# SA30: Land to the north of Lyndon, Reeds Lane - Index by ID Number

ID	Respondent	Organisation	BehalfOf	Respondent Category	Participate
99	8 Ms J Simmons			Resident	
108	33 Mrs S Groom	Hurstpierpoint & Sayers Common Parish Council		Town & Parish Council	
206	55 Mr A Black	Andrew Black consulting	Denton - Horsham Road	Promoter	
206	7 Mr A Black	Andrew Black consulting	Denton Homes - Butlers green	Promoter	
207	'9 Mr A Black	Andrew Black consulting	Vanderbilt Homes - Hurstwood HH	Promoter	
208	30 Mr A Black	Andrew Black consulting	Vanderbilt homes - CDR	Promoter	
210	7 Ms K Lamb	DMH Stallard	Reside - SA30 Lyndon Sayers Common	Promoter	•

# **Site Allocations DPD: Regulation 19 Consultation Response**

# Policy: SA30

ID: 998

**Response Ref:** Reg19/998/1 **Respondent:** Ms J Simmons

Organisation:
On Behalf Of:

Category: Resident

Appear at Examination? ×

From:

**Sent:** 16 September 2020 10:52

To:

Idfconsultation

Subject:

RE: Mid Sussex DC Planning Policy - Site Allocations DPD Consultation (Regulation

19)

With regards to your email below. I am sending this email to add to the responses you have received regarding this report as your form is not user friendly to individuals and seems to be meant for organisations.

Sites appear to have been chosen at random for the report without any thought to how they fit into or would actually affect the actual location and the people who live there at the moment. It is as if these people do not matter.

No account or reference seems to have been taken of existing agreed and made Neighbourhood Plans.

With regards to SA30 Land to the North of Lydon Reeds Lane Sayers Common this application has already been refused by Mid Sussex Planning as not being in line with national, local or neighbourhood policies. The synopsis in the report for the site completely ignores the actual issues with the site which resulted in their refusal to allow the application.

The existing and made Neighbourhood Plan for Hurstpierpoint and Sayers Common confirms that 30 to 40 new homes should be built in Sayers Common in the 30 years following the plan. However since that Plan the Planning Authority has already approved the 120 house Kingsland Laines development in the village, way in access of that. Therefore the village which is in a greenfield site has already been subjected to over development against the Neighbourhood Plan and in excess of existing facilities and amenities.

If the Council is going to ignore Neighbourhood Plans will they be compensating the Parish Councils for all the money time and effort they put into making them?

Therefore the rational adopted by and method used by the council to choose the sites in their report is not sound against the National Planning Policy Framework because of the above. It unfortunately comes across as an act of desperation to try and pacify Central Planning departments instead of dealing with actual issues in the area.

Mrs J Simmons



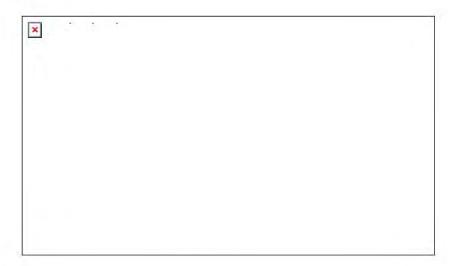
From: Mid Sussex District Council - Planning Policy <planningpolicy@midsussex.gov.uk>

Sent: 03 August 2020 16:09

To: Ms Simmons < jacky@jackysimmons.me.uk>

Subject: Mid Sussex DC Planning Policy - Site Allocations DPD Consultation (Regulation 19)

View this email in your browser



# Site Allocations DPD - Regulation 19 Consultation

3rd August 2020

Mid Sussex District Council has published the Site Allocations Development
Plan Document for consultation from the 3<sup>rd</sup> August, closing midnight on the
28<sup>th</sup> September 2020.

The Site Allocations DPD forms part of the Mid Sussex District Plan 2014-2031, which was adopted in March 2018. Its preparation is in response to the requirement by the Planning Inspector to meet the residual housing and employment needs up to 2031.

The Site Allocations DPD proposes a number of new housing and employment sites for allocation in order to meet this need. It also includes an allocation for a Science and Technology Park to the west of Burgess Hill, and a number of other strategic planning policies considered necessary for delivering sustainable development.

The Council must publish the version of the Site Allocations DPD that it intends to submit to the Planning Inspectorate for Examination. At this stage of consultation, the Council is seeking views on whether the Plan is legally compliant and meets the test of 'soundness' set out in the National Planning Policy Framework (NPPF). These are the broad areas that the Inspector will

focus on in examining the Plan.

Comments will be considered by an independent planning inspector alongside the submitted Site Allocations DPD at a future Public Examination before deciding whether the Plan can be adopted by the Council.

The District Council will summarise the main issues from the consultation for the Inspector. The Inspector will also receive copies of the representations submitted.

All of the consultation documents, Community Involvement Plan, Statement of Representations Procedure, and further information can be viewed online at:

www.midsussex.gov.uk/SitesDPD

### Comments can be submitted:

Online: Online Form at <a href="https://www.midsussex.gov.uk/SitesDPD">www.midsussex.gov.uk/SitesDPD</a>

Post to: Planning Policy, Mid Sussex District Council, Oaklands, Oaklands

Road, Haywards Heath, West Sussex, RH16 1SS

E-mail to: LDFconsultation@midsussex.gov.uk

Responses must be received by midnight on the 28th September 2020.

If you have any queries about this consultation, please e-mail: planningpolicy@midsussex.gov.uk

Our address is:

Planning Policy
Mid Sussex District Council
Oaklands
Oaklands Road
Haywards Heath

West Sussex

**RH16 1SS** 

#### planningpolicy@midsussex.gov.uk

You are receiving this email as you are either a Statutory Consultee, subscribe to the Planning Policy Update mailing list, or made a response to the Site Allocations DPD Regulation 18 consultation.

Want to change how you receive these emails?
You can <u>update your preferences</u> or <u>unsubscribe from this list</u>.

# **Site Allocations DPD: Regulation 19 Consultation Response**

# Policy: SA30

ID: 1083

**Response Ref:** Reg19/1083/1 **Respondent:** Mrs S Groom

**Organisation:** Hurstpierpoint & Sayers Common Parish Council

On Behalf Of:

**Category:** Town & Parish Council

Appear at Examination? ×

From: Sarah Groom <sarah.groom@hurstpierpoint-pc.gov.uk>

**Sent:** 28 September 2020 18:14

**To:** Idfconsultation

**Subject:** Response to MSDC Site Allocations DPD Submission Draft

**Attachments:** 20200927 Response to MSDC Site Allocations DPD Submission Draft.pdf

Dear Sir/Madam,

Please find attached our response to the above consultation.

Thank you for your consideration.

Kind regards,

Sarah Groom CiLCA
Clerk to the Council & Responsible Finance Officer

#### Hurstpierpoint & Sayers Common Parish Council

Village Centre, Trinity Road, Hurstpierpoint, West Sussex BN6 9UY

Tel: 01273 833264

Website: <a href="www.hurstpierpoint-pc.gov.uk">www.hurstpierpoint-pc.gov.uk</a> Email: office@hurstpierpoint-pc.gov.uk

Coronavirus: The Parish Council office is open to the public Monday to Friday 9.30am – 1.30pm. All staff can be contacted via the office email address below or please call the office and leave a message. Only in emergencies please call 07497 271481. All council and committee meetings are being held using Microsoft Teams. Parks, play grounds and public toilets are open but please observe current Government guidance.

This email has been sent by Hurstpierpoint & Sayers Common Parish Council. Its contents and any attachments are intended solely for the persons addressed. If it has come to you in error please reply to advise us but you should not read it, copy it, show it to anyone else nor make any other use of its content. The Council takes steps to ensure emails and attachments are virus-free but you should carry out your own checks before opening any attachment.

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Emailed to: LDFconsultation@midsussex.gov.uk

27 September 2020

Dear Sir/Madam,

#### Response to MSDC's Submission Draft Site Allocations DPD

Hurstpierpoint & Sayers Common Parish Council <u>objects</u> to the inclusion of **SA30 Land to the North of Lyndon, Reeds Lane, Sayers Common** in Mid Sussex District Council's Submission Draft Site Allocation Development Plan Document For the following reasons:

- (1) The proposal is contrary to the Parish Council's Neighbourhood Plan.
- (2) As a medium sized village, Sayers Common lacks the supporting infrastructure to be found in a larger village – in essence it is a dormitory village for which residents require some means of transport to facilitate and to support daily life. The village has doubled in size already over the past 20 years without any, let alone commensurate, infrastructure improvements. It has:
  - Only a small self-help Community Shop
  - An inadequate bus service
  - No safe cycle routes within or connecting to adjacent communities
  - No doctors/dentist
  - No pharmacy
  - No school
  - No Post Office or banking facilities/ATM
  - Inadequate Broadband and mobile phone coverage
  - (3) The appeal decision by the Secretary of State granting permission for 120 dwellings at the Kingsland Laines development in Sayers Common will have a major detrimental impact on the settlement pattern of Sayers Common, its countryside location and significant lack of infrastructure. This decision taken was contrary to the approved Hurstpierpoint & Sayers Common Parish Council's Neighbourhood Plan and prior to the MSDC District Plan being made, and will represent a major challenge as the Parish struggles to manage this significant increase in dwellings with no planned infrastructure improvements.
  - (4) The supporting SA30 data sheet:
    - Acknowledges the underlying flood risk and drainage issues to be found within the site as a result of wider Sayers Common challenges and proposes a flood risk assessment to identify specific issues within the site and appropriate mitigation. It does not appear to seek to address the wider Sayers Common issue.
    - Notes how the access to the site will be enabled but fails to identify the impact of another 35 households accessing Reeds Lane. It only acknowledges that detailed access arrangements need to be investigated further.

- Shows the boundaries of the adjacent Kingsland Laines 120 house development, which was allowed at appeal contrary to our Neighbourhood Plan and before the MSDC District Plan was made. However Appendix B Minimum Residual Amount of Development for Each Settlement fails to note the 120 house commitment which has already been approved for Sayers Common and therefore now both Sayers Common and Hurstpierpoint have overachieved allocations within the prescribed timeframe.
- (5) The Neighbourhood Plan provided for 30/40 dwellings taking into account Sayers Common's Category 3 settlement allocation. To include the Land to the North of Lyndon in the Site Allocation Development Plan, in addition to the 120 dwellings approved at Kingsland Laines (which could include a further 20 or more dwellings in phase 2 of the development), will add further to the infrastructure problems.

Please note our objections remain the same as previously submitted on 19 November 2019.

Yours faithfully,

Sarah Groom

Clerk to the Council



# **Site Allocations DPD: Regulation 19 Consultation Response**

# Policy: SA30

ID: 2065

Response Ref: Reg19/2065/15

**Respondent:** Mr A Black

Organisation: Andrew Black consulting On Behalf Of: Denton - Horsham Road

Category: Promoter

Appear at Examination? ×



Mid Sussex District Council

Draft Site Allocations DPD (Regulation 19) Consultation

Representation on behalf of Denton Homes – Land North of Horsham Road, Pease Pottage

September 2020

Project MSDC Draft Site Allocations DPD

ABC Reference ABC/0075/07a

Local Authority Mid Sussex District Council

Client Denton Homes

Issue Final

Author Andrew Black

Date September 2020

Disclaimer: This report has been prepared for the above named client for the purpose agreed in Andrew Black Consulting's (ABC) terms of engagement. Whilst every effort has been made to ensure the accuracy and suitability of the information contained in this report, the results and recommendations presented should not be used as the basis of design, management or implementation of decisions unless the client has first discussed with ABC their suitability for these purposes and ABC has confirmed their suitability in writing to the client. ABC does not warrant, in any way whatsoever, the use of information contained in this report by parties other than the above

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### 1. Introduction

- 1.1 These representations for the Draft Site Allocations DPD (Regulation 19) Consultation (Herein referred to as the 'SADPD') are submitted by Andrew Black Consulting on behalf of Denton Homes regarding two linked sites within their control at Horsham Road in Pease Pottage.
- 1.2 The two sites are known as Land at former Driving Range, Horsham Road, Pease Pottage (SHELAA ID 219) and Land north of the Former Golf House, Horsham Road, Pease Pottage (SHELAA ID 818)
- 1.3 It is understood that the SADPD has been produced in accordance with the Planning and Compulsory Purchase Act 2004, and other relevant regulations.
- 1.4 The NPPF states that Development Plan Documents should be prepared in accordance with the legal and procedural requirements. To be found to be 'sound', plans must be:
  - a) positively prepared
  - b) justified
  - c) effective, and
  - d) consistent with national policy.
- 1.5 It is with this in mind that these representations are made.
- 1.6 The draft SADPD has been prepared using an extensive and legally compliant evidence base including a Sustainability Appraisal, Habitat Regulations Assessment, Community Involvement Plan, Equalities Impact Assessment, and various technical reports and studies. Of particular note is the Built Up Area Boundary and Policies Map Topic Paper (TP1) produced in August 2020.
- 1.7 The Site Allocations DPD proposes to allocate 22 sites to meet this residual necessary to meet the overall agreed housing requirement for the plan period as reflected in the 'stepped trajectory' and in accordance with the District Plan.
- 1.8 These representations set out the detail of the Site and Surroundings and a response to the detailed parts of the SADPD.

# 2. Site and Surroundings

2.1 The two sites are located within close proximity of each other as highlighted in the below SHELAA map.

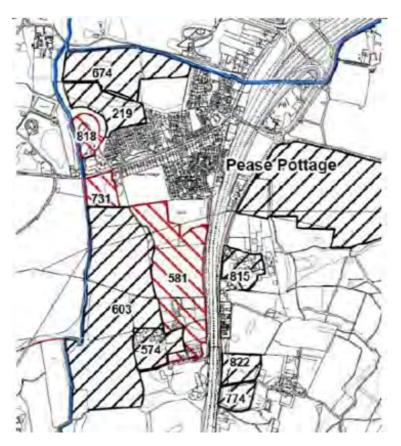


Figure 1 – SHELAA Extract

2.2 The sites were assessed in the most recent under SHELAA (Ref 219 and 818) as Suitable, Available and Achievable in the Medium to Long Term (The full extract of the SHELAA is set out in Appendix 1). Several constraints were note within the HELAA form which are addressed below.

### **Surrounding Developments and Proposed Allocations**

- 2.3 Both sites are in close proximity to areas which have been developed for housing in recent years.
- 2.4 To the south of the sites, permission was granted at appeal for the redevelopment of the former area of Golf Course for 95 dwellings which has been subsequently completed.
- 2.5 The application was submitted in 2013 (13/02994/OUT) and refused at local level before being allowed at appeal in 2014 (ref APP/D3830/A/2215289)



Figure 2 – Riverdale Homes site layout

2.6 The site directly to the west of the Golf Course site which comprised of the former club house and driving range was granted permission for the *demolition of existing buildings and redevelopment of the site to provide 25no. dwellings with associated access, parking and landscaping and other associated works* (Ref DM/17/0747).



Figure 3 – Approved layout on land to south (forming access road)

- 2.7 The site provides an access to the further parcels at the rear of the site (SHELAA ref 219 and 818)
- 2.8 The Proposals Map for the SADPD shows the significant growth forecasted in Pease Pottage in the lifetime of the plan.

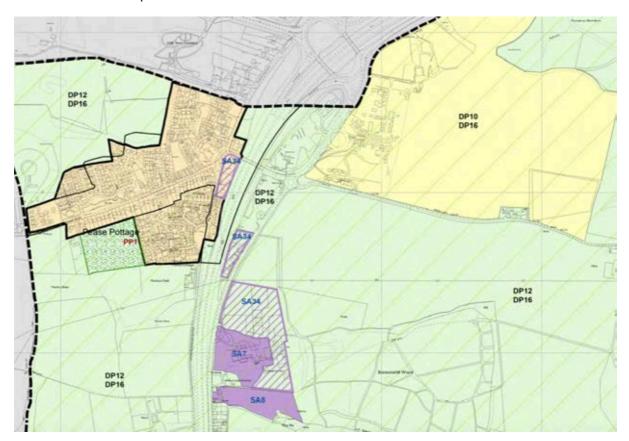
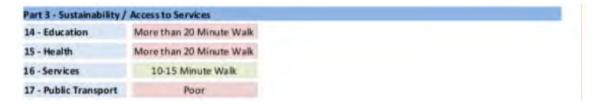


Figure 4 – SADPD Proposals Map

- 2.9 The large development to the East of Pease Pottage is being brought forward by Thakeham Homes and will deliver a substantial portion of housing together with new facilities for the Village including a new Primary School, Village Shop, Village Café and areas of open space.
- 2.10 The site was dismissed within the Site Selection Process for its lack of proximity to services



- 2.11 This may be the case at present but will substantially improve with the development of the Thakeham site.
- 2.12 Sites SA7 Cedars (Former Crawley Forest School) and SA8 Pease Pottage Nurseries are allocated within the SADPD for B1, B2 and B8 employment.

2.13 All of the new development coming forward with Pease Pottage is also within the AONB. It demonstrates that Pease Pottage will experience significant growth in the coming years and is able to support an uplift in housing which will be located alongside facilities and employment opportunities.

### 3. Housing Site Allocation Process

- 3.1 The District Plan 2014-2031 sets out the housing requirement for the district for the plan period of 16,390 dwellings. This meets the Objectively Assessed Need (OAN) for the district of 14,892 dwellings in full and makes provision for the agreed quantum of unmet housing need for the Northern West Sussex Housing Market Area, to be addressed within Mid Sussex, of 1,498 dwellings.
- 3.2 The District Plan 2014-2031 established a 'stepped' trajectory for housing delivery with an average of 876 dwellings per annum (dpa) between 2014/15 and 2023/24 and thereafter an average of 1,090 dpa between 2024/25 and 2030/31. This represents a significant increase in housing supply compared with historical rates within the district.
- 3.3 The latest data on completions from MSDC was published in *MSDC Housing Land Supply Position Statement* was published in August 2020 (Document H1) and shows a significant shortfall in delivery against the housing requirement since the start of the plan:

Category	Number of Dwellings		
Housing Requirement for the full plan period (April 2014 to March 2031)		16,390	
Housing Completions (Apr	il 2014 to March 2020)	4,917	
Completions 2014/15		630	
Completions 2015/16		868	
Completions 2016/17		912	
Completions 2017/18		843	
Completions 2018/19		661	
Completions 2019/20		1003	
Housing Supply (April 2014 to March 2031)	Commitments (including District Plan Allocations)	9,689	
,	Site Allocations DPD - Allocations	1,764	
	Windfalls	504	
Total Supply (at 1 April 201	16,874		

Figure 5 – Extract from MSDC Housing Land Supply Position Statement

- 3.4 The Housing Delivery Test was introduced in the July 2018 update to the NPPF. The Housing Delivery Test is an annual measurement of housing delivery for each local authority and the first results were published in February 2019 by the Ministry of Housing, Communities and Local Government (MHCLG). Where the Housing Delivery Test indicates that delivery has fallen below 95% of the local planning authority's housing requirement over the previous 3 years then it is required to prepare an action plan. Where delivery has fallen below 85% of the housing requirement a 20% buffer should be added to the five year supply of deliverable sites.
- 3.5 The result for Mid Sussex produced in February 2020 was 95%. This result is based on monitoring years 2016-17, 2017-18 and 2018-19. Mid Sussex is therefore not required to add 20% buffer for significant under delivery, or prepare an Action Plan. However, it is clear that under current performance the council will struggle when the housing target steps up to 1,090 in 2024.
- 3.6 Para 4.10 of the previous MSDC Housing Land Supply Position Statement (2019) sets out how the identified to the shortfall to calculate the five year supply requirement for the district:

Annual Requirement	876 x 5 years =	4,380
As set out in District Plan		
Shortfall spread over	466 divided by 12 remaining	194
remaining plan period	years x 5 years	
Total		4,574
Buffer (see paras 2.4,4.9 above)	10%	457
Total five year supply requirement		5,032

Figure6 – Total Five Year Housing Requirement taken from MSDC Housing Land Supply
Position Statement

- 3.7 MSDC is seeking to confirm the five year housing land supply under the terms of paragraph 74 of the NPPF through submission of the annual position statement to the secretary of state. Paragraph 74 of the framework states:
  - A five year supply of deliverable housing sites, with the appropriate buffer, can be demonstrated where it has been established in a recently adopted plan, or in a subsequent annual position statement which:
  - a) has been produced through engagement with developers and others who have an impact on delivery, and been considered by the Secretary of State; and
  - b) incorporates the recommendation of the Secretary of State, where the position on specific sites could not be agreed during the engagement process.
- 3.8 The report on the Annual Position Statement was issues by the Planning Inspectorate on 13 January 2020. It was confirmed that as the council did not have a recently adopted plan in conformity with the definition of the NPPF then the correct process had not been followed and the inspector was unable to confirm that the council had a five year housing land supply.
- 3.9 It is therefore clear that the council does not currently have a five year housing land supply and the demonstration of sufficiently deliverable sites within the SADPD is of critical importance for MSDC.

#### **Deliverability of Sites**

3.10 Any sites that have been included in the final Sites DPD will need to pass the tests of deliverability as set out in the NPPF. This is defined within the glossary of the framework as follows:

**Deliverable:** To be considered deliverable, sites for housing should be available now, offer a suitable location for development now, and be achievable with a realistic prospect that housing will be delivered on the site within five years. In particular:

- a) sites which do not involve major development and have planning permission, and all sites with detailed planning permission, should be considered deliverable until permission expires, unless there is clear evidence that homes will not be delivered within five years (for example because they are no longer viable, there is no longer a demand for the type of units or sites have long term phasing plans).
- b) where a site has outline planning permission for major development, has been allocated in a development plan, has a grant of permission in principle, or is identified on a brownfield register, it should only be considered deliverable where there is clear evidence that housing completions will begin on site within five years.
- 3.11 The Planning Practice Guidance provides a further explanation on how the deliverability of sites should be considered:

A site can be considered available for development, when, on the best information available (confirmed by the call for sites and information from land owners and legal searches where appropriate), there is confidence that there are no legal or ownership impediments to development. For example, land controlled by a developer or landowner who has expressed an intention to develop may be considered available.

The existence of planning permission can be a good indication of the availability of sites. Sites meeting the definition of deliverable should be considered available unless evidence indicates otherwise. Sites without permission can be considered available within the first five years, further guidance to this is contained in the 5 year housing land supply guidance. Consideration can also be given to the delivery record of the developers or landowners putting forward sites, and whether the planning background of a site shows a history of unimplemented permissions.

Paragraph: 019 Reference ID: 3-019-20190722

Revision date: 22 07 2019

3.12 It is with this in mind that the proposed sites within the Sites DPD are scrutinised within subsequent sections of this document. It is considered that many of the proposed sites do not fully accord with the definition of delivery and consideration of alternative sites is required.

#### **Historic Environment**

3.13 Several of the allocations within the DPD are in close proximity to heritage assets. Paragraph 193 of the framework sets out the approach to heritage assets as follows:

When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation (and the more important the asset, the greater the weight should be). This is irrespective of whether any

- potential harm amounts to substantial harm, total loss or less than substantial harm to its significance.
- 3.14 In many instances the council themselves suggest that the development of housing on the sites is likely to have 'less than significant harm' on the heritage assets in question. Paragraph 196 of the framework sets out the approach which should be taken in this instance:
  - Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable
- 3.15 The council has sought in their assessment of sites to grade the level of harm within the category of less than substantial harm. This is not appropriate way to suggest that this harm could be mitigated if it is at the lower end of 'less than substantial harm' is an incorrect interpretation of planning policy, legislation and guidance. The most recent authority on this matter is in the high court decision for James Hall and Company Limted v City of Bradford Metropolitan District Council & Co-operative Group Limited & Dalehead Properties Limited in a judgement handed down on 22 October 2019 ([2019] EWHC 2899) where the ruling confirmed that 'negligible' or 'minimal' harm still equates to 'harm' for the purposes of the heritage tests in the NPPF.
- 3.16 It is not considered that the harm caused to heritage assets has been adequately assessed within the Sustainability Appraisal for many of the proposed sites and further consideration is required of the sites in this regard. This would include assessing sites which would not have an impact on heritage assets through a robust application of reasonable alternatives within the Sustainability Appraisal.

# 4. Sustainability Appraisal

- 4.1 The SADPD is accompanied by a Sustainability Appraisal (SA) report which is a legal requirement derived from the Planning and Compulsory Purchase Act 2004 (Section 19). Section 39 of the Act requires documents such as the SADPD to be prepared with a view to contributing to the achievement of sustainable development.
- 4.2 The requirement for Strategic Environmental Assessment, in addition to the SA, is set out in the European Directive 2001/42/EC adopted into UK law as the "Environmental Assessment of Plans or Programmes Regulations 2004".
- 4.3 In line with best practice the SEA has been incorporated into the SA of the SADPD.
- 4.4 The planning practice guidance sets out detailed consideration as to how any sustainability should assess alternatives and identify likely significant effects:

The sustainability appraisal needs to consider and compare all reasonable alternatives as the plan evolves, including the preferred approach, and assess these against the baseline environmental, economic and social characteristics of the area and the likely situation if the plan were not to be adopted. In doing so it is important to:

- outline the reasons the alternatives were selected, and identify, describe and evaluate
  their likely significant effects on environmental, economic and social factors using the
  evidence base (employing the same level of detail for each alternative option). Criteria
  for determining the likely significance of effects on the environment are set out
  in schedule 1 to the Environmental Assessment of Plans and Programmes Regulations
  2004;
- as part of this, identify any likely significant adverse effects and measures envisaged to prevent, reduce and, as fully as possible, offset them;
- provide conclusions on the reasons the rejected options are not being taken forward and the reasons for selecting the preferred approach in light of the alternatives.

Any assumptions used in assessing the significance of the effects of the plan will need to be documented. Reasonable alternatives are the different realistic options considered by the planmaker in developing the policies in the plan. They need to be sufficiently distinct to highlight the different sustainability implications of each so that meaningful comparisons can be made.

The development and appraisal of proposals in plans needs to be an iterative process, with the proposals being revised to take account of the appraisal findings.

Paragraph: 018 Reference ID: 11-018-20140306

Revision date: 06 03 2014

4.5 In response to this guidance and requirement, paragraph 6.16 of the Sustainability Appraisal states that:

The Site Selection Paper 2 (paras 6.2 - 6.3) also recognises that, in order to meet the District Plan strategy, conclusions will be compared on a settlement-by-settlement basis with the most suitable sites at each settlement chosen in order to meet the residual needs of that settlement. This may result in some sites being chosen for allocation which have higher negative impact across all the objectives because this will be on the basis that the aim is to distribute allocations according to the District Plan strategy in the first instance; as opposed to simply selecting only

the most sustainable sites in the district (as this may not accord with the spatial strategy and would lead to an unequal distribution of sites across settlements). 20 sites that perform well individually and on a settlement basis, the residual housing need of 1,507 would be met with a small over-supply of 112 units.

- 4.6 Paragraph 6.45 recognises that this small over-supply may not be a sufficient buffer should sites fall out of the allocations process between now and adoption (for example, due to delivery issues, reduction in yield, or any other reasons identified during consultation or the evidence base).
- 4.7 The SA therefore considers reasonable alternatives of option A, B and C as follows:
  - Option A 20 'Constant Sites' 1,619 dwellings
  - Option B 20 'Constant Sites' + Folders Lane, Burgess Hill (x3 sites) 1,962 dwellings.
  - Option C 20 'Constant Sites' + Haywards Heath Golf Court 2,249 dwellings
- 4.8 Paragraph 6.52 of the SA concludes that:

Following the assessment of all reasonable alternative options for site selection, the preferred option is option B. Although option A would meet residual housing need, option B proposes a sufficient buffer to allow for non-delivery, therefore provides more certainty that the housing need could be met. Whilst option C also proposes a sufficient buffer, it is at the expense of negative impacts arising on environmental objectives. The level of development within option C is approximately 50% above the residual housing need, the positives of delivering an excess of this amount within the Site Allocations DPD is outweighed by the negative environmental impacts associated with it.

- 4.9 It is not considered that this assessment of Option A, B and C is a sufficient enough assessment of reasonable alternatives as required by guidance and legislation. All of the options contain the '20 Constant Sites' with no derivation of alternative options such as those which seek to divert housing growth away from the AONB or designated heritage assets.
- 4.10 It is apparent that other sites other than the 20 Constant Sites will need to be assessed if the council is to adequately demonstrate that reasonable alternatives have been considered as required.

### 5. Assessment of Proposed Sites.

5.1 This section analyses each of the proposed allocations against the tests of deliverability as set out in the NPPF and the potential shortcomings of several of the sites which require significant consideration. The findings of *Appendix B: Housing Site Proformas* of the *Site Selection Paper* 3 (Appendix B) and the conclusions of the Sustainability Appraisal (SA) are considered in detail.

#### SA 12 Land South of 96 Folders Lane, Burgess Hill

- 5.2 Appendix B of the reg 18 SADPD set out that this site has moderate landscape sensitivity and moderate landscape value. This site could be visible from the South Downs National Park. The SA states that an LVIA is required to determine any impact on the national park. Given the weight that the NPPF requires to be placed on the protection of the national park, any impact must be measured prior to allocation. If it is deemed that mitigation would not minimise the harm caused, then the proposed allocation must fall away.
- 5.3 Appendix B of the reg 18 SADPD also set out that a TPO area lines the norther border and potential access route. It should be noted that an application was submitted in 2019 for the *erection of 43 dwellings and associated works* (DM/19/0276) but was withdrawn in September 2019 due to concerns over highways. The deliverability of this site is therefore not considered to be in accordance with the guidance set out in the framework.
- 5.4 Finally, whilst the priority for sites higher in the settlement hierarchy is acknowledged, this is site is very remote from the services offered by Burgess Hill. This is highlighted within the sustainability appraisal for the site which states that it is more than a 20 minute walk from the site to schools, GP and shops.

#### SA 13 Land East of Keymer Road and South of Folders Lane, Burgess Hill.

- 5.5 As with SA12, this site is in close proximity to the national park and the conclusions as set out above apply equally to this site.
- 5.6 The SA sets out that this is the only site within Burgess Hill to have any impact on listed buildings where it is stated that development of this site would cause *less than substantial harm (medium) on High Chimneys (Grade II listed)*. This is not mentioned within appendix B and this therefore calls into question the consistency of assessment of the sites in this regard.
- 5.7 Given that site SA12 and SA13 are in close proximity to one another it is notable that the cumulative impact of the development of both of these sites has not been assessed for a number of 'in-combination' impacts such as highways and landscape impact.

#### SA 14 Land to the south of Selby Close, Hammonds Ridge, Burgess Hill

- There is a TPO at the front of this site which is potentially why access is proposed through the CALA Homes site (DM/17/0205). No evidence is submitted to suggest that this form of access is agreed or available. The section relating to Highways and Access within the SADPD simply states that this access will need to be investigated further.
- 5.9 The SA and appendix B both point towards the Southern Water Infrastructure which crosses the site. The wording in the DPD recommends that the layout of the development is considered to ensure future access for maintenance and/or improvement work, unless diversion of the sewer is possible. Given that the site is only 0.16ha it is therefore questionable whether there would be adequate space to develop the site for housing and provide accommodation for the sewage infrastructure crossing the site. The deliverability of this site has therefore not been adequately demonstrated.

5.10 As with SA12 and SA13 there are questions of the sustainability of the site given that the SA notes that it is more than a 20 minute walk to the school and GP.

#### SA 15 Land South of Southway, Burgess Hill

- 5.11 The SADPD describes the site as overgrown and inaccessible land designated as a Local Green Space in the Burgess Hill Neighbourhood Plan. It is unclear whether this site was ever previously in use a playing pitches and whether re-provision of this space would be required under Sport England policies.
- 5.12 Appendix B of the reg 18 SADPD points towards issues with relocation of existing parking on the site and states that:
  - Private parking areas would need to be removed to provide a suitable access point with sufficient visibility. The parking spaces are visitor spaces over which the owners/developers of the subject land have rights to access it to serve new development onto Linnet Lane. Accordingly, a new access into the site can be provided any new development would include two visitor spaces as close as reasonably possible to the existing visitor spaces.
- 5.13 It is clear that there are substantial issues with deliverability and availability of this site given these constraints and the site should be deleted as a proposed allocation until this can be adequately demonstrated.

#### SA 16 St. Wilfrids Catholic Primary School, School Close, Burgess Hill

- 5.14 The SADPD sets out that the satisfactory relocation of St Wilfrid's Primary School to St Paul's Catholic College site is required before development can commence on the school part of the site. There is also a requirement to re-provide the emergency services accommodation in a new emergency service centre either on this site or elsewhere in the town.
- 5.15 Given that the allocation is for 300 dwellings and requires this relocation first, it is considered that there is insufficient evidence to justify delivery of development of this site in the 6-10 year time period as set out.

#### SA 17 Woodfield House, Isaacs Lane, Burgess Hill

5.16 The SADPD sets out some significant landscape features on site which require retention and it is stated that:

There is a group Tree Preservation Order in the southern and western areas of the site. High quality substantial new planting of native trees is required, should these be lost to provide access from Isaac's Lane. All other TPO trees on the site are to be retained.

Retain and enhance important landscape features, mature trees, hedgerows and the pond at the south of the site and incorporate these into the landscape structure and Green Infrastructure proposals for the development. Open space is to be provided as an integral part of this landscape structure and should be prominent and accessible within the scheme.

- 5.17 Given that the site is only 1.4 hectares in size it is questionable whether there is adequate space on the site for 30 dwellings after retention of these landscape features.
- 5.18 It is clear from the Sites DPD that access to site is envisaged to be from the Northern Arc where it is stated that:

Integrated access with the Northern Arc Development is strongly preferred, the details of which will need to be investigated further.

5.19 This is also set out in appendix B of the reg 18 SADPD where it is stated that:

Entrance drive to house. Access on bend with limited visibility. 50 mph road. Would involve removal of trees that are subject to TPO. Objection for tree officer. However, future access is anticipated to be provided via the Northern Arc. Whilst the specific details of this remain uncertain on the basis that the enabling development is still at an early stage, it is considered that the identified constraints will no longer apply.

5.20 Given the uncertainty of the deliverability of the land immediately adjoining the site as part of the Northern Arc it is considered that the deliverability of this site is not clear enough to justify allocation within the sites DPD. The uncertainty of this deliverability also has an implication of the sustainability of the site and proximity to adequate services. This is highlighted within the SA where is stated that:

The impact of option (h) on these objectives (Health/Retail/Education) is uncertain; currently the site is a long distance from local services, however, this will change once the Northern Arc is built out.

5.21 Overall it is not considered that this site is suitable for allocation and should be removed from the Sites DPD

#### SA 18 East Grinstead Police Station, College Lane, East Grinstead

5.22 We have no comments to make in relation to this allocation.

#### SA 19 Land south of Crawley Down Road, Felbridge

- 5.23 As set out, this allocation is directly to the west of the land under the control of Vanderbilt Homes which is also adjoined to the east by land with the benefit of planning permission for 62 dwellings.
- 5.24 Given that the entire area will be included within the revised Built Up Area Boundary, then it is considered logical that the adjoining sites are also identified for allocation within the SADPD.

# SA 20 Land south and west of Imberhorne Upper School, Imberhorne Lane, East Grinstead

- 5.25 There is a requirement in the SADPD for this site to provide a detailed phasing plan with agreement from key stakeholders to secure:
  - Land for early years and primary school (2FE) provision 2.2 ha
  - A land exchange agreement between WSCC and the developer to secure 6 ha (gross) land to create new playing field facilities in association with Imberhorne Secondary School (c.4 ha net excluding land for provision of a new vehicular access onto Imberhorne Lane).
- 5.26 It is unclear when these requirements are to be provided by within the development of any site and whether it is considered that the site would be suitable for allocation should these uses not come forward.
- 5.27 There are clear concerns over the suitability of this site in terms of ecology as set out in appendix B of the reg 18 SADPD which states:
  - Natural England have concerns over the high density of housing south of Felbridge. Hedgecourt SSSI is accessible from the proposed site allocations via a network of Public Rights of Way. In

line with paragraph 175 of the NPPF, Mid Sussex District Council should determine if allocations are likely to have an adverse effect (either individually or in combination) on SSSI's. The NPPF states that "if significant harm to biodiversity resulting from a development cannot be avoided, adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused." We would be happy to provide further advice if requested, although this may need to be on cost recovery The LWS adjacent to the site is an important recreational route and therefore consideration needs to be given to additional recreational disturbance to its habitats. We are unable to advise you on specific impacts as we have no details of the scale or type of proposed development consider further impacts of disturbance of the LWS and Ancient woodland arising from people and domestic pets, connectivity, light and noise pollution, appropriate buffer and cumulative impact. This site is adjacent to the Worth Way. The SHELAA should be redrawn to remove the section of LWS. The site is an important recreational route and therefore consideration needs to be given to additional recreational disturbance to its habitats. Further consideration be given to impacts of disturbance on LWS and Ancient Woodland from people and pets, impacts on connectivity, impacts of light and noise pollution, need for Ancient Woodland buffer. Cumulative impact with SHELAA 686 and 561.

- 5.28 It is clear that the impacts upon ecology and the SSSI have not been adequately addressed.
- 5.29 As with other sites there is potential for impact upon local heritage assets of Gullege Farm, Imberhorne Farm and Imberhorne Cottages as set out below. The harm in terms of less than strategic harm is inappropriately weighted in the assessment as a means for justification of allocation.

#### APPENDIX B: Gullege Farm, Imberhorne Lane

This isolated farmstead has historically had a rural setting and continues to do so today. The introduction of a substantial housing development to the north, east and south of the listed manor house would have a fundamental impact on the character of that setting and would detract from the way in which the special interest of this Grade II listed rural manor house and the of the historic farmstead is appreciated.

#### NPPF: LSH, high

#### Imberhorne Farm and Imberhorne Cottages

In its original incarnation Imberhorne Cottages was probably constructed as a dwelling providing accommodation between London and Lewes, on Lewes Priory lands. It may have acted as the manor house to the substantial manor of Imberhorne, which was owned by the Priory. It seems likely that the building became farm cottages when the new farmhouse (Imberhorne) was constructed in the early 19th century. The currently rural setting of both buildings within the Imberhorne farmstead informs an understanding of their past function and therefore contributes positively to their special interest.

The proposed development site would engulf the farmstead to the west, north and east and would have a fundamental impact on the character of the greater part of its existing of rural setting and on views from both listed buildings. It would adversely affect the manner in which the special interest of the two listed buildings within their rural setting is appreciated, including by those passing along the PROW to the north of the farmstead.

#### NPPF: LSH, high

5.30 The potential harm to heritage is also referred to in the SA which states that:

- option (e) which is not constrained by a conservation area, but would have a less than substantial harm (high) on Gullege Farm (Grade II listed) and Imberhorne Farm and Imberhorne Cottages (Grade II\* listed). As this is a large site, there is potential to still achieve the yield whilst providing necessary mitigation to lower the impact on these heritage assets.
- 5.31 Notwithstanding the significant constraints to delivery from this site it is notable that the delivery of 550 in 6-10 years as set out in the SADPD is particularly optimistic and would need to be revised in order to be realistic on the constraints to delivery including the requirement for provision of education on the site.

#### SA 21 Rogers Farm, Fox Hill, Haywards Heath

5.32 This site is also significantly constrained by the presence of heritage assets. This is referenced in the SA which states that:

Site option (b) is constrained in terms of impact upon a listed building; it would have a less than substantial harm (medium) on Cleavewater (Grade II listed) and The Old Cottage (Grade II listed).

5.33 Appendix B also references these heritage assets together with an assessment of the likely impact as follows:

Cleavewaters, Fox Hill there would be a fundamental impact not only on views from the building and associated farmstead but on the context and manner in which the farmhouse and farmstead are appreciated by those travelling along the road which runs between the farmstead and the site. **NPPF: LSH, MID** 

Olde Cottage, there would be some potential impact on views from the Cottage and its garden setting. The belt of woodland between the asset and the site is relatively narrow and development on the site is likely to be visible, particularly in winter. There would also be an impact on the setting in which the Cottage is appreciated by those approaching along the access drive from Ditchling Road. **NPPF: LSH, MID** 

- 5.34 The impact on heritage assets and character of the area has been assessed in an appeal decision on the site (APP/D3830/W/17/3187318) issued in January 2019 following an application for up to 37 dwellings on the site (DM/16/3998).
  - 15 The combination of the buffer and local topography would mean that any development would be clearly visible on the approach down Lunce's Hill and perceived as a separate and distinct residential development. I am not persuaded that it would be seen within the context of an urban fringe setting as the appellant suggests. On the contrary it would be a harmful encroachment into the countryside and the rural character of the approach into the settlement would be irrevocably changed and harmed through the loss of this open land.
  - 16 Overall, the proposal would result in an unacceptable suburbanisation of the appeal site that would fundamentally change the character and appearance of the rural setting of the settlement. The effects would also be exacerbated somewhat by the loss of part of the existing mature hedgerow for the access. Proposed mitigation, in the form of additional landscaping would restrict the visibility of the proposal from a number of viewpoints. However, it would take a substantial amount of time to mature and be dependent on a number of factors to be successful. Moreover, I am not persuaded that it would fully mitigate the visual impacts.

- 17 For these reasons, the proposal would not be a suitable site for housing in terms of location and would cause significant harm to the character and appearance of the area. It would therefore conflict with Policy C1 of the LP and Policies E5 and E9 of the HHNP. In addition to the requirements set out above, these policies also require new development to be permitted where it would protect, reinforce and not unduly erode the landscape character of the area. There would also be some conflict with Policies DP10 and DP24 which, seek to protect the countryside in recognition of its intrinsic character and beauty and promote well located and designed development.
- 5.35 Overall it is not considered that the site represents a logical, justified or deliverable site and should not be considered for allocation within the Sites DPD.

#### SA 22 Land north of Burleigh Lane, Crawley Down

5.36 As with other proposed sites, it has been identified that the development of this site would cause harm to adjoining heritage assets. Appendix B of the reg 18 SADPD sets out the following:

Burleigh Cottage is a Grade II listed 17th century building faced with weatherboarding and painted brick. Previously the building was the farmhouse for Sandhillgate Farm, and was renamed Burleigh Cottage in the mid 20th century. An outbuilding shown on historic maps dating from the mid 19th century appears to survive to the north east of the house, but otherwise the former farm buildings appear to have been lost. If in fact pre-dating 1948 this outbuilding may be regarded as curtilage listed. Sandhillgate Farm is recorded in the West Sussex Historic Farmstead and Landscape Character assessment, which is part of the HER, as an historic farmstead dating from the 19th century.

Burleigh Cottage is in a semi-rural location on the southern edge of Crawley Down. NPPF: LSH, MEDIUM

5.37 Conclusions in relation to heritage made for other proposed allocations apply equally to this site.

#### SA 23 Land at Hanlye Lane to the east of Ardingly Road, Cuckfield

5.38 No comments.

#### SA 24 Land to the north of Shepherds Walk, Hassocks

5.39 The access for this site is through an adjacent parcel of land which has a ransom strip over this land. The deliverability of this site is therefore in doubt unless a right of access can be confirmed by the site owners.

#### SA 25 Land west of Selsfield Road, Ardingly

5.40 No comments.

### SA 26 Land south of Hammerwood Road, Ashurst Wood

5.41 The site is within the AONB and it is considered it is inappropriate to allocate this site for development without thorough appraisal of reasonable alternatives as previously set out.

#### SA 27 Land at St. Martin Close, Handcross

5.42 No comments.

#### SA28 Land South of The Old Police House, Birchgrove Road, Horsted Keynes

5.43 No comments.

#### SA 29 Land south of St. Stephens Church, Hamsland, Horsted Keynes

5.44 No comments.

#### SA 30 Land to the north Lyndon, Reeds Lane, Sayers Common

- 5.45 The sustainability of this site has been considered in the SA which sets out that the site is more than 20 minutes away from services such as GP and the School. It is therefore not considered that the development of this site would be justified in sustainability terms.
- 5.46 The site is located within the Brick Clay (Weald) Mineral Safeguarding Area. No further evidence has been provided which demonstrates that the site is required for further mineral extraction.

#### SA 31 Land to the rear Firlands, Church Road, Scaynes Hill

5.47 The site is located within the Building Stone (Cuckfield) Mineral safeguarding Area. No further evidence has been provided which demonstrates that the site is required for further mineral extraction.

#### SA 32 Withypitts Farm, Selsfield Road, Turners Hill

- 5.48 No comments.
- 5.49 The site is located within the Brick Clay (Weald) Mineral Safeguarding Area. No further evidence has been provided which demonstrates that the site is required for further mineral extraction.

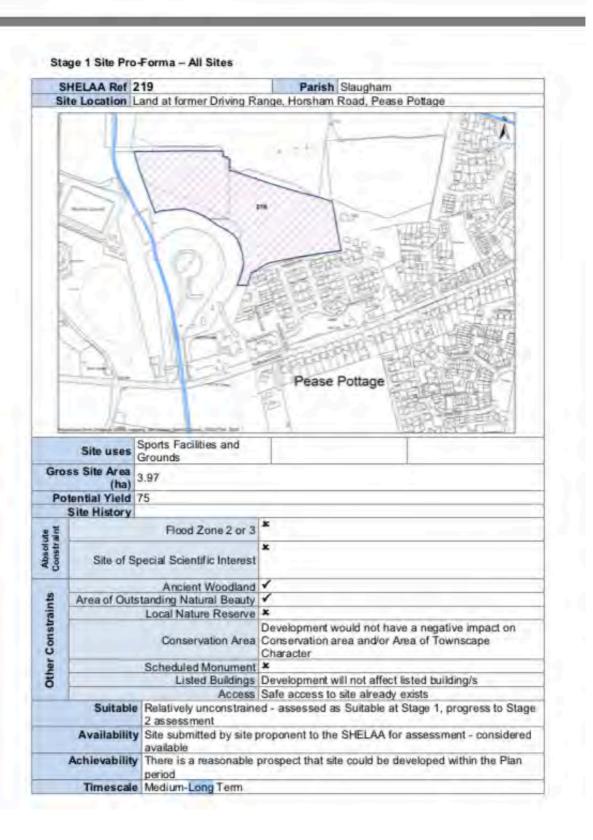
#### SA 33 Ansty Cross Garage, Cuckfield Road, Ansty

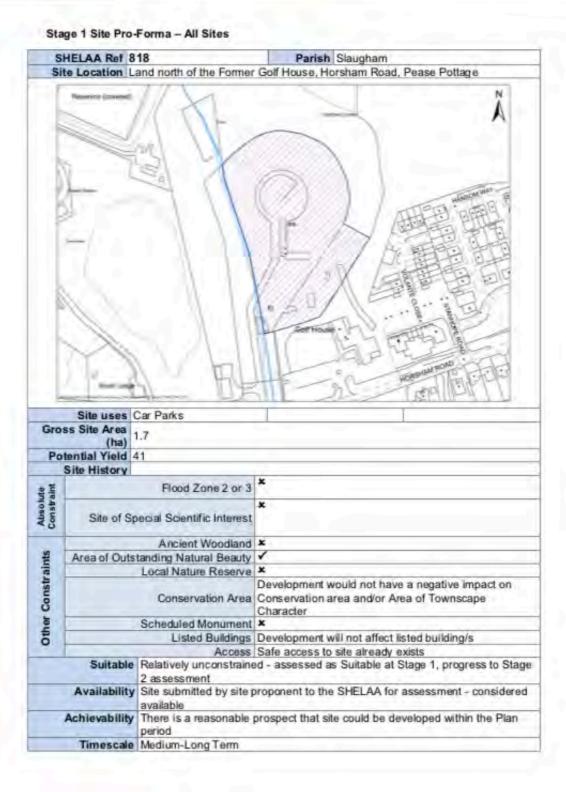
5.50 This site is not considered to be a sustainable location. A total of four separate sites were considered within Ansty with this being the only one accepted. The only difference between this and the other sites was that this scored slightly higher in the SA due to it being PDL. Whilst this is correct it is not considered that the PDL nature of this site makes it appropriate for allocation within the Sites DPD.

#### 6. Conclusions

- 6.1 Detailed consideration of the sites identified for allocation within the SADPD show that there are some significant technical constraints and policy issues with many of the sites. These are matters which have been previously raised as part of regulation 18 representations and the council has done nothing to address these matters.
- 6.2 The analysis of the proposed allocations demonstrates there are some significant failings in the deliverability of the sites which requires reconsideration of the appropriateness of these allocations and selection of alternative sites.
- 6.3 The assessment of reasonable alternatives is significantly lacking and requires further retesting which would logically include this site. As a result, it is not considered that the SADPD is positively prepared or justified and therefore fails the test as set out in the NPPF as a result.
- 6.4 It is clear that the adoption of the SADPD is of significance importance to Mid Sussex in demonstrating a robust and deliverable five year housing land supply. It is therefore suggested that consideration is given to the allocation of the site as set out within these representations which can deliver much needed housing in the early part of the plan period.

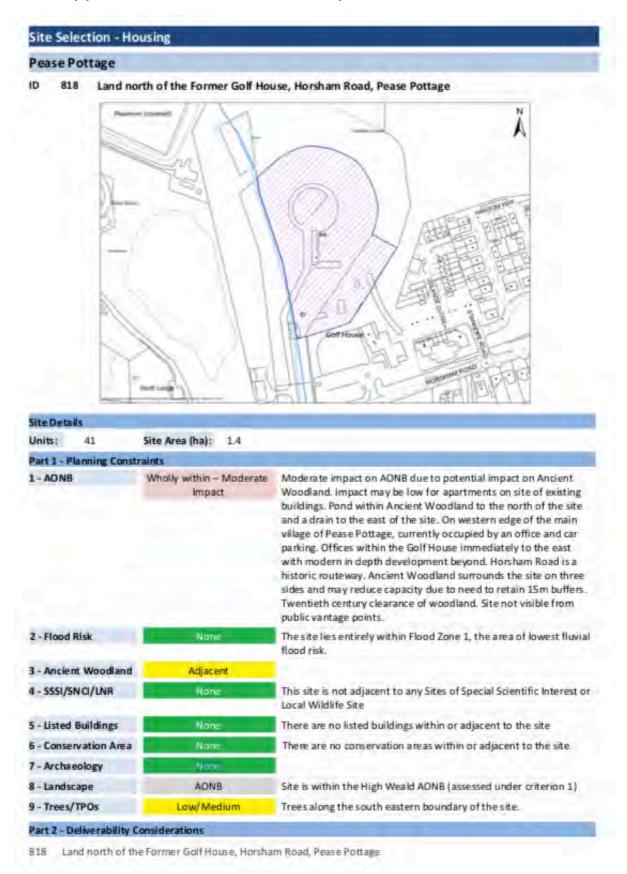
# 7. Appendix 1 – SHELAA Extract – February 2020





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### 8. Appendix 2 – Site Selection Paper Extract



0 - Highways		
1 - Local Road/Acces	Name	Safe access to site already exists.
2 - Deliverability	Reasonable prospect developability	Housebuilder in an option agreement with the landowner. Intend to submit an application if the site is given a draft allocation in the Site Allocations Document.
3 - Infrastructure	Infrastructure conscity	Developer Questionnaire - normal contributions apply.
art 3 - Sustainability /	Access to Services	
4 - Education	More than 20 Minute Walk	
5 - Health	More than 20 Mim/le Walk	
6 - Services	10-15 Minute Walk	
7 - Public Transport	Poor	
art 4 - Other Comider	ations	
leighbourhood Plan		Minerals
olicy 1 Protecting AOI olicy 2 Protection of It olicy 3 Protection of t im 1 Preventing coale	andscape he open countryside	Minerals considerations unnecessary as site does not progress past detailed assessment stage.
Vaste		Environmental Health
Water and wastewater considerations unnecessary as site does not progress past detailed assessment stage.		site Environmental health considerations unnecessary as site does not progress past detailed assessment stage.
Sustainability Appraisal		Notes
ssessment indicates s nd is therefore not te	ite is not a reasonable alternat sted through the SA.	ive
art 5 - Conclusion		

515 Land north of the Former Golf House, Horsham Road, Pease Pottage

#### MSDC – Draft Site Allocations DPD (Regulation 19) Consultation Representation on behalf of Denton Homes – Land North of Horsham Road, Pease Pottage

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# **Site Allocations DPD: Regulation 19 Consultation Response**

# Policy: SA30

ID: 2067

Response Ref: Reg19/2067/16

**Respondent:** Mr A Black

**Organisation:** Andrew Black consulting

On Behalf Of: Denton Homes - Butlers green

Category: Promoter

Appear at Examination? ×



Mid Sussex District Council

Draft Site Allocations DPD (Regulation 19) Consultation

Representation on behalf of Denton Homes – Land North of Butlers Green Road, Haywards Heath

September 2020

Project MSDC Draft Site Allocations DPD

ABC Reference ABC/0075/07

Local Authority Mid Sussex District Council

Client Denton Homes

Issue Final

Author Andrew Black

Date September 2020

Disclaimer: This report has been prepared for the above named client for the purpose agreed in Andrew Black Consulting's (ABC) terms of engagement. Whilst every effort has been made to ensure the accuracy and suitability of the information contained in this report, the results and recommendations presented should not be used as the basis of design, management or implementation of decisions unless the client has first discussed with ABC their suitability for these purposes and ABC has confirmed their suitability in writing to the client. ABC does not warrant, in any way whatsoever, the use of information contained in this report by parties other than the above

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2. Site and Surroundings

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3. Built up Area Boundary Review

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5. Sustainability Appraisal

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6. Assessment of Proposed Sites.

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7. Conclusions

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8. Appendix 1 – SHELAA Extract – February 2020 Error! Bookmark not defined.

### 1. Introduction

- 1.1 These representations for the Draft Site Allocations DPD (Regulation 19) Consultation (Herein referred to as the 'SADPD') are submitted by Andrew Black Consulting on behalf of Denton Homes regarding a within their control in Haywards Heath.
- 1.2 The site is known as Land north of Butlers Green Road, Haywards Heath (SHELAA ID 673).
- 1.3 It is understood that the SADPD has been produced in accordance with the Planning and Compulsory Purchase Act 2004, and other relevant regulations.
- 1.4 The NPPF states that Development Plan Documents should be prepared in accordance with the legal and procedural requirements. To be found to be 'sound', plans must be:
  - a) positively prepared
  - b) justified
  - c) effective, and
  - d) consistent with national policy.
- 1.5 It is with this in mind that these representations are made.
- 1.6 The draft SADPD has been prepared using an extensive and legally compliant evidence base including a Sustainability Appraisal, Habitat Regulations Assessment, Community Involvement Plan, Equalities Impact Assessment, and various technical reports and studies. Of particular note is the Built Up Area Boundary and Policies Map Topic Paper (TP1) produced in August 2020.
- 1.7 The Site Allocations DPD proposes to allocate 22 sites to meet this residual necessary to meet the overall agreed housing requirement for the plan period as reflected in the 'stepped trajectory' and in accordance with the District Plan.
- 1.8 These representations set out the detail of the Site and Surroundings and a response to the detailed parts of the SADPD.

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# 2. Site and Surroundings

2.1 The site is located to the North of Butlers Green Road in Haywards Heath.



Figure 1 – SHELAA Extract

2.2 The site was assessed as Suitable, Available and Achievable in the Medium to Long Term (The full extract of the SHELAA is set out in Appendix 1).

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### 3. Housing Site Allocation Process

- 3.1 The District Plan 2014-2031 sets out the housing requirement for the district for the plan period of 16,390 dwellings. This meets the Objectively Assessed Need (OAN) for the district of 14,892 dwellings in full and makes provision for the agreed quantum of unmet housing need for the Northern West Sussex Housing Market Area, to be addressed within Mid Sussex, of 1,498 dwellings.
- 3.2 The District Plan 2014-2031 established a 'stepped' trajectory for housing delivery with an average of 876 dwellings per annum (dpa) between 2014/15 and 2023/24 and thereafter an average of 1,090 dpa between 2024/25 and 2030/31. This represents a significant increase in housing supply compared with historical rates within the district.
- 3.3 The latest data on completions from MSDC was published in *MSDC Housing Land Supply Position Statement* was published in August 2020 (Document H1) and shows a significant shortfall in delivery against the housing requirement since the start of the plan:

Category		Number of Dwellings
Housing Requirement for the full plan period (April 2014 to March 2031)		16,390
Housing Completions (Apr	il 2014 to March 2020)	4,917
Completions 2014/15		630
Completions 2015/16		868
Completions 2016/17		912
Completions 2017/18		843
Completions 2018/19		661
Completions 2019/20		1003
Housing Supply (April 2014 to March 2031)	Commitments (including District Plan Allocations)	9,689
, , , , , , , , , , , , , , , , , , , ,	Site Allocations DPD - Allocations	1,764
	Windfalls	504
Total Supply (at 1 April 2019)		16,874

Figure 5 – Extract from MSDC Housing Land Supply Position Statement

- 3.4 The Housing Delivery Test was introduced in the July 2018 update to the NPPF. The Housing Delivery Test is an annual measurement of housing delivery for each local authority and the first results were published in February 2019 by the Ministry of Housing, Communities and Local Government (MHCLG). Where the Housing Delivery Test indicates that delivery has fallen below 95% of the local planning authority's housing requirement over the previous 3 years then it is required to prepare an action plan. Where delivery has fallen below 85% of the housing requirement a 20% buffer should be added to the five year supply of deliverable sites.
- 3.5 The result for Mid Sussex produced in February 2020 was 95%. This result is based on monitoring years 2016-17, 2017-18 and 2018-19. Mid Sussex is therefore not required to add 20% buffer for significant under delivery, or prepare an Action Plan. However, it is clear that under current performance the council will struggle when the housing target steps up to 1,090 in 2024.
- 3.6 Para 4.10 of the previous MSDC Housing Land Supply Position Statement (2019) sets out how the identified to the shortfall to calculate the five year supply requirement for the district:

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Annual Requirement As set out in District Plan	876 x 5 years =	4,380
Shortfall spread over remaining plan period	466 divided by 12 remaining years x 5 years	194
Total		4,574
Buffer (see paras 2.4,4.9 above)	10%	457
Total five year supply requirement		5,032

Figure6 – Total Five Year Housing Requirement taken from MSDC Housing Land Supply
Position Statement

- 3.7 MSDC is seeking to confirm the five year housing land supply under the terms of paragraph 74 of the NPPF through submission of the annual position statement to the secretary of state. Paragraph 74 of the framework states:
  - A five year supply of deliverable housing sites, with the appropriate buffer, can be demonstrated where it has been established in a recently adopted plan, or in a subsequent annual position statement which:
  - a) has been produced through engagement with developers and others who have an impact on delivery, and been considered by the Secretary of State; and
  - b) incorporates the recommendation of the Secretary of State, where the position on specific sites could not be agreed during the engagement process.
- 3.8 The report on the Annual Position Statement was issues by the Planning Inspectorate on 13 January 2020. It was confirmed that as the council did not have a recently adopted plan in conformity with the definition of the NPPF then the correct process had not been followed and the inspector was unable to confirm that the council had a five year housing land supply.
- 3.9 It is therefore clear that the council does not currently have a five year housing land supply and the demonstration of sufficiently deliverable sites within the SADPD is of critical importance for MSDC.

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#### **Deliverability of Sites**

3.10 Any sites that have been included in the final Sites DPD will need to pass the tests of deliverability as set out in the NPPF. This is defined within the glossary of the framework as follows:

**Deliverable:** To be considered deliverable, sites for housing should be available now, offer a suitable location for development now, and be achievable with a realistic prospect that housing will be delivered on the site within five years. In particular:

- a) sites which do not involve major development and have planning permission, and all sites with detailed planning permission, should be considered deliverable until permission expires, unless there is clear evidence that homes will not be delivered within five years (for example because they are no longer viable, there is no longer a demand for the type of units or sites have long term phasing plans).
- b) where a site has outline planning permission for major development, has been allocated in a development plan, has a grant of permission in principle, or is identified on a brownfield register, it should only be considered deliverable where there is clear evidence that housing completions will begin on site within five years.
- 3.11 The Planning Practice Guidance provides a further explanation on how the deliverability of sites should be considered:

A site can be considered available for development, when, on the best information available (confirmed by the call for sites and information from land owners and legal searches where appropriate), there is confidence that there are no legal or ownership impediments to development. For example, land controlled by a developer or landowner who has expressed an intention to develop may be considered available.

The existence of planning permission can be a good indication of the availability of sites. Sites meeting the definition of deliverable should be considered available unless evidence indicates otherwise. Sites without permission can be considered available within the first five years, further guidance to this is contained in the 5 year housing land supply guidance. Consideration can also be given to the delivery record of the developers or landowners putting forward sites, and whether the planning background of a site shows a history of unimplemented permissions.

Paragraph: 019 Reference ID: 3-019-20190722

Revision date: 22 07 2019

3.12 It is with this in mind that the proposed sites within the Sites DPD are scrutinised within subsequent sections of this document. It is considered that many of the proposed sites do not fully accord with the definition of delivery and consideration of alternative sites is required.

### 4. Sustainability Appraisal

- 4.1 The SADPD is accompanied by a Sustainability Appraisal (SA) report which is a legal requirement derived from the Planning and Compulsory Purchase Act 2004 (Section 19). Section 39 of the Act requires documents such as the SADPD to be prepared with a view to contributing to the achievement of sustainable development.
- 4.2 The requirement for Strategic Environmental Assessment, in addition to the SA, is set out in the European Directive 2001/42/EC adopted into UK law as the "Environmental Assessment of Plans or Programmes Regulations 2004".
- 4.3 In line with best practice the SEA has been incorporated into the SA of the SADPD.
- 4.4 The planning practice guidance sets out detailed consideration as to how any sustainability should assess alternatives and identify likely significant effects:

The sustainability appraisal needs to consider and compare all reasonable alternatives as the plan evolves, including the preferred approach, and assess these against the baseline environmental, economic and social characteristics of the area and the likely situation if the plan were not to be adopted. In doing so it is important to:

- outline the reasons the alternatives were selected, and identify, describe and evaluate
  their likely significant effects on environmental, economic and social factors using the
  evidence base (employing the same level of detail for each alternative option). Criteria
  for determining the likely significance of effects on the environment are set out
  in schedule 1 to the Environmental Assessment of Plans and Programmes Regulations
  2004;
- as part of this, identify any likely significant adverse effects and measures envisaged to prevent, reduce and, as fully as possible, offset them;
- provide conclusions on the reasons the rejected options are not being taken forward and the reasons for selecting the preferred approach in light of the alternatives.

Any assumptions used in assessing the significance of the effects of the plan will need to be documented. Reasonable alternatives are the different realistic options considered by the planmaker in developing the policies in the plan. They need to be sufficiently distinct to highlight the different sustainability implications of each so that meaningful comparisons can be made.

The development and appraisal of proposals in plans needs to be an iterative process, with the proposals being revised to take account of the appraisal findings.

Paragraph: 018 Reference ID: 11-018-20140306

Revision date: 06 03 2014

4.5 In response to this guidance and requirement, paragraph 6.16 of the Sustainability Appraisal states that:

The Site Selection Paper 2 (paras 6.2 - 6.3) also recognises that, in order to meet the District Plan strategy, conclusions will be compared on a settlement-by-settlement basis with the most suitable sites at each settlement chosen in order to meet the residual needs of that settlement. This may result in some sites being chosen for allocation which have higher negative impact across all the objectives because this will be on the basis that the aim is to distribute allocations according to the District Plan strategy in the first instance; as opposed to simply selecting only

the most sustainable sites in the district (as this may not accord with the spatial strategy and would lead to an unequal distribution of sites across settlements). 20 sites that perform well individually and on a settlement basis, the residual housing need of 1,507 would be met with a small over-supply of 112 units.

- 4.6 Paragraph 6.45 recognises that this small over-supply may not be a sufficient buffer should sites fall out of the allocations process between now and adoption (for example, due to delivery issues, reduction in yield, or any other reasons identified during consultation or the evidence base).
- 4.7 The SA therefore considers reasonable alternatives of option A, B and C as follows:

Option A – 20 'Constant Sites' – 1,619 dwellings

Option B – 20 'Constant Sites' + Folders Lane, Burgess Hill (x3 sites) – 1,962 dwellings.

Option C – 20 'Constant Sites' + Haywards Heath Golf Court – 2,249 dwellings

4.8 Paragraph 6.52 of the SA concludes that:

Following the assessment of all reasonable alternative options for site selection, the preferred option is option B. Although option A would meet residual housing need, option B proposes a sufficient buffer to allow for non-delivery, therefore provides more certainty that the housing need could be met. Whilst option C also proposes a sufficient buffer, it is at the expense of negative impacts arising on environmental objectives. The level of development within option C is approximately 50% above the residual housing need, the positives of delivering an excess of this amount within the Site Allocations DPD is outweighed by the negative environmental impacts associated with it.

- 4.9 It is not considered that this assessment of Option A, B and C is a sufficient enough assessment of reasonable alternatives as required by guidance and legislation. All of the options contain the '20 Constant Sites' with no derivation of alternative options such as those which seek to divert housing growth away from the AONB or designated heritage assets.
- **4.10** It is apparent that other sites other than the 20 Constant Sites will need to be assessed if the council is to adequately demonstrate that reasonable alternatives have been considered as required.

### Assessment of Proposed Sites.

5.1 This section analyses each of the proposed allocations against the tests of deliverability as set out in the NPPF and the potential shortcomings of several of the sites which require significant consideration. The findings of *Appendix B: Housing Site Proformas* of the *Site Selection Paper* 3 (Appendix B) and the conclusions of the Sustainability Appraisal (SA) are considered in detail.

#### SA 12 Land South of 96 Folders Lane, Burgess Hill

- 5.2 Appendix B of the reg 18 SADPD set out that this site has moderate landscape sensitivity and moderate landscape value. This site could be visible from the South Downs National Park. The SA states that an LVIA is required to determine any impact on the national park. Given the weight that the NPPF requires to be placed on the protection of the national park, any impact must be measured prior to allocation. If it is deemed that mitigation would not minimise the harm caused, then the proposed allocation must fall away.
- 5.3 Appendix B of the reg 18 SADPD also set out that a TPO area lines the norther border and potential access route. It should be noted that an application was submitted in 2019 for the *erection of 43 dwellings and associated works* (DM/19/0276) but was withdrawn in September 2019 due to concerns over highways. The deliverability of this site is therefore not considered to be in accordance with the guidance set out in the framework.
- 5.4 Finally, whilst the priority for sites higher in the settlement hierarchy is acknowledged, this is site is very remote from the services offered by Burgess Hill. This is highlighted within the sustainability appraisal for the site which states that it is more than a 20 minute walk from the site to schools, GP and shops.

#### SA 13 Land East of Keymer Road and South of Folders Lane, Burgess Hill.

- As with SA12, this site is in close proximity to the national park and the conclusions as set out above apply equally to this site.
- 5.6 The SA sets out that this is the only site within Burgess Hill to have any impact on listed buildings where it is stated that development of this site would cause *less than substantial harm (medium) on High Chimneys (Grade II listed)*. This is not mentioned within appendix B and this therefore calls into question the consistency of assessment of the sites in this regard.
- 5.7 Given that site SA12 and SA13 are in close proximity to one another it is notable that the cumulative impact of the development of both of these sites has not been assessed for a number of 'in-combination' impacts such as highways and landscape impact.

#### SA 14 Land to the south of Selby Close, Hammonds Ridge, Burgess Hill

- There is a TPO at the front of this site which is potentially why access is proposed through the CALA Homes site (DM/17/0205). No evidence is submitted to suggest that this form of access is agreed or available. The section relating to Highways and Access within the SADPD simply states that this access will need to be investigated further.
- 5.9 The SA and appendix B both point towards the Southern Water Infrastructure which crosses the site. The wording in the DPD recommends that the layout of the development is considered to ensure future access for maintenance and/or improvement work, unless diversion of the sewer is possible. Given that the site is only 0.16ha it is therefore questionable whether there would be adequate space to develop the site for housing and provide accommodation for the sewage infrastructure crossing the site. The deliverability of this site has therefore not been adequately demonstrated.

5.10 As with SA12 and SA13 there are questions of the sustainability of the site given that the SA notes that it is more than a 20 minute walk to the school and GP.

#### SA 15 Land South of Southway, Burgess Hill

- 5.11 The SADPD describes the site as overgrown and inaccessible land designated as a Local Green Space in the Burgess Hill Neighbourhood Plan. It is unclear whether this site was ever previously in use a playing pitches and whether re-provision of this space would be required under Sport England policies.
- **5.12** Appendix B of the reg 18 SADPD points towards issues with relocation of existing parking on the site and states that:

Private parking areas would need to be removed to provide a suitable access point with sufficient visibility. The parking spaces are visitor spaces over which the owners/developers of the subject land have rights to access it to serve new development onto Linnet Lane. Accordingly, a new access into the site can be provided any new development would include two visitor spaces as close as reasonably possible to the existing visitor spaces.

5.13 It is clear that there are substantial issues with deliverability and availability of this site given these constraints and the site should be deleted as a proposed allocation until this can be adequately demonstrated.

#### SA 16 St. Wilfrids Catholic Primary School, School Close, Burgess Hill

- 5.14 The SADPD sets out that the satisfactory relocation of St Wilfrid's Primary School to St Paul's Catholic College site is required before development can commence on the school part of the site. There is also a requirement to re-provide the emergency services accommodation in a new emergency service centre either on this site or elsewhere in the town.
- 5.15 Given that the allocation is for 300 dwellings and requires this relocation first, it is considered that there is insufficient evidence to justify delivery of development of this site in the 6-10 year time period as set out.

#### SA 17 Woodfield House, Isaacs Lane, Burgess Hill

**5.16** The SADPD sets out some significant landscape features on site which require retention and it is stated that:

There is a group Tree Preservation Order in the southern and western areas of the site. High quality substantial new planting of native trees is required, should these be lost to provide access from Isaac's Lane. All other TPO trees on the site are to be retained.

Retain and enhance important landscape features, mature trees, hedgerows and the pond at the south of the site and incorporate these into the landscape structure and Green Infrastructure proposals for the development. Open space is to be provided as an integral part of this landscape structure and should be prominent and accessible within the scheme.

- 5.17 Given that the site is only 1.4 hectares in size it is questionable whether there is adequate space on the site for 30 dwellings after retention of these landscape features.
- **5.18** It is clear from the Sites DPD that access to site is envisaged to be from the Northern Arc where it is stated that:

Integrated access with the Northern Arc Development is strongly preferred, the details of which will need to be investigated further.

5.19 This is also set out in appendix B of the reg 18 SADPD where it is stated that:

Entrance drive to house. Access on bend with limited visibility. 50 mph road. Would involve removal of trees that are subject to TPO. Objection for tree officer. However, future access is anticipated to be provided via the Northern Arc. Whilst the specific details of this remain uncertain on the basis that the enabling development is still at an early stage, it is considered that the identified constraints will no longer apply.

5.20 Given the uncertainty of the deliverability of the land immediately adjoining the site as part of the Northern Arc it is considered that the deliverability of this site is not clear enough to justify allocation within the sites DPD. The uncertainty of this deliverability also has an implication of the sustainability of the site and proximity to adequate services. This is highlighted within the SA where is stated that:

The impact of option (h) on these objectives (Health/Retail/Education) is uncertain; currently the site is a long distance from local services, however, this will change once the Northern Arc is built out.

5.21 Overall it is not considered that this site is suitable for allocation and should be removed from the Sites DPD

#### SA 18 East Grinstead Police Station, College Lane, East Grinstead

**5.22** We have no comments to make in relation to this allocation.

#### SA 19 Land south of Crawley Down Road, Felbridge

- 5.23 As set out, this allocation is directly to the west of the land under the control of Vanderbilt Homes which is also adjoined to the east by land with the benefit of planning permission for 62 dwellings.
- 5.24 Given that the entire area will be included within the revised Built Up Area Boundary, then it is considered logical that the adjoining sites are also identified for allocation within the SADPD.

# SA 20 Land south and west of Imberhorne Upper School, Imberhorne Lane, East Grinstead

- 5.25 There is a requirement in the SADPD for this site to provide a detailed phasing plan with agreement from key stakeholders to secure:
  - Land for early years and primary school (2FE) provision 2.2 ha
  - A land exchange agreement between WSCC and the developer to secure 6 ha (gross) land to create new playing field facilities in association with Imberhorne Secondary School (c.4 ha net excluding land for provision of a new vehicular access onto Imberhorne Lane).
- 5.26 It is unclear when these requirements are to be provided by within the development of any site and whether it is considered that the site would be suitable for allocation should these uses not come forward.
- 5.27 There are clear concerns over the suitability of this site in terms of ecology as set out in appendix B of the reg 18 SADPD which states:

Natural England have concerns over the high density of housing south of Felbridge. Hedgecourt SSSI is accessible from the proposed site allocations via a network of Public Rights of Way. In

line with paragraph 175 of the NPPF, Mid Sussex District Council should determine if allocations are likely to have an adverse effect (either individually or in combination) on SSSI's. The NPPF states that "if significant harm to biodiversity resulting from a development cannot be avoided, adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused." We would be happy to provide further advice if requested, although this may need to be on cost recovery The LWS adjacent to the site is an important recreational route and therefore consideration needs to be given to additional recreational disturbance to its habitats. We are unable to advise you on specific impacts as we have no details of the scale or type of proposed development consider further impacts of disturbance of the LWS and Ancient woodland arising from people and domestic pets, connectivity, light and noise pollution, appropriate buffer and cumulative impact. This site is adjacent to the Worth Way. The SHELAA should be redrawn to remove the section of LWS. The site is an important recreational route and therefore consideration needs to be given to additional recreational disturbance to its habitats. Further consideration be given to impacts of disturbance on LWS and Ancient Woodland from people and pets, impacts on connectivity, impacts of light and noise pollution, need for Ancient Woodland buffer. Cumulative impact with SHELAA 686 and 561.

- 5.28 It is clear that the impacts upon ecology and the SSSI have not been adequately addressed.
- 5.29 As with other sites there is potential for impact upon local heritage assets of Gullege Farm, Imberhorne Farm and Imberhorne Cottages as set out below. The harm in terms of less than strategic harm is inappropriately weighted in the assessment as a means for justification of allocation.

APPENDIX B : Gullege Farm, Imberhorne Lane

This isolated farmstead has historically had a rural setting and continues to do so today. The introduction of a substantial housing development to the north, east and south of the listed manor house would have a fundamental impact on the character of that setting and would detract from the way in which the special interest of this Grade II listed rural manor house and the of the historic farmstead is appreciated.

#### NPPF: LSH, high

Imberhorne Farm and Imberhorne Cottages

In its original incarnation Imberhorne Cottages was probably constructed as a dwelling providing accommodation between London and Lewes, on Lewes Priory lands. It may have acted as the manor house to the substantial manor of Imberhorne, which was owned by the Priory. It seems likely that the building became farm cottages when the new farmhouse (Imberhorne) was constructed in the early 19th century. The currently rural setting of both buildings within the Imberhorne farmstead informs an understanding of their past function and therefore contributes positively to their special interest.

The proposed development site would engulf the farmstead to the west, north and east and would have a fundamental impact on the character of the greater part of its existing of rural setting and on views from both listed buildings. It would adversely affect the manner in which the special interest of the two listed buildings within their rural setting is appreciated, including by those passing along the PROW to the north of the farmstead.

#### NPPF: LSH, high

5.30 The potential harm to heritage is also referred to in the SA which states that:

option (e) which is not constrained by a conservation area, but would have a less than substantial harm (high) on Gullege Farm (Grade II listed) and Imberhorne Farm and Imberhorne Cottages (Grade II\* listed). As this is a large site, there is potential to still achieve the yield whilst providing necessary mitigation to lower the impact on these heritage assets.

5.31 Notwithstanding the significant constraints to delivery from this site it is notable that the delivery of 550 in 6-10 years as set out in the SADPD is particularly optimistic and would need to be revised in order to be realistic on the constraints to delivery including the requirement for provision of education on the site.

#### SA 21 Rogers Farm, Fox Hill, Haywards Heath

5.32 This site is also significantly constrained by the presence of heritage assets. This is referenced in the SA which states that:

Site option (b) is constrained in terms of impact upon a listed building; it would have a less than substantial harm (medium) on Cleavewater (Grade II listed) and The Old Cottage (Grade II listed).

**5.33** Appendix B also references these heritage assets together with an assessment of the likely impact as follows:

Cleavewaters, Fox Hill there would be a fundamental impact not only on views from the building and associated farmstead but on the context and manner in which the farmhouse and farmstead are appreciated by those travelling along the road which runs between the farmstead and the site. **NPPF: LSH, MID** 

Olde Cottage, there would be some potential impact on views from the Cottage and its garden setting. The belt of woodland between the asset and the site is relatively narrow and development on the site is likely to be visible, particularly in winter. There would also be an impact on the setting in which the Cottage is appreciated by those approaching along the access drive from Ditchling Road. **NPPF: LSH, MID** 

- 5.34 The impact on heritage assets and character of the area has been assessed in an appeal decision on the site (APP/D3830/W/17/3187318) issued in January 2019 following an application for up to 37 dwellings on the site (DM/16/3998).
  - 15 The combination of the buffer and local topography would mean that any development would be clearly visible on the approach down Lunce's Hill and perceived as a separate and distinct residential development. I am not persuaded that it would be seen within the context of an urban fringe setting as the appellant suggests. On the contrary it would be a harmful encroachment into the countryside and the rural character of the approach into the settlement would be irrevocably changed and harmed through the loss of this open land.
  - 16 Overall, the proposal would result in an unacceptable suburbanisation of the appeal site that would fundamentally change the character and appearance of the rural setting of the settlement. The effects would also be exacerbated somewhat by the loss of part of the existing mature hedgerow for the access. Proposed mitigation, in the form of additional landscaping would restrict the visibility of the proposal from a number of viewpoints. However, it would take a substantial amount of time to mature and be dependent on a number of factors to be successful. Moreover, I am not persuaded that it would fully mitigate the visual impacts.

- 17 For these reasons, the proposal would not be a suitable site for housing in terms of location and would cause significant harm to the character and appearance of the area. It would therefore conflict with Policy C1 of the LP and Policies E5 and E9 of the HHNP. In addition to the requirements set out above, these policies also require new development to be permitted where it would protect, reinforce and not unduly erode the landscape character of the area. There would also be some conflict with Policies DP10 and DP24 which, seek to protect the countryside in recognition of its intrinsic character and beauty and promote well located and designed development.
- 5.35 Overall it is not considered that the site represents a logical, justified or deliverable site and should not be considered for allocation within the Sites DPD.

#### SA 22 Land north of Burleigh Lane, Crawley Down

5.36 As with other proposed sites, it has been identified that the development of this site would cause harm to adjoining heritage assets. Appendix B of the reg 18 SADPD sets out the following:

Burleigh Cottage is a Grade II listed 17th century building faced with weatherboarding and painted brick. Previously the building was the farmhouse for Sandhillgate Farm, and was renamed Burleigh Cottage in the mid 20th century. An outbuilding shown on historic maps dating from the mid 19th century appears to survive to the north east of the house, but otherwise the former farm buildings appear to have been lost. If in fact pre-dating 1948 this outbuilding may be regarded as curtilage listed. Sandhillgate Farm is recorded in the West Sussex Historic Farmstead and Landscape Character assessment, which is part of the HER, as an historic farmstead dating from the 19th century.

Burleigh Cottage is in a semi-rural location on the southern edge of Crawley Down. NPPF: LSH, MEDIUM

5.37 Conclusions in relation to heritage made for other proposed allocations apply equally to this site.

#### SA 23 Land at Hanlye Lane to the east of Ardingly Road, Cuckfield

5.38 No comments.

#### SA 24 Land to the north of Shepherds Walk, Hassocks

5.39 The access for this site is through an adjacent parcel of land which has a ransom strip over this land. The deliverability of this site is therefore in doubt unless a right of access can be confirmed by the site owners.

#### SA 25 Land west of Selsfield Road, Ardingly

5.40 No comments.

#### SA 26 Land south of Hammerwood Road, Ashurst Wood

5.41 The site is within the AONB and it is considered it is inappropriate to allocate this site for development without thorough appraisal of reasonable alternatives as previously set out.

#### SA 27 Land at St. Martin Close, Handcross

5.42 No comments.

#### SA28 Land South of The Old Police House, Birchgrove Road, Horsted Keynes

5.43 No comments.

#### SA 29 Land south of St. Stephens Church, Hamsland, Horsted Keynes

5.44 No comments.

#### SA 30 Land to the north Lyndon, Reeds Lane, Sayers Common

- 5.45 The sustainability of this site has been considered in the SA which sets out that the site is more than 20 minutes away from services such as GP and the School. It is therefore not considered that the development of this site would be justified in sustainability terms.
- 5.46 The site is located within the Brick Clay (Weald) Mineral Safeguarding Area. No further evidence has been provided which demonstrates that the site is required for further mineral extraction.

#### SA 31 Land to the rear Firlands, Church Road, Scaynes Hill

5.47 The site is located within the Building Stone (Cuckfield) Mineral safeguarding Area. No further evidence has been provided which demonstrates that the site is required for further mineral extraction.

#### SA 32 Withypitts Farm, Selsfield Road, Turners Hill

- 5.48 No comments.
- 5.49 The site is located within the Brick Clay (Weald) Mineral Safeguarding Area. No further evidence has been provided which demonstrates that the site is required for further mineral extraction.

#### SA 33 Ansty Cross Garage, Cuckfield Road, Ansty

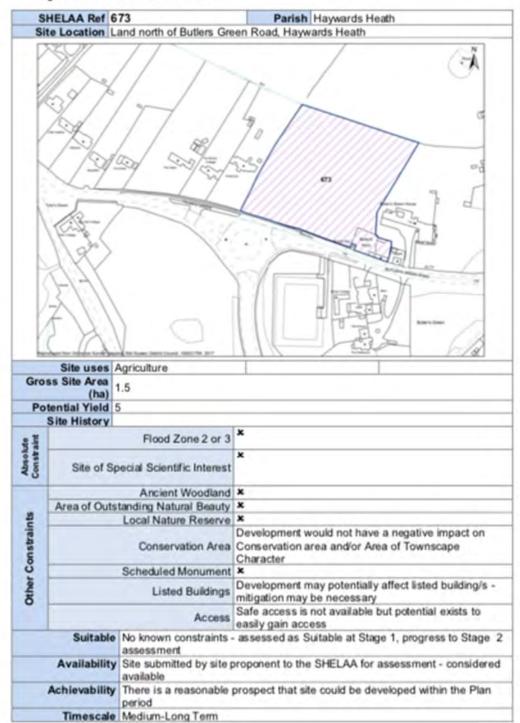
5.50 This site is not considered to be a sustainable location. A total of four separate sites were considered within Ansty with this being the only one accepted. The only difference between this and the other sites was that this scored slightly higher in the SA due to it being PDL. Whilst this is correct it is not considered that the PDL nature of this site makes it appropriate for allocation within the Sites DPD.

### 6. Conclusions

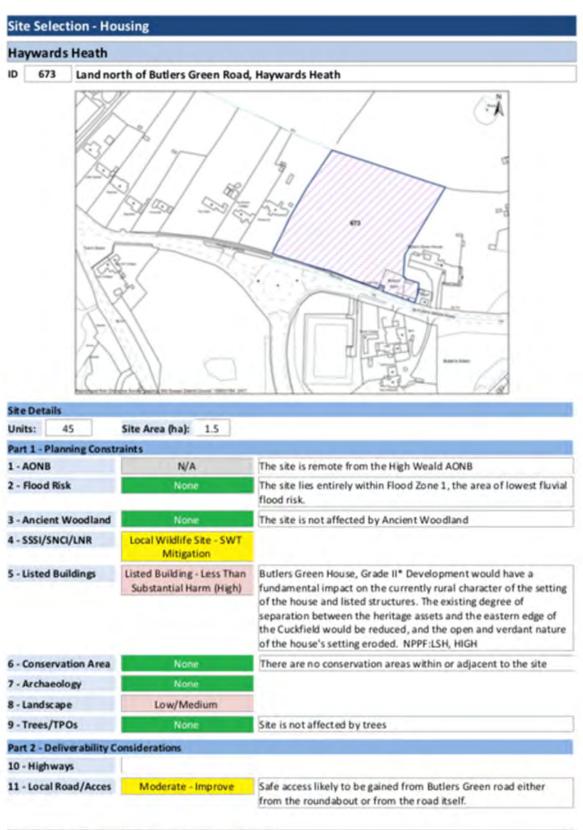
- 6.1 Detailed consideration of the sites identified for allocation within the SADPD show that there are some significant technical constraints and policy issues with many of the sites. These are matters which have been previously raised as part of regulation 18 representations and the council has done nothing to address these matters.
- 6.2 The analysis of the proposed allocations demonstrates there are some significant failings in the deliverability of the sites which requires reconsideration of the appropriateness of these allocations and selection of alternative sites.
- 6.3 The assessment of reasonable alternatives is significantly lacking and requires further retesting which would logically include this site. As a result, it is not considered that the SADPD is positively prepared or justified and therefore fails the test as set out in the NPPF as a result.
- 6.4 It is clear that the adoption of the SADPD is of significance importance to Mid Sussex in demonstrating a robust and deliverable five year housing land supply. It is therefore suggested that consideration is given to the allocation of the site as set out within these representations which can deliver much needed housing in the early part of the plan period.

### 7. Appendix 1 – SHELAA Extract – February 2020

Stage 1 Site Pro-Forma - All Sites



### 8. Appendix 2 – Site Selection Paper Extract



673 Land north of Butlers Green Road, Haywards Heath



673 Land north of Butlers Green Road, Haywards Heath

# **Site Allocations DPD: Regulation 19 Consultation Response**

# Policy: SA30

ID: 2079

**Response Ref:** Reg19/2079/18

**Respondent:** Mr A Black

**Organisation:** Andrew Black consulting

On Behalf Of: Vanderbilt Homes - Hurstwood HH

Category: Promoter

Appear at Examination? ×



Mid Sussex District Council

Draft Site Allocations DPD (Regulation 19) Consultation

Representation on behalf of Vanderbilt Homes – Land at Junction of Hurstwood Lane and Colwell Lane, Haywards Heath

September 2020

Project MSDC Draft Site Allocations DPD

ABC Reference ABC/0072/07b

Local Authority Mid Sussex District Council

Client Vanderbilt Homes

Issue Final

Author Andrew Black

Date September 2020

Disclaimer: This report has been prepared for the above named client for the purpose agreed in Andrew Black Consulting's (ABC) terms of engagement. Whilst every effort has been made to ensure the accuracy and suitability of the information contained in this report, the results and recommendations presented should not be used as the basis of design, management or implementation of decisions unless the client has first discussed with ABC their suitability for these purposes and ABC has confirmed their suitability in writing to the client. ABC does not warrant, in any way whatsoever, the use of information contained in this report by parties other than the above

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#### 1. Introduction

- 1.1 These representations for the Draft Site Allocations DPD (Regulation 19) Consultation (Herein referred to as the 'SADPD') are submitted by Andrew Black Consulting on behalf of Vanderbilt Homes regarding a site within their control in Haywards Heath.
- 1.2 The site under the control of Vanderbilt Homes is Land at Junction of Hurstwood Lane and Colwell Lane, Haywards Heath and was previously considered in the SHELAA (ref 508) as Available, Achievable and Deliverable.
- 1.3 It is understood that the SADPD has been produced in accordance with the Planning and Compulsory Purchase Act 2004, and other relevant regulations.
- 1.4 The NPPF states that Development Plan Documents should be prepared in accordance with the legal and procedural requirements. To be found to be 'sound', plans must be:
  - a) positively prepared
  - b) justified
  - c) effective, and
  - d) consistent with national policy.
- 1.5 It is with this in mind that the representations are made.
- 1.6 The draft SADPD has been prepared using an extensive and legally compliant evidence base including a Sustainability Appraisal, Habitat Regulations Assessment, Community Involvement Plan, Equalities Impact Assessment, and various technical reports and studies. Of particular note is the Built Up Area Boundary and Policies Map Topic Paper (TP1) produced in August 2020.
- 1.7 The Site Allocations DPD proposes to allocate 22 sites to meet this residual necessary to meet the overall agreed housing requirement for the plan period as reflected in the 'stepped trajectory' and in accordance with the District Plan.
- 1.8 These representations set out the detail of the Site and Surroundings and a response to the detailed parts of the SADPD.

### 2. Site and Surroundings

2.1 The Site is located to the at the Junction of Hurstwood Lane and Colwell Lane in Haywards Heath.



Figure 1 – SHELAA Extract

- 2.2 The site was assessed in the most recent SHELAA (Ref 508) as Suitable, Available and Achievable in the Medium to Long Term (The full extract of the SHELAA is set out in Appendix 1). Several constraints were note within the HELAA form which are addressed below.
- 2.3 The SHELAA Appraisal of the site confirms that there are no constraints to the development of the site in terms of Flooding, SSSIs, Ancient Woodland, AONB, Local Nature Reserves, Heritage Assets or Access.

#### **Planning History**

- 2.4 The site does not have any planning history.
- 2.5 The site is in close proximity to a site which was allocated under the District Plan (H1) and has a current application for a substantial application. An application was submitted in 2017 (DM/17/2739) with the following description:
  - Outline application for development of up to 375 new homes, a 2 form entry primary school with Early Years provision, a new burial ground, allotments, Country Park, car parking, 'Green Way', new vehicular accesses and associated parking and landscaping. All matters are to be reserved except for access.
- 2.6 A resolution to grant planning permission was made by planning committee in August 2018. A formal planning decision is yet to be issued as further negotiations are taking place regarding the s106 agreement. However, the allocation of the site and the resolution to grant planning

permission is considered as a strong indicator that development of the site is highly likely to take place and will result in substantial change in the immediate context of the area.

2.7 The proximity of the site to the site under control of Vanderbilt Homes (shown in red) is set out below:



Figure 2 – Proximity of Site to significant application

2.8 The proposed policies map shows the extent of the built up area boundary, the proposed allocation of the site to the north (H1) and the proposed allocated site SA21 to the south-west.

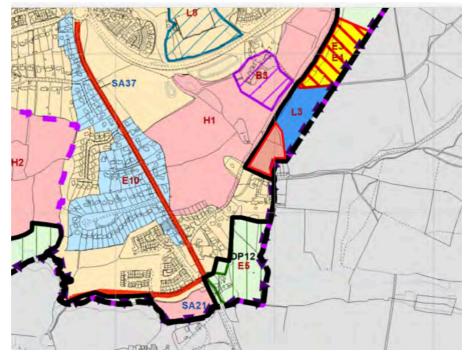


Figure 3 – Proposed Site Allocations Proposals Map

2.9 Specific representations are made against each of the allocated sites in subsequent sections of these representations. However, of specific focus is the allocation of Rogers Farm on Fox Hill in Haywards Heath. Significant concerns are raised as part of these representations as to why the Rogers Farm site has been allocated instead of the more obvious site under the control of Vanderbilt Homes at Hurstwood Lane.

#### SA 21 Rogers Farm, Fox Hill, Haywards Heath

2.10 This site is significantly constrained by the presence of heritage assets. This is referenced in the SA which states that:

Site option (b) is constrained in terms of impact upon a listed building; it would have a less than substantial harm (medium) on Cleavewater (Grade II listed) and The Old Cottage (Grade II listed).

2.11 Appendix B of the reg 18 SADPD also references these heritage assets together with an assessment of the likely impact as follows:

Cleavewaters, Fox Hill there would be a fundamental impact not only on views from the building and associated farmstead but on the context and manner in which the farmhouse and farmstead are appreciated by those travelling along the road which runs between the farmstead and the site. **NPPF: LSH, MID** 

Olde Cottage, there would be some potential impact on views from the Cottage and its garden setting. The belt of woodland between the asset and the site is relatively narrow and development on the site is likely to be visible, particularly in winter. There would also be an impact on the setting in which the Cottage is appreciated by those approaching along the access drive from Ditchling Road. NPPF: LSH, MID

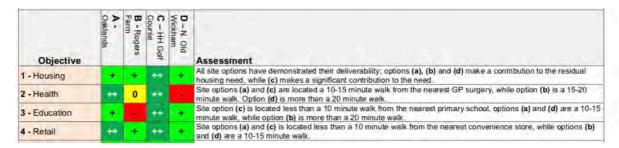
- 2.12 The impact on heritage assets and character of the area has been assessed in an appeal decision on the site (APP/D3830/W/17/3187318) issued in January 2019 following an application for up to 37 dwellings on the site (DM/16/3998).
  - 15 The combination of the buffer and local topography would mean that any development would be clearly visible on the approach down Lunce's Hill and perceived as a separate and distinct residential development. I am not persuaded that it would be seen within the context of an urban fringe setting as the appellant suggests. On the contrary it would be a harmful encroachment into the countryside and the rural character of the approach into the settlement would be irrevocably changed and harmed through the loss of this open land.
  - 16 Overall, the proposal would result in an unacceptable suburbanisation of the appeal site that would fundamentally change the character and appearance of the rural setting of the settlement. The effects would also be exacerbated somewhat by the loss of part of the existing mature hedgerow for the access. Proposed mitigation, in the form of additional landscaping would restrict the visibility of the proposal from a number of viewpoints. However, it would take a substantial amount of time to mature and be dependent on a number of factors to be successful. Moreover, I am not persuaded that it would fully mitigate the visual impacts.
  - 17 For these reasons, the proposal would not be a suitable site for housing in terms of location and would cause significant harm to the character and appearance of the area. It would therefore conflict with Policy C1 of the LP and Policies E5 and E9 of the HHNP. In addition to the requirements set out above, these policies also require new development to be

permitted where it would protect, reinforce and not unduly erode the landscape character of the area. There would also be some conflict with Policies DP10 and DP24 which, seek to protect the countryside in recognition of its intrinsic character and beauty and promote well located and designed development.

- 2.13 In addition to consideration of heritage matters it would appear that the consideration of Sustainability / Access to Services is inconsistent between the Site Selection Paper (SSP3) and the Sustainability Appraisal.
- 2.14 In the Site Selection Paper (SSP3) the Sustainability / Access to Services of Rogers Farm is assessed as follows:

14 - Education More than 20 Minute Walk	
	Word Chair 20 Williate Walk
15 - Health	15-20 Minute Walk
16 - Services	15-20 Minute Walk
17 - Public Transport	Fair

2.15 However, this differs from the assessment of these matters within the Sustainability Appraisal where the following conclusions are reached.



- 2.16 The site is assessed positively for its access to retail and it is stated that they are a 10-15 minute walk when the SA correctly identifies that they are a 15-20 minute walk.
- 2.17 The Site Selection Paper (SSP3) for the Land at Hurstwood Lane makes it clear that whilst connectivity is currently poor, facilities will be provided at the Hurst Farm development and it is therefore considered that the SA would rate these as positive.
- 2.18 It is therefore clear that the Hurstwood Lane site has been overlooked in favour of the less suitable site at Rogers Farm.
- 2.19 It is apparent that the heritage constraints and poor sustainability for Rogers Farm weigh heavily against the allocation of the site and this should be readdressed within the final version of the SADPD.

### 3. Housing Site Allocation Process

- 3.1 The District Plan 2014-2031 sets out the housing requirement for the district for the plan period of 16,390 dwellings. This meets the Objectively Assessed Need (OAN) for the district of 14,892 dwellings in full and makes provision for the agreed quantum of unmet housing need for the Northern West Sussex Housing Market Area, to be addressed within Mid Sussex, of 1,498 dwellings.
- 3.2 The District Plan 2014-2031 established a 'stepped' trajectory for housing delivery with an average of 876 dwellings per annum (dpa) between 2014/15 and 2023/24 and thereafter an average of 1,090 dpa between 2024/25 and 2030/31. This represents a significant increase in housing supply compared with historical rates within the district.
- 3.3 The latest data on completions from MSDC was published in *MSDC Housing Land Supply Position Statement* was published in August 2020 (Document H1) and shows a significant shortfall in delivery against the housing requirement since the start of the plan:

Category		Number of Dwellings
Housing Requirement for the full plan period (April 2014 to March 2031)		16,390
Housing Completions (Apr	il 2014 to March 2020)	4,917
Completions 2014/15		630
Completions 2015/16		868
Completions 2016/17		912
Completions 2017/18		843
Completions 2018/19		661
Completions 2019/20		1003
Housing Supply (April 2014 to March 2031)	Commitments (including District Plan Allocations)	9,689
, , ,	Site Allocations DPD - Allocations	1,764
	Windfalls	504
Total Supply (at 1 April 201	9)	16,874

Figure 4 – Extract from MSDC Housing Land Supply Position Statement

- 3.4 The Housing Delivery Test was introduced in the July 2018 update to the NPPF. The Housing Delivery Test is an annual measurement of housing delivery for each local authority and the first results were published in February 2019 by the Ministry of Housing, Communities and Local Government (MHCLG). Where the Housing Delivery Test indicates that delivery has fallen below 95% of the local planning authority's housing requirement over the previous 3 years then it is required to prepare an action plan. Where delivery has fallen below 85% of the housing requirement a 20% buffer should be added to the five year supply of deliverable sites.
- 3.5 The result for Mid Sussex produced in February 2020 was 95%. This result is based on monitoring years 2016-17, 2017-18 and 2018-19. Mid Sussex is therefore not required to add 20% buffer for significant under delivery, or prepare an Action Plan. However, it is clear that under current performance the council will struggle when the housing target steps up to 1,090 in 2024.
- 3.6 Para 4.10 of the previous MSDC Housing Land Supply Position Statement (2019) sets out the five year supply requirement for the district as follows:

Annual Requirement	876 x 5 years =	4,380
As set out in District Plan		
Shortfall spread over	466 divided by 12 remaining	194
remaining plan period	years x 5 years	
Total		4,574
Buffer (see paras 2.4,4.9 above)	10%	457
Total five year supply requirement		5,032

Figure 5 – Total Five Year Housing Requirement taken from MSDC Housing Land Supply
Position Statement

- 3.7 MSDC is seeking to confirm the five year housing land supply under the terms of paragraph 74 of the NPPF through submission of the annual position statement to the secretary of state. Paragraph 74 of the framework states:
  - A five year supply of deliverable housing sites, with the appropriate buffer, can be demonstrated where it has been established in a recently adopted plan, or in a subsequent annual position statement which:
  - a) has been produced through engagement with developers and others who have an impact on delivery, and been considered by the Secretary of State; and
  - b) incorporates the recommendation of the Secretary of State, where the position on specific sites could not be agreed during the engagement process.
- 3.8 The report on the Annual Position Statement was issued by the Planning Inspectorate on 13 January 2020. It was confirmed that as the council did not have a recently adopted plan in conformity with the definition of the NPPF then the correct process had not been followed and the inspector was unable to confirm that the council had a five year housing land supply.
- 3.9 It is therefore clear that the council does not currently have a five year housing land supply and the demonstration of sufficiently deliverable sites within the SADPD is of critical importance for MSDC.

#### **Deliverability of Sites**

3.10 Any sites that have been included in the final Sites DPD will need to pass the tests of deliverability as set out in the NPPF. This is defined within the glossary of the framework as follows:

**Deliverable:** To be considered deliverable, sites for housing should be available now, offer a suitable location for development now, and be achievable with a realistic prospect that housing will be delivered on the site within five years. In particular:

- a) sites which do not involve major development and have planning permission, and all sites with detailed planning permission, should be considered deliverable until permission expires, unless there is clear evidence that homes will not be delivered within five years (for example because they are no longer viable, there is no longer a demand for the type of units or sites have long term phasing plans).
- b) where a site has outline planning permission for major development, has been allocated in a development plan, has a grant of permission in principle, or is identified on a brownfield register, it should only be considered deliverable where there is clear evidence that housing completions will begin on site within five years.
- 3.11 The Planning Practice Guidance provides a further explanation on how the deliverability of sites should be considered:

A site can be considered available for development, when, on the best information available (confirmed by the call for sites and information from land owners and legal searches where appropriate), there is confidence that there are no legal or ownership impediments to development. For example, land controlled by a developer or landowner who has expressed an intention to develop may be considered available.

The existence of planning permission can be a good indication of the availability of sites. Sites meeting the definition of deliverable should be considered available unless evidence indicates otherwise. Sites without permission can be considered available within the first five years, further guidance to this is contained in the 5 year housing land supply guidance. Consideration can also be given to the delivery record of the developers or landowners putting forward sites, and whether the planning background of a site shows a history of unimplemented permissions.

Paragraph: 019 Reference ID: 3-019-20190722

Revision date: 22 07 2019

3.12 It is with this in mind that the proposed sites within the Sites DPD are scrutinised within subsequent sections of this document. It is considered that many of the proposed sites do not fully accord with the definition of delivery and consideration of alternative sites is required.

#### **Area of Outstanding Natural Beauty**

3.13 A significant number of the proposed sites are located within, or close to, the High Weald AONB. Paragraph 172 sets out the significant protection which should be afforded to the AONB in planning terms and states that:

Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife

and cultural heritage are also important considerations in these areas, and should be given great weight in National Parks and the Broads. The scale and extent of development within these designated areas should be limited. Planning permission should be refused for major development other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest. Consideration of such applications should include an assessment of:

- a) the need for the development, including in terms of any national considerations, and the impact of permitting it, or refusing it, upon the local economy;
- b) the cost of, and scope for, developing outside the designated area, or meeting the need for it in some other way; and
- c) any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated.
- 3.14 It is part b of paragraph 172 that is of particular importance in this instance. It is not considered that MSDC has considered sites outside of the AONB which could be used to meet the identified residual housing requirement. It would appear that sites have been selected because of their conformity to the spatial strategy and hierarchy without the proper application of the 'great weight' required to protect the AONB.
- 3.15 The approach of allocating sites within the AONB as opposed to 'outside the designated area' should have been tested through a robust analysis of reasonable alternatives within the Sustainability Appraisal. The failure to do this adequately is a matter of soundness and it is considered that the Sites DPD fails the tests within the NPPF on this basis alone.

#### **Historic Environment**

- 3.16 Several of the allocations within the DPD are in close proximity to heritage assets. Paragraph 193 of the framework sets out the approach to heritage assets as follows:
  - When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation (and the more important the asset, the greater the weight should be). This is irrespective of whether any potential harm amounts to substantial harm, total loss or less than substantial harm to its significance.
- 3.17 In many instances the council themselves suggest that the development of housing on the sites is likely to have 'less than significant harm' on the heritage assets in question. Paragraph 196 of the framework sets out the approach which should be taken in this instance:
  - Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the
- 3.18 It is not considered that the harm caused to heritage assets has been adequately assessed within the Sustainability Appraisal for many of the proposed sites and further consideration is required of the sites in this regard. This would include assessing sites which would not have an impact on heritage assets through a robust application of reasonable alternatives within the Sustainability Appraisal.

# 4. Sustainability Appraisal

- 4.1 The SADPD is accompanied by a Sustainability Appraisal (SA) report which is a legal requirement derived from the Planning and Compulsory Purchase Act 2004 (Section 19). Section 39 of the Act requires documents such as the SADPD to be prepared with a view to contributing to the achievement of sustainable development.
- 4.2 The requirement for Strategic Environmental Assessment, in addition to the SA, is set out in the European Directive 2001/42/EC adopted into UK law as the "Environmental Assessment of Plans or Programmes Regulations 2004".
- 4.3 In line with best practice the SEA has been incorporated into the SA of the SADPD.
- 4.4 The planning practice guidance sets out detailed consideration as to how any sustainability should assess alternatives and identify likely significant effects:

The sustainability appraisal needs to consider and compare all reasonable alternatives as the plan evolves, including the preferred approach, and assess these against the baseline environmental, economic and social characteristics of the area and the likely situation if the plan were not to be adopted. In doing so it is important to:

- outline the reasons the alternatives were selected, and identify, describe and evaluate
  their likely significant effects on environmental, economic and social factors using the
  evidence base (employing the same level of detail for each alternative option). Criteria
  for determining the likely significance of effects on the environment are set out
  in schedule 1 to the Environmental Assessment of Plans and Programmes Regulations
  2004;
- as part of this, identify any likely significant adverse effects and measures envisaged to prevent, reduce and, as fully as possible, offset them;
- provide conclusions on the reasons the rejected options are not being taken forward and the reasons for selecting the preferred approach in light of the alternatives.

Any assumptions used in assessing the significance of the effects of the plan will need to be documented. Reasonable alternatives are the different realistic options considered by the planmaker in developing the policies in the plan. They need to be sufficiently distinct to highlight the different sustainability implications of each so that meaningful comparisons can be made.

The development and appraisal of proposals in plans needs to be an iterative process, with the proposals being revised to take account of the appraisal findings.

Paragraph: 018 Reference ID: 11-018-20140306

Revision date: 06 03 2014

4.5 In response to this guidance and requirement, paragraph 6.16 of the Sustainability Appraisal states that:

The Site Selection Paper 2 (paras 6.2 - 6.3) also recognises that, in order to meet the District Plan strategy, conclusions will be compared on a settlement-by-settlement basis with the most suitable sites at each settlement chosen in order to meet the residual needs of that settlement. This may result in some sites being chosen for allocation which have higher negative impact across all the objectives because this will be on the basis that the aim is to distribute allocations according to the District Plan strategy in the first instance; as opposed to simply selecting only

the most sustainable sites in the district (as this may not accord with the spatial strategy and would lead to an unequal distribution of sites across settlements). 20 sites that perform well individually and on a settlement basis, the residual housing need of 1,507 would be met with a small over-supply of 112 units.

- 4.6 Paragraph 6.45 recognises that this small over-supply may not be a sufficient buffer should sites fall out of the allocations process between now and adoption (for example, due to delivery issues, reduction in yield, or any other reasons identified during consultation or the evidence base).
- 4.7 The SA therefore considers reasonable alternatives of option A, B and C as follows:

Option A – 20 'Constant Sites' – 1,619 dwellings

Option B - 20 'Constant Sites' + Folders Lane, Burgess Hill (x3 sites) - 1,962 dwellings.

Option C – 20 'Constant Sites' + Haywards Heath Golf Court – 2,249 dwellings

4.8 Paragraph 6.52 of the SA concludes that:

Following the assessment of all reasonable alternative options for site selection, the preferred option is option B. Although option A would meet residual housing need, option B proposes a sufficient buffer to allow for non-delivery, therefore provides more certainty that the housing need could be met. Whilst option C also proposes a sufficient buffer, it is at the expense of negative impacts arising on environmental objectives. The level of development within option C is approximately 50% above the residual housing need, the positives of delivering an excess of this amount within the Site Allocations DPD is outweighed by the negative environmental impacts associated with it.

- 4.9 It is not considered that this assessment of Option A, B and C is a sufficient enough assessment of reasonable alternatives as required by guidance and legislation. All of the options contain the '20 Constant Sites' with no derivation of alternative options such as those which seek to divert housing growth away from the AONB or designated heritage assets.
- 4.10 It is apparent that other sites other than the 20 Constant Sites will need to be assessed if the council is to adequately demonstrate that reasonable alternatives have been considered as required.

## 5. Assessment of Proposed Sites.

5.1 This section analyses each of the proposed allocations against the tests of deliverability as set out in the NPPF and the potential shortcomings of several of the sites which require significant consideration. The findings of *Appendix B: Housing Site Proformas* of the *Site Selection Paper* 3 (Appendix B) and the conclusions of the Sustainability Appraisal (SA) are considered in detail.

## SA 12 Land South of 96 Folders Lane, Burgess Hill

- 5.2 Appendix B of the reg 18 SADPD set out that this site has moderate landscape sensitivity and moderate landscape value. This site could be visible from the South Downs National Park. The SA states that an LVIA is required to determine any impact on the national park. Given the weight that the NPPF requires to be placed on the protection of the national park, any impact must be measured prior to allocation. If it is deemed that mitigation would not minimise the harm caused, then the proposed allocation must fall away.
- 5.3 Appendix B of the reg 18 SADPD also set out that a TPO area lines the norther border and potential access route. It should be noted that an application was submitted in 2019 for the *erection of 43 dwellings and associated works* (DM/19/0276) but was withdrawn in September 2019 due to concerns over highways. The deliverability of this site is therefore not considered to be in accordance with the guidance set out in the framework.
- 5.4 Finally, whilst the priority for sites higher in the settlement hierarchy is acknowledged, this is site is very remote from the services offered by Burgess Hill. This is highlighted within the sustainability appraisal for the site which states that it is more than a 20 minute walk from the site to schools, GP and shops.

## SA 13 Land East of Keymer Road and South of Folders Lane, Burgess Hill.

- 5.5 As with SA12, this site is in close proximity to the national park and the conclusions as set out above apply equally to this site.
- 5.6 The SA sets out that this is the only site within Burgess Hill to have any impact on listed buildings where it is stated that development of this site would cause *less than substantial harm (medium) on High Chimneys (Grade II listed)*. This is not mentioned within appendix B and this therefore calls into question the consistency of assessment of the sites in this regard.
- 5.7 Given that site SA12 and SA13 are in close proximity to one another it is notable that the cumulative impact of the development of both of these sites has not been assessed for a number of 'in-combination' impacts such as highways and landscape impact.

## SA 14 Land to the south of Selby Close, Hammonds Ridge, Burgess Hill

- There is a TPO at the front of this site which is potentially why access is proposed through the CALA Homes site (DM/17/0205). No evidence is submitted to suggest that this form of access is agreed or available. The section relating to Highways and Access within the SADPD simply states that this access will need to be investigated further.
- 5.9 The SA and appendix B both point towards the Southern Water Infrastructure which crosses the site. The wording in the DPD recommends that the layout of the development is considered to ensure future access for maintenance and/or improvement work, unless diversion of the sewer is possible. Given that the site is only 0.16ha it is therefore questionable whether there would be adequate space to develop the site for housing and provide accommodation for the sewage infrastructure crossing the site. The deliverability of this site has therefore not been adequately demonstrated.

5.10 As with SA12 and SA13 there are questions of the sustainability of the site given that the SA notes that it is more than a 20 minute walk to the school and GP.

### SA 15 Land South of Southway, Burgess Hill

- 5.11 The SADPD describes the site as overgrown and inaccessible land designated as a Local Green Space in the Burgess Hill Neighbourhood Plan. It is unclear whether this site was ever previously in use a playing pitches and whether re-provision of this space would be required under Sport England policies.
- 5.12 Appendix B of the reg 18 SADPD points towards issues with relocation of existing parking on the site and states that:
  - Private parking areas would need to be removed to provide a suitable access point with sufficient visibility. The parking spaces are visitor spaces over which the owners/developers of the subject land have rights to access it to serve new development onto Linnet Lane. Accordingly, a new access into the site can be provided any new development would include two visitor spaces as close as reasonably possible to the existing visitor spaces.
- 5.13 It is clear that there are substantial issues with deliverability and availability of this site given these constraints and the site should be deleted as a proposed allocation until this can be adequately demonstrated.

## SA 16 St. Wilfrids Catholic Primary School, School Close, Burgess Hill

- 5.14 The SADPD sets out that the satisfactory relocation of St Wilfrid's Primary School to St Paul's Catholic College site is required before development can commence on the school part of the site. There is also a requirement to re-provide the emergency services accommodation in a new emergency service centre either on this site or elsewhere in the town.
- 5.15 Given that the allocation is for 300 dwellings and requires this relocation first, it is considered that there is insufficient evidence to justify delivery of development of this site in the 6-10 year time period as set out.

### SA 17 Woodfield House, Isaacs Lane, Burgess Hill

5.16 The SADPD sets out some significant landscape features on site which require retention and it is stated that:

There is a group Tree Preservation Order in the southern and western areas of the site. High quality substantial new planting of native trees is required, should these be lost to provide access from Isaac's Lane. All other TPO trees on the site are to be retained.

Retain and enhance important landscape features, mature trees, hedgerows and the pond at the south of the site and incorporate these into the landscape structure and Green Infrastructure proposals for the development. Open space is to be provided as an integral part of this landscape structure and should be prominent and accessible within the scheme.

- 5.17 Given that the site is only 1.4 hectares in size it is questionable whether there is adequate space on the site for 30 dwellings after retention of these landscape features.
- 5.18 It is clear from the Sites DPD that access to site is envisaged to be from the Northern Arc where it is stated that:

Integrated access with the Northern Arc Development is strongly preferred, the details of which will need to be investigated further.

5.19 This is also set out in appendix B of the reg 18 SADPD where it is stated that:

Entrance drive to house. Access on bend with limited visibility. 50 mph road. Would involve removal of trees that are subject to TPO. Objection for tree officer. However, future access is anticipated to be provided via the Northern Arc. Whilst the specific details of this remain uncertain on the basis that the enabling development is still at an early stage, it is considered that the identified constraints will no longer apply.

5.20 Given the uncertainty of the deliverability of the land immediately adjoining the site as part of the Northern Arc it is considered that the deliverability of this site is not clear enough to justify allocation within the sites DPD. The uncertainty of this deliverability also has an implication of the sustainability of the site and proximity to adequate services. This is highlighted within the SA where is stated that:

The impact of option (h) on these objectives (Health/Retail/Education) is uncertain; currently the site is a long distance from local services, however, this will change once the Northern Arc is built out

5.21 Overall it is not considered that this site is suitable for allocation and should be removed from the Sites DPD

#### SA 18 East Grinstead Police Station, College Lane, East Grinstead

5.22 We have no comments to make in relation to this allocation.

#### SA 19 Land south of Crawley Down Road, Felbridge

- 5.23 As set out, this allocation is directly to the west of the land under the control of Vanderbilt Homes which is also adjoined to the east by land with the benefit of planning permission for 63 dwellings.
- 5.24 Given that the entire area will be included within the revised Built Up Area Boundary, then it is considered logical that the adjoining sites are also identified for allocation within the SADPD.

# SA 20 Land south and west of Imberhorne Upper School, Imberhorne Lane, East Grinstead

- 5.25 There is a requirement in the SADPD for this site to provide a detailed phasing plan with agreement from key stakeholders to secure:
  - Land for early years and primary school (2FE) provision 2.2 ha
  - A land exchange agreement between WSCC and the developer to secure 6 ha (gross) land to create new playing field facilities in association with Imberhorne Secondary School (c.4 ha net excluding land for provision of a new vehicular access onto Imberhorne Lane).
- 5.26 It is unclear when these requirements are to be provided by within the development of any site and whether it is considered that the site would be suitable for allocation should these uses not come forward.
- 5.27 There are clear concerns over the suitability of this site in terms of ecology as set out in appendix B of the reg 18 SADPD which states:
  - Natural England have concerns over the high density of housing south of Felbridge. Hedgecourt SSSI is accessible from the proposed site allocations via a network of Public Rights of Way. In

line with paragraph 175 of the NPPF, Mid Sussex District Council should determine if allocations are likely to have an adverse effect (either individually or in combination) on SSSI's. The NPPF states that "if significant harm to biodiversity resulting from a development cannot be avoided, adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused." We would be happy to provide further advice if requested, although this may need to be on cost recovery The LWS adjacent to the site is an important recreational route and therefore consideration needs to be given to additional recreational disturbance to its habitats. We are unable to advise you on specific impacts as we have no details of the scale or type of proposed development consider further impacts of disturbance of the LWS and Ancient woodland arising from people and domestic pets, connectivity, light and noise pollution, appropriate buffer and cumulative impact. This site is adjacent to the Worth Way. The SHELAA should be redrawn to remove the section of LWS. The site is an important recreational route and therefore consideration needs to be given to additional recreational disturbance to its habitats. Further consideration be given to impacts of disturbance on LWS and Ancient Woodland from people and pets, impacts on connectivity, impacts of light and noise pollution, need for Ancient Woodland buffer. Cumulative impact with SHELAA 686 and 561.

- 5.28 It is clear that the impacts upon ecology and the SSSI have not been adequately addressed.
- 5.29 As with other sites there is potential for impact upon local heritage assets of Gullege Farm, Imberhorne Farm and Imberhorne Cottages as set out below. The harm in terms of less than strategic harm is inappropriately weighted in the assessment as a means for justification of allocation.

#### APPENDIX B: Gullege Farm, Imberhorne Lane

This isolated farmstead has historically had a rural setting and continues to do so today. The introduction of a substantial housing development to the north, east and south of the listed manor house would have a fundamental impact on the character of that setting and would detract from the way in which the special interest of this Grade II listed rural manor house and the of the historic farmstead is appreciated.

## NPPF: LSH, high

#### Imberhorne Farm and Imberhorne Cottages

In its original incarnation Imberhorne Cottages was probably constructed as a dwelling providing accommodation between London and Lewes, on Lewes Priory lands. It may have acted as the manor house to the substantial manor of Imberhorne, which was owned by the Priory. It seems likely that the building became farm cottages when the new farmhouse (Imberhorne) was constructed in the early 19th century. The currently rural setting of both buildings within the Imberhorne farmstead informs an understanding of their past function and therefore contributes positively to their special interest.

The proposed development site would engulf the farmstead to the west, north and east and would have a fundamental impact on the character of the greater part of its existing of rural setting and on views from both listed buildings. It would adversely affect the manner in which the special interest of the two listed buildings within their rural setting is appreciated, including by those passing along the PROW to the north of the farmstead.

#### NPPF: LSH, high

5.30 The potential harm to heritage is also referred to in the SA which states that:

option (e) which is not constrained by a conservation area, but would have a less than substantial harm (high) on Gullege Farm (Grade II listed) and Imberhorne Farm and Imberhorne Cottages (Grade II\* listed). As this is a large site, there is potential to still achieve the yield whilst providing necessary mitigation to lower the impact on these heritage assets.

5.31 Notwithstanding the significant constraints to delivery from this site it is notable that the delivery of 550 in 6-10 years as set out in the SADPD is particularly optimistic and would need to be revised in order to be realistic on the constraints to delivery including the requirement for provision of education on the site.

#### SA 22 Land north of Burleigh Lane, Crawley Down

5.32 No comments.

#### SA 23 Land at Hanlye Lane to the east of Ardingly Road, Cuckfield

5.33 The site is within close proximity to the High Weald AONB. Previous comments made in relation to the requirements of the NPPF in relation to AONB for other allocations apply equally to this site.

#### SA 24 Land to the north of Shepherds Walk, Hassocks

5.34 The access for this site is through an adjacent parcel of land which has a ransom strip over this land. The deliverability of this site is therefore in doubt unless a right of access can be confirmed by the site owners.

## SA 25 Land west of Selsfield Road, Ardingly

5.35 This site is located within the AONB and comments made in this regard to other proposed allocations apply to this site. The SA references this impact as follows:

There is a 'Very Negative' impact against objective (9) due to its location within the High Weald AONB, however the AONB unit have concluded that there is Moderate Impact as opposed to High Impact

5.36 The conclusions of the AONB unit have not been provided as part of the evidence base and requires further scrutiny in order to assess the impact of development of this site in this regard.

#### SA 26 Land south of Hammerwood Road, Ashurst Wood

5.37 The site is within the AONB and it is considered it is inappropriate to allocate this site for development without thorough appraisal of reasonable alternatives as previously set out.

#### SA 27 Land at St. Martin Close, Handcross

5.38 No comments.

#### SA28 Land South of The Old Police House, Birchgrove Road, Horsted Keynes

5.39 No comments.

## SA 29 Land south of St. Stephens Church, Hamsland, Horsted Keynes

5.40 The site is within the AONB and it is considered it is inappropriate to allocate this site for development without thorough appraisal of reasonable alternatives as previously set out.

### SA 30 Land to the north Lyndon, Reeds Lane, Sayers Common

- 5.41 The sustainability of this site has been considered in the SA which sets out that the site is more than 20 minutes away from services such as GP and the School. It is therefore not considered that the development of this site would be justified in sustainability terms.
- 5.42 The site is located within the Brick Clay (Weald) Mineral Safeguarding Area. No further evidence has been provided which demonstrates that the site is required for further mineral extraction.

## SA 31 Land to the rear Firlands, Church Road, Scaynes Hill

5.43 The site is located within the Building Stone (Cuckfield) Mineral safeguarding Area. No further evidence has been provided which demonstrates that the site is required for further mineral extraction.

## SA 32 Withypitts Farm, Selsfield Road, Turners Hill

- 5.44 The site is within the AONB and it is considered it is inappropriate to allocate this site for development without thorough appraisal of reasonable alternatives as previously set out.
- 5.45 The site is located within the Brick Clay (Weald) Mineral Safeguarding Area. No further evidence has been provided which demonstrates that the site is required for further mineral extraction.

## SA 33 Ansty Cross Garage, Cuckfield Road, Ansty

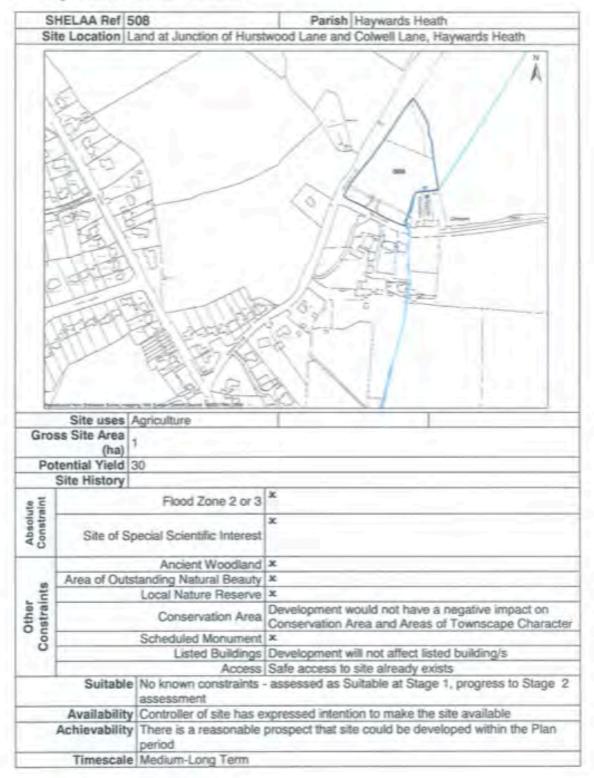
5.46 This site is not considered to be a sustainable location. A total of four separate sites were considered within Ansty with this being the only one accepted. The only difference between this and the other sites was that this scored slightly higher in the SA due to it being PDL. Whilst this is correct it is not considered that the PDL nature of this site makes it appropriate for allocation within the Sites DPD.

## 6. Conclusions

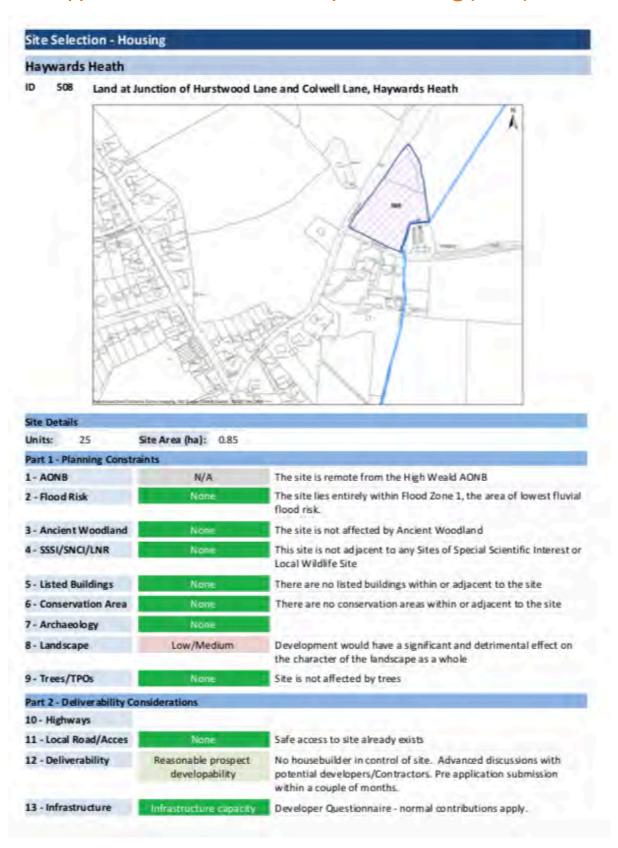
- 6.1 Detailed consideration of the sites identified for allocation within the SADPD show that there are some significant technical constraints and policy issues with many of the sites. These are matters which have been previously raised as part of regulation 18 representations and the council has done nothing to address these matters.
- 6.2 The analysis of the proposed allocations demonstrates there are some significant failings in the deliverability of the sites which requires reconsideration of the appropriateness of these allocations and selection of alternative sites.
- 6.3 The selection of sites with significant heritage constraints and also location within the AONB is not considered to be a sound approach. The assessment of reasonable alternatives is significantly lacking and requires further retesting which would logically include this site. As a result, it is not considered that the SADPD is positively prepared or justified and therefore fails the test as set out in the NPPF as a result.
- 6.4 It is clear that the adoption of the SADPD is of significance importance to Mid Sussex in demonstrating a robust and deliverable five year housing land supply. It is therefore suggested that consideration is given to the allocation of the site as set out within these representations which can deliver much needed housing in the early part of the plan period.

# 7. Appendix 1 - SHELAA Extract - February 2020

Stage 1 Site Pro-Forma - All Sites



# 8. Appendix 2 – Site Selection Paper 3: Housing (SSP3) Extract



art 3 - Sustainability	Access to Services		
14 - Education More than 20 Minute Walk Note:		e: facilities are likely to be provided at Hurst Farm	
5 - Health	More than 20 Minute Walk		
16 - Services	15-20 Minute Walk		
17 - Public Transport	Poor		
Part 4 - Other Conside	rations		
Neighbourhood Plan		Minerals	
None		Minerals considerations unnecessary as site does not progress past detailed assessment stage.	
Waste		Environmental Health	
Water and was tewater considerations unnecessary as site does not progress past detailed assessment stage.		s site Environmental health considerations unnecessary as site does not progress past detailed assessment stage.	
Sustainability Appraisal		Notes	
Assessment indicates s and is therefore not te	ite is not a reasonable alterna sted through the SA.	tive	
Part 5 - Conclusion			
		te is not suitable for allocation.	



# **Site Allocations DPD: Regulation 19 Consultation Response**

# Policy: SA30

ID: 2080

**Response Ref:** Reg19/2080/20

**Respondent:** Mr A Black

Organisation: Andrew Black consulting
On Behalf Of: Vanderbilt homes - CDR

Category: Promoter

Appear at Examination? ×



Mid Sussex District Council

Draft Site Allocations DPD (Regulation 19) Consultation

Representation on behalf of Vanderbilt Homes – Land South of 61 Crawley Down Road, Felbridge

September 2020

Project MSDC Draft Site Allocations DPD

ABC Reference ABC/0072/07

Local Authority Mid Sussex District Council

Client Vanderbilt Homes

Issue Final

Author Andrew Black

Date September 2020

Disclaimer: This report has been prepared for the above named client for the purpose agreed in Andrew Black Consulting's (ABC) terms of engagement. Whilst every effort has been made to ensure the accuracy and suitability of the information contained in this report, the results and recommendations presented should not be used as the basis of design, management or implementation of decisions unless the client has first discussed with ABC their suitability for these purposes and ABC has confirmed their suitability in writing to the client. ABC does not warrant, in any way whatsoever, the use of information contained in this report by parties other than the above

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•		
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## 1. Introduction

- 1.1 These representations for the Draft Site Allocations DPD (Regulation 19) Consultation (Herein referred to as the 'SADPD') are submitted by Andrew Black Consulting on behalf of Vanderbilt Homes regarding a site within their control at Crawley Down Road in Felbridge.
- 1.2 The site under the control of Vanderbilt Homes is known as Land South of 61 Crawley Down Road, Felbridge and was previously considered in the SHELAA as Available, Achievable and Deliverable.
- 1.3 It is understood that the SADPD has been produced in accordance with the Planning and Compulsory Purchase Act 2004, and other relevant regulations.
- 1.4 The NPPF states that Development Plan Documents should be prepared in accordance with the legal and procedural requirements. To be found to be 'sound', plans must be:
  - a) positively prepared
  - b) justified
  - c) effective, and
  - d) consistent with national policy.
- 1.5 It is with this in mind that these representations are made.
- 1.6 The draft SADPD has been prepared using an extensive and legally compliant evidence base including a Sustainability Appraisal, Habitat Regulations Assessment, Community Involvement Plan, Equalities Impact Assessment, and various technical reports and studies. Of particular note is the Built Up Area Boundary and Policies Map Topic Paper (TP1) produced in August 2020.
- 1.7 The Site Allocations DPD proposes to allocate 22 sites to meet this residual necessary to meet the overall agreed housing requirement for the plan period as reflected in the 'stepped trajectory' and in accordance with the District Plan.
- 1.8 These representations set out the detail of the Site and Surroundings and a response to the detailed parts of the SADPD.

# 2. Site and Surroundings

2.1 The Site is located to the South of Crawley Down Road and is in an area that has experienced significant housing growth in recent years.



Figure 1 – SHELAA Extract

2.2 The site was assessed in the most recent SHELAA (Ref 676) as Suitable, Available and Achievable in the Medium to Long Term (The full extract of the SHELAA is set out in Appendix 1). Each of the constraints within the SHELAA for are taken in turn below:

#### Flood Risk

2.3 Whilst the location of the site in flood zone 2/3 is noted within the SHELAA Proforma, the extract from the Environment Agency Flood Risk Map shows this to be negligible. It is only the very southern extent of the site that is potentially within an area of flood risk. In any event, the site can clearly demonstrate the ability to provide a safe access and egress to any housing on site which can equally be located well outside of any areas prone to flooding.

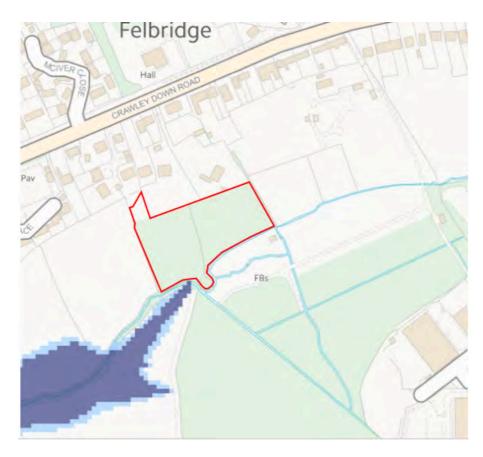
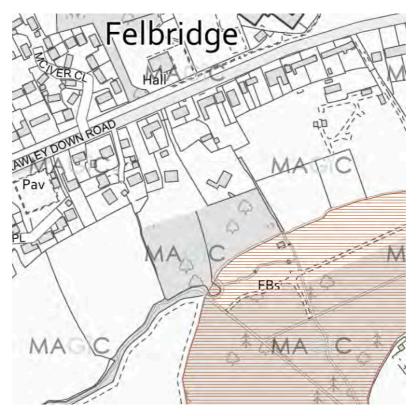


Figure 2 – Extract from Environment Agency Flood Risk Map

## **Ancient Woodland**

2.4 The SHELAA report also makes reference to proximity to Ancient Woodland. The map below shows the extent of the nearby ancient woodland which is to the south of the existing site.



2.5 It is evident that development could be incorporated on the site without any impact on the Ancient Woodland and that an adequate buffer could be provided between any proposed houses and the ancient woodland to the south.

## Site of Special Scientific Interest

2.6 The site is not within, nor in proximity to, a SSSI

## **Area of Outstanding Natural Beauty**

2.7 The site is not within, nor in proximity to, an AONB

#### **Local Nature Reserve**

2.8 The site is not within, nor in proximity to, a Local Nature Reserve

#### **Conservation Area**

2.9 The SHELAA specifically states that development would not have a negative impact on Conservation area and /or Area of Townscape

#### **Scheduled Monument**

2.10 There are no scheduled monuments in proximity to the site.

#### **Listed Buildings**

2.11 The SHELAA confirms that development will not affect listed buildings.

#### **Access**

- 2.12 The SHELAA sets out that safe access to the site already exists.
- 2.13 As set out the site directly adjoins the land to the east which has the benefit of outline planning permission for residential development. This land is also in the control of Vanderbilt Homes and it is possible that access could be provided through this land into this site as indicated below:



Figure 4 – Potential Access.

2.14 If the site was assessed against the criteria for Reasonable Alternatives as set out in the Sustainability Appraisal then it would perform identically to the adjoining allocated site. Furthermore it performs better against each of the criteria than the sites at 'Land south and west of Imberhorne Upper School, Imberhorne Lane' for 550 dwellings and 'East Grinstead Police Station, College Lane' for 12 dwellings. It is therefore entirely logically that this site should be allocated for development within the Site Allocations DPD.

## **Planning History**

2.15 The site itself has been subject to a number of previous applications which are set out below:

App Ref	App Date	Description of Development	Decision
12/02577	Jul 2012	Residential development comprising 7 dwellings (3 detached properties and 2 pairs of semi-detached houses) with associated garaging, new road layout and landscaping.	Refused / Appeal Withdrawn
13/02528	Jul 2013	Residential development comprising 5 detached dwellings with associated garaging, new road layout and landscaping	Refused / Appeal Dismissed
16/5662	Dec 2016	Residential development comprising 4 no. detached dwellings.	Refused / Appeal Dismissed.

- 2.16 The previous applications were refused on the basis of the site being outside of the settlement boundary and therefore any development would have been considered to be in direct conflict with the adopted District Plan at the time of determination. The outcome of these applications would clearly have been different had the sites been within the Built Up Area Boundary
- 2.17 No other issues were identified which would warrant refusal of an application if the site was within the Built Up Area Boundary as proposed within the draft SADPD.

#### **Surrounding Developments and Proposed Allocations**

- 2.18 The site located directly to the east has the benefit of an outline planning permission for the erection of 63 dwellings and new vehicular access onto Crawley Down Road required [sic] the demolition of existing buildings and structures at no's 15 and 39 Crawley Down Road (DM/17/2570)
- 2.19 The access to the site is located within Tandridge District Council which was granted under application TA/2017/1290.



Figure 5 – Approved Parameters Plan of adjoining site – Outline Planning Application

- 2.20 Reserved matters applications have been made against both of the outline applications. The reserved matters application for the access was approved by Tandridge Council in July 2020 (TA/2020/555).
- 2.21 At the time of submission of these representations, the reserved matters application for the housing within the Mid Sussex element of the site for the housing is still under determination (DM/20/1078).
- 2.22 It is therefore highly likely that the development of the land directly adjoining the site subject to these representations will come forward in the immediate short term.



Figure 6 – Reserved Matters Plan for adjoining site.

2.23 The site (yellow) is therefore directly between the allocated site SA19 for 196 dwellings to the east (pink) and the site subject to approval for 63 dwellings (blue).

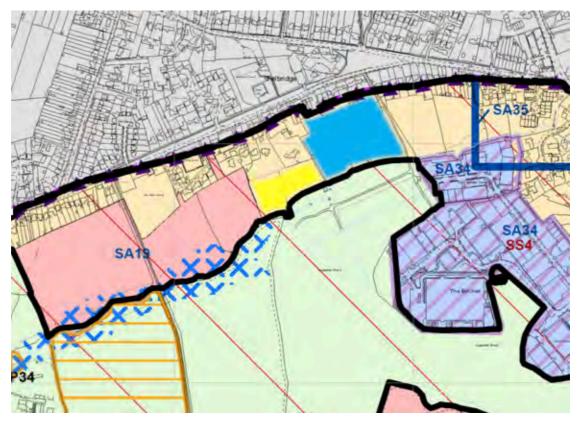


Figure 7 – Map of proposed allocation SA19, BUAB, Consented Land and Proposed Site

2.24

allocations within the SADPD.	
allocations within the SADED.	

Overall, it is considered that the immediate context of this site makes it highly appropriate for

## 3. Built up Area Boundary Review

- 3.1 In addition to the allocation of sites for development the SADPD seeks to make changes to the existing Built Up Area Boundary (BUAB) as established under the District Plan Process. The Built Up Area Boundary and Policies Map Topic Paper (TP1) produced in August 2020 forms a vital part of the evidence base for the SADPD.
- 3.2 Paragraph 2.4 of TP1 sets out that the purpose of the review as part of the SADPD is to:
  - Assess areas that have been built since the last review, which logically could be included within the BUA.
  - Assess areas that have planning permission which have not yet commenced/completed, which logically could be included within the BUA.
- 3.3 TP1 goes on to set out the criteria for consideration of changes to the boundary.
- 3.4 Within the adopted District Plan proposals map, the site is outside of the Built Up Area Boundary as illustrated in the extract below:



Figure 8 – Existing District Plan Proposals Map

3.5 Within the draft SADPD, it is proposed that the site, and all adjoining land will be now set within the BUAB as highlighted below.

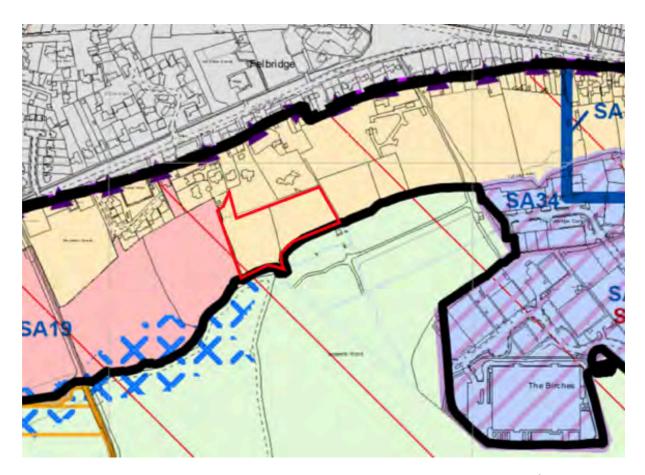


Figure 9 – Proposed BUAB

3.6 The principle of including this site within the BUAB is logical and supported. However, for reasons as set out in subsequent sections of these representations, it is considered that it would be appropriate for the site to be allocated for development.

# 4. Housing Site Allocation Process

- 4.1 The District Plan 2014-2031 sets out the housing requirement for the district for the plan period of 16,390 dwellings. This meets the Objectively Assessed Need (OAN) for the district of 14,892 dwellings in full and makes provision for the agreed quantum of unmet housing need for the Northern West Sussex Housing Market Area, to be addressed within Mid Sussex, of 1,498 dwellings.
- 4.2 The District Plan 2014-2031 established a 'stepped' trajectory for housing delivery with an average of 876 dwellings per annum (dpa) between 2014/15 and 2023/24 and thereafter an average of 1,090 dpa between 2024/25 and 2030/31. This represents a significant increase in housing supply compared with historical rates within the district.
- 4.3 The latest data on completions from MSDC was published in *MSDC Housing Land Supply Position Statement* was published in August 2020 (Document H1) and shows a significant shortfall in delivery against the housing requirement since the start of the plan:

Category		Number of Dwellings
Housing Requirement for the full plan period (April 2014 to March 2031)  Housing Completions (April 2014 to March 2020)		16,390 4,917
Completions 2015/16		868
Completions 2016/17		912
Completions 2017/18		843
Completions 2018/19		661
Completions 2019/20		1003
Housing Supply (April 2014 to March 2031)	Commitments (including District Plan Allocations)	9,689
,	Site Allocations DPD - Allocations	1,764
	Windfalls	504
Total Supply (at 1 April 2019)		16,874

Figure 10 – Extract from MSDC Housing Land Supply Position Statement

- 4.4 The Housing Delivery Test was introduced in the July 2018 update to the NPPF. The Housing Delivery Test is an annual measurement of housing delivery for each local authority and the first results were published in February 2019 by the Ministry of Housing, Communities and Local Government (MHCLG). Where the Housing Delivery Test indicates that delivery has fallen below 95% of the local planning authority's housing requirement over the previous 3 years then it is required to prepare an action plan. Where delivery has fallen below 85% of the housing requirement a 20% buffer should be added to the five year supply of deliverable sites.
- 4.5 The result for Mid Sussex produced in February 2020 was 95%. This result is based on monitoring years 2016-17, 2017-18 and 2018-19. Mid Sussex is therefore not required to add 20% buffer for significant under delivery, or prepare an Action Plan. However, it is clear that under current performance the council will struggle when the housing target steps up to 1,090 in 2024.
- 4.6 Para 4.10 of the previous MSDC Housing Land Supply Position Statement (2019) sets out the five year supply requirement for the district as follows:

Annual Requirement	876 x 5 years =	4,380
As set out in District Plan		
Shortfall spread over	466 divided by 12 remaining	194
remaining plan period	years x 5 years	
Total		4,574
Buffer (see paras 2.4,4.9 above)	10%	457
Total five year supply requirement		5,032

Figure 11 – Total Five Year Housing Requirement taken from MSDC Housing Land Supply
Position Statement

- 4.7 MSDC is seeking to confirm the five year housing land supply under the terms of paragraph 74 of the NPPF through submission of the annual position statement to the secretary of state. Paragraph 74 of the framework states:
  - A five year supply of deliverable housing sites, with the appropriate buffer, can be demonstrated where it has been established in a recently adopted plan, or in a subsequent annual position statement which:
  - a) has been produced through engagement with developers and others who have an impact on delivery, and been considered by the Secretary of State; and
  - b) incorporates the recommendation of the Secretary of State, where the position on specific sites could not be agreed during the engagement process.
- 4.8 The report on the Annual Position Statement was issues by the Planning Inspectorate on 13 January 2020. It was confirmed that as the council did not have a recently adopted plan in conformity with the definition of the NPPF then the correct process had not been followed and the inspector was unable to confirm that the council had a five year housing land supply.
- 4.9 It is therefore clear that the council does not currently have a five year housing land supply and the demonstration of sufficiently deliverable sites within the SADPD is of critical importance for MSDC.

### **Deliverability of Sites**

4.10 Any sites that have been included in the final Sites DPD will need to pass the tests of deliverability as set out in the NPPF. This is defined within the glossary of the framework as follows:

**Deliverable:** To be considered deliverable, sites for housing should be available now, offer a suitable location for development now, and be achievable with a realistic prospect that housing will be delivered on the site within five years. In particular:

- a) sites which do not involve major development and have planning permission, and all sites with detailed planning permission, should be considered deliverable until permission expires, unless there is clear evidence that homes will not be delivered within five years (for example because they are no longer viable, there is no longer a demand for the type of units or sites have long term phasing plans).
- b) where a site has outline planning permission for major development, has been allocated in a development plan, has a grant of permission in principle, or is identified on a brownfield register, it should only be considered deliverable where there is clear evidence that housing completions will begin on site within five years.
- 4.11 The Planning Practice Guidance provides a further explanation on how the deliverability of sites should be considered:

A site can be considered available for development, when, on the best information available (confirmed by the call for sites and information from land owners and legal searches where appropriate), there is confidence that there are no legal or ownership impediments to development. For example, land controlled by a developer or landowner who has expressed an intention to develop may be considered available.

The existence of planning permission can be a good indication of the availability of sites. Sites meeting the definition of deliverable should be considered available unless evidence indicates otherwise. Sites without permission can be considered available within the first five years, further guidance to this is contained in the 5 year housing land supply guidance. Consideration can also be given to the delivery record of the developers or landowners putting forward sites, and whether the planning background of a site shows a history of unimplemented permissions.

Paragraph: 019 Reference ID: 3-019-20190722

Revision date: 22 07 2019

4.12 It is with this in mind that the proposed sites within the Sites DPD are scrutinised within subsequent sections of this document. It is considered that many of the proposed sites do not fully accord with the definition of delivery and consideration of alternative sites is required.

#### **Area of Outstanding Natural Beauty**

4.13 A significant number of the proposed sites are located within, or close to, the High Weald AONB. Paragraph 172 sets out the significant protection which should be afforded to the AONB in planning terms and states that:

Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife

and cultural heritage are also important considerations in these areas, and should be given great weight in National Parks and the Broads. The scale and extent of development within these designated areas should be limited. Planning permission should be refused for major development other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest. Consideration of such applications should include an assessment of:

- a) the need for the development, including in terms of any national considerations, and the impact of permitting it, or refusing it, upon the local economy;
- b) the cost of, and scope for, developing outside the designated area, or meeting the need for it in some other way; and
- c) any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated.
- 4.14 It is part b of paragraph 172 that is of particular importance in this instance. It is not considered that MSDC has considered sites outside of the AONB should be used to meet the identified residual housing requirement. It would appear that sites have been selected because of their conformity to the spatial strategy and hierarchy without the proper application of the 'great weight' required to protect the AONB.
- 4.15 The approach of allocating sites within the AONB as opposed to 'outside the designated area' should have been tested through a robust analysis of reasonable alternatives within the Sustainability Appraisal. The failure to do this adequately is a matter of soundness and it is considered that the Sites DPD fails the tests within the NPPF on this basis alone.

#### **Historic Environment**

- 4.16 Several of the allocations within the DPD are in close proximity to heritage assets. Paragraph 193 of the framework sets out the approach to heritage assets as follows:
  - When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation (and the more important the asset, the greater the weight should be). This is irrespective of whether any potential harm amounts to substantial harm, total loss or less than substantial harm to its significance.
- 4.17 In many instances the council themselves suggest that the development of housing on the sites is likely to have 'less than significant harm' on the heritage assets in question. Paragraph 196 of the framework sets out the approach which should be taken in this instance:
  - Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable
- 4.18 It is not considered that the harm caused to heritage assets has been adequately assessed within the Sustainability Appraisal for many of the proposed sites and further consideration is required of the sites in this regard. This would include assessing sites which would not have an impact on heritage assets through a robust application of reasonable alternatives within the Sustainability Appraisal.

## 5. Sustainability Appraisal

- 5.1 The SADPD is accompanied by a Sustainability Appraisal (SA) report which is a legal requirement derived from the Planning and Compulsory Purchase Act 2004 (Section 19). Section 39 of the Act requires documents such as the SADPD to be prepared with a view to contributing to the achievement of sustainable development.
- 5.2 The requirement for Strategic Environmental Assessment, in addition to the SA, is set out in the European Directive 2001/42/EC adopted into UK law as the "Environmental Assessment of Plans or Programmes Regulations 2004".
- 5.3 In line with best practice the SEA has been incorporated into the SA of the SADPD.
- 5.4 The planning practice guidance sets out detailed consideration as to how any sustainability should assess alternatives and identify likely significant effects:

The sustainability appraisal needs to consider and compare all reasonable alternatives as the plan evolves, including the preferred approach, and assess these against the baseline environmental, economic and social characteristics of the area and the likely situation if the plan were not to be adopted. In doing so it is important to:

- outline the reasons the alternatives were selected, and identify, describe and evaluate
  their likely significant effects on environmental, economic and social factors using the
  evidence base (employing the same level of detail for each alternative option). Criteria
  for determining the likely significance of effects on the environment are set out
  in schedule 1 to the Environmental Assessment of Plans and Programmes Regulations
  2004;
- as part of this, identify any likely significant adverse effects and measures envisaged to prevent, reduce and, as fully as possible, offset them;
- provide conclusions on the reasons the rejected options are not being taken forward and the reasons for selecting the preferred approach in light of the alternatives.

Any assumptions used in assessing the significance of the effects of the plan will need to be documented. Reasonable alternatives are the different realistic options considered by the planmaker in developing the policies in the plan. They need to be sufficiently distinct to highlight the different sustainability implications of each so that meaningful comparisons can be made.

The development and appraisal of proposals in plans needs to be an iterative process, with the proposals being revised to take account of the appraisal findings.

Paragraph: 018 Reference ID: 11-018-20140306

Revision date: 06 03 2014

5.5 In response to this guidance and requirement, paragraph 6.16 of the Sustainability Appraisal states that:

The Site Selection Paper 2 (paras 6.2 - 6.3) also recognises that, in order to meet the District Plan strategy, conclusions will be compared on a settlement-by-settlement basis with the most suitable sites at each settlement chosen in order to meet the residual needs of that settlement. This may result in some sites being chosen for allocation which have higher negative impact across all the objectives because this will be on the basis that the aim is to distribute allocations according to the District Plan strategy in the first instance; as opposed to simply selecting only

the most sustainable sites in the district (as this may not accord with the spatial strategy and would lead to an unequal distribution of sites across settlements). 20 sites that perform well individually and on a settlement basis, the residual housing need of 1,507 would be met with a small over-supply of 112 units.

- 5.6 Paragraph 6.45 recognises that this small over-supply may not be a sufficient buffer should sites fall out of the allocations process between now and adoption (for example, due to delivery issues, reduction in yield, or any other reasons identified during consultation or the evidence base).
- 5.7 The SA therefore considers reasonable alternatives of option A, B and C as follows:
  - Option A 20 'Constant Sites' 1,619 dwellings
  - Option B 20 'Constant Sites' + Folders Lane, Burgess Hill (x3 sites) 1,962 dwellings.
  - Option C 20 'Constant Sites' + Haywards Heath Golf Court 2,249 dwellings
- 5.8 Paragraph 6.52 of the SA concludes that:

Following the assessment of all reasonable alternative options for site selection, the preferred option is option B. Although option A would meet residual housing need, option B proposes a sufficient buffer to allow for non-delivery, therefore provides more certainty that the housing need could be met. Whilst option C also proposes a sufficient buffer, it is at the expense of negative impacts arising on environmental objectives. The level of development within option C is approximately 50% above the residual housing need, the positives of delivering an excess of this amount within the Site Allocations DPD is outweighed by the negative environmental impacts associated with it.

- 5.9 It is not considered that this assessment of Option A, B and C is a sufficient enough assessment of reasonable alternatives as required by guidance and legislation. All of the options contain the '20 Constant Sites' with no derivation of alternative options such as those which seek to divert housing growth away from the AONB or designated heritage assets.
- 5.10 It is apparent that other sites other than the 20 Constant Sites will need to be assessed if the council is to adequately demonstrate that reasonable alternatives have been considered as required.

## 6. Assessment of Proposed Sites.

6.1 This section analyses each of the proposed allocations against the tests of deliverability as set out in the NPPF and the potential shortcomings of several of the sites which require significant consideration. The findings of *Appendix B: Housing Site Proformas* of the *Site Selection Paper* 3 (Appendix B) and the conclusions of the Sustainability Appraisal (SA) are considered in detail.

## SA 12 Land South of 96 Folders Lane, Burgess Hill

- 6.2 Appendix B of the reg 18 SADPD set out that this site has moderate landscape sensitivity and moderate landscape value. This site could be visible from the South Downs National Park. The SA states that an LVIA is required to determine any impact on the national park. Given the weight that the NPPF requires to be placed on the protection of the national park, any impact must be measured prior to allocation. If it is deemed that mitigation would not minimise the harm caused, then the proposed allocation must fall away.
- 6.3 Appendix B of the reg 18 SADPD also set out that a TPO area lines the norther border and potential access route. It should be noted that an application was submitted in 2019 for the *erection of 43 dwellings and associated works* (DM/19/0276) but was withdrawn in September 2019 due to concerns over highways. The deliverability of this site is therefore not considered to be in accordance with the guidance set out in the framework.
- 6.4 Finally, whilst the priority for sites higher in the settlement hierarchy is acknowledged, this is site is very remote from the services offered by Burgess Hill. This is highlighted within the sustainability appraisal for the site which states that it is more than a 20 minute walk from the site to schools, GP and shops.

## SA 13 Land East of Keymer Road and South of Folders Lane, Burgess Hill.

- 6.5 As with SA12, this site is in close proximity to the national park and the conclusions as set out above apply equally to this site.
- 6.6 The SA sets out that this is the only site within Burgess Hill to have any impact on listed buildings where it is stated that development of this site would cause *less than substantial harm (medium) on High Chimneys (Grade II listed)*. This is not mentioned within appendix B and this therefore calls into question the consistency of assessment of the sites in this regard.
- 6.7 Given that site SA12 and SA13 are in close proximity to one another it is notable that the cumulative impact of the development of both of these sites has not been assessed for a number of 'in-combination' impacts such as highways and landscape impact.

## SA 14 Land to the south of Selby Close, Hammonds Ridge, Burgess Hill

- There is a TPO at the front of this site which is potentially why access is proposed through the CALA Homes site (DM/17/0205). No evidence is submitted to suggest that this form of access is agreed or available. The section relating to Highways and Access within the SADPD simply states that this access will need to be investigated further.
- 6.9 The SA and appendix B both point towards the Southern Water Infrastructure which crosses the site. The wording in the DPD recommends that the layout of the development is considered to ensure future access for maintenance and/or improvement work, unless diversion of the sewer is possible. Given that the site is only 0.16ha it is therefore questionable whether there would be adequate space to develop the site for housing and provide accommodation for the sewage infrastructure crossing the site. The deliverability of this site has therefore not been adequately demonstrated.

6.10 As with SA12 and SA13 there are questions of the sustainability of the site given that the SA notes that it is more than a 20 minute walk to the school and GP.

### SA 15 Land South of Southway, Burgess Hill

- 6.11 The SADPD describes the site as overgrown and inaccessible land designated as a Local Green Space in the Burgess Hill Neighbourhood Plan. It is unclear whether this site was ever previously in use a playing pitches and whether re-provision of this space would be required under Sport England policies.
- 6.12 Appendix B of the reg 18 SADPD points towards issues with relocation of existing parking on the site and states that:
  - Private parking areas would need to be removed to provide a suitable access point with sufficient visibility. The parking spaces are visitor spaces over which the owners/developers of the subject land have rights to access it to serve new development onto Linnet Lane. Accordingly, a new access into the site can be provided any new development would include two visitor spaces as close as reasonably possible to the existing visitor spaces.
- 6.13 It is clear that there are substantial issues with deliverability and availability of this site given these constraints and the site should be deleted as a proposed allocation until this can be adequately demonstrated.

## SA 16 St. Wilfrids Catholic Primary School, School Close, Burgess Hill

- 6.14 The SADPD sets out that the satisfactory relocation of St Wilfrid's Primary School to St Paul's Catholic College site is required before development can commence on the school part of the site. There is also a requirement to re-provide the emergency services accommodation in a new emergency service centre either on this site or elsewhere in the town.
- 6.15 Given that the allocation is for 300 dwellings and requires this relocation first, it is considered that there is insufficient evidence to justify delivery of development of this site in the 6-10 year time period as set out.

### SA 17 Woodfield House, Isaacs Lane, Burgess Hill

6.16 The SADPD sets out some significant landscape features on site which require retention and it is stated that:

There is a group Tree Preservation Order in the southern and western areas of the site. High quality substantial new planting of native trees is required, should these be lost to provide access from Isaac's Lane. All other TPO trees on the site are to be retained.

Retain and enhance important landscape features, mature trees, hedgerows and the pond at the south of the site and incorporate these into the landscape structure and Green Infrastructure proposals for the development. Open space is to be provided as an integral part of this landscape structure and should be prominent and accessible within the scheme.

- 6.17 Given that the site is only 1.4 hectares in size it is questionable whether there is adequate space on the site for 30 dwellings after retention of these landscape features.
- 6.18 It is clear from the Sites DPD that access to site is envisaged to be from the Northern Arc where it is stated that:

Integrated access with the Northern Arc Development is strongly preferred, the details of which will need to be investigated further.

6.19 This is also set out in appendix B of the reg 18 SADPD where it is stated that:

Entrance drive to house. Access on bend with limited visibility. 50 mph road. Would involve removal of trees that are subject to TPO. Objection for tree officer. However, future access is anticipated to be provided via the Northern Arc. Whilst the specific details of this remain uncertain on the basis that the enabling development is still at an early stage, it is considered that the identified constraints will no longer apply.

6.20 Given the uncertainty of the deliverability of the land immediately adjoining the site as part of the Northern Arc it is considered that the deliverability of this site is not clear enough to justify allocation within the sites DPD. The uncertainty of this deliverability also has an implication of the sustainability of the site and proximity to adequate services. This is highlighted within the SA where is stated that:

The impact of option (h) on these objectives (Health/Retail/Education) is uncertain; currently the site is a long distance from local services, however, this will change once the Northern Arc is built out.

6.21 Overall it is not considered that this site is suitable for allocation and should be removed from the Sites DPD

#### SA 18 East Grinstead Police Station, College Lane, East Grinstead

6.22 We have no comments to make in relation to this allocation.

#### SA 19 Land south of Crawley Down Road, Felbridge

- 6.23 As set out, this allocation is directly to the west of the land under the control of Vanderbilt Homes which is also adjoined to the east by land with the benefit of planning permission for 63 dwellings.
- 6.24 Given that the entire area will be included within the revised Built Up Area Boundary, then it is considered logical that the adjoining sites are also identified for allocation within the SADPD.

# SA 20 Land south and west of Imberhorne Upper School, Imberhorne Lane, East Grinstead

- 6.25 There is a requirement in the SADPD for this site to provide a detailed phasing plan with agreement from key stakeholders to secure:
  - Land for early years and primary school (2FE) provision 2.2 ha
  - A land exchange agreement between WSCC and the developer to secure 6 ha (gross) land to create new playing field facilities in association with Imberhorne Secondary School (c.4 ha net excluding land for provision of a new vehicular access onto Imberhorne Lane).
- 6.26 It is unclear when these requirements are to be provided by within the development of any site and whether it is considered that the site would be suitable for allocation should these uses not come forward.
- 6.27 There are clear concerns over the suitability of this site in terms of ecology as set out in appendix B of the reg 18 SADPD which states:
  - Natural England have concerns over the high density of housing south of Felbridge. Hedgecourt SSSI is accessible from the proposed site allocations via a network of Public Rights of Way. In

line with paragraph 175 of the NPPF, Mid Sussex District Council should determine if allocations are likely to have an adverse effect (either individually or in combination) on SSSI's. The NPPF states that "if significant harm to biodiversity resulting from a development cannot be avoided, adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused." We would be happy to provide further advice if requested, although this may need to be on cost recovery The LWS adjacent to the site is an important recreational route and therefore consideration needs to be given to additional recreational disturbance to its habitats. We are unable to advise you on specific impacts as we have no details of the scale or type of proposed development consider further impacts of disturbance of the LWS and Ancient woodland arising from people and domestic pets, connectivity, light and noise pollution, appropriate buffer and cumulative impact. This site is adjacent to the Worth Way. The SHELAA should be redrawn to remove the section of LWS. The site is an important recreational route and therefore consideration needs to be given to additional recreational disturbance to its habitats. Further consideration be given to impacts of disturbance on LWS and Ancient Woodland from people and pets, impacts on connectivity, impacts of light and noise pollution, need for Ancient Woodland buffer. Cumulative impact with SHELAA 686 and 561.

- 6.28 It is clear that the impacts upon ecology and the SSSI have not been adequately addressed.
- 6.29 As with other sites there is potential for impact upon local heritage assets of Gullege Farm, Imberhorne Farm and Imberhorne Cottages as set out below. The harm in terms of less than strategic harm is inappropriately weighted in the assessment as a means for justification of allocation.

#### APPENDIX B: Gullege Farm, Imberhorne Lane

This isolated farmstead has historically had a rural setting and continues to do so today. The introduction of a substantial housing development to the north, east and south of the listed manor house would have a fundamental impact on the character of that setting and would detract from the way in which the special interest of this Grade II listed rural manor house and the of the historic farmstead is appreciated.

#### NPPF: LSH, high

#### Imberhorne Farm and Imberhorne Cottages

In its original incarnation Imberhorne Cottages was probably constructed as a dwelling providing accommodation between London and Lewes, on Lewes Priory lands. It may have acted as the manor house to the substantial manor of Imberhorne, which was owned by the Priory. It seems likely that the building became farm cottages when the new farmhouse (Imberhorne) was constructed in the early 19th century. The currently rural setting of both buildings within the Imberhorne farmstead informs an understanding of their past function and therefore contributes positively to their special interest.

The proposed development site would engulf the farmstead to the west, north and east and would have a fundamental impact on the character of the greater part of its existing of rural setting and on views from both listed buildings. It would adversely affect the manner in which the special interest of the two listed buildings within their rural setting is appreciated, including by those passing along the PROW to the north of the farmstead.

#### NPPF: LSH, high

6.30 The potential harm to heritage is also referred to in the SA which states that:

- option (e) which is not constrained by a conservation area, but would have a less than substantial harm (high) on Gullege Farm (Grade II listed) and Imberhorne Farm and Imberhorne Cottages (Grade II\* listed). As this is a large site, there is potential to still achieve the yield whilst providing necessary mitigation to lower the impact on these heritage assets.
- 6.31 Notwithstanding the significant constraints to delivery from this site it is notable that the delivery of 550 in 6-10 years as set out in the SADPD is particularly optimistic and would need to be revised in order to be realistic on the constraints to delivery including the requirement for provision of education on the site.

#### SA 21 Rogers Farm, Fox Hill, Haywards Heath

6.32 This site is also significantly constrained by the presence of heritage assets. This is referenced in the SA which states that:

Site option (b) is constrained in terms of impact upon a listed building; it would have a less than substantial harm (medium) on Cleavewater (Grade II listed) and The Old Cottage (Grade II listed).

6.33 Appendix B also references these heritage assets together with an assessment of the likely impact as follows:

Cleavewaters, Fox Hill there would be a fundamental impact not only on views from the building and associated farmstead but on the context and manner in which the farmhouse and farmstead are appreciated by those travelling along the road which runs between the farmstead and the site. **NPPF: LSH, MID** 

Olde Cottage, there would be some potential impact on views from the Cottage and its garden setting. The belt of woodland between the asset and the site is relatively narrow and development on the site is likely to be visible, particularly in winter. There would also be an impact on the setting in which the Cottage is appreciated by those approaching along the access drive from Ditchling Road. **NPPF: LSH, MID** 

- 6.34 The impact on heritage assets and character of the area has been assessed in an appeal decision on the site (APP/D3830/W/17/3187318) issued in January 2019 following an application for up to 37 dwellings on the site (DM/16/3998).
  - 15 The combination of the buffer and local topography would mean that any development would be clearly visible on the approach down Lunce's Hill and perceived as a separate and distinct residential development. I am not persuaded that it would be seen within the context of an urban fringe setting as the appellant suggests. On the contrary it would be a harmful encroachment into the countryside and the rural character of the approach into the settlement would be irrevocably changed and harmed through the loss of this open land.
  - 16 Overall, the proposal would result in an unacceptable suburbanisation of the appeal site that would fundamentally change the character and appearance of the rural setting of the settlement. The effects would also be exacerbated somewhat by the loss of part of the existing mature hedgerow for the access. Proposed mitigation, in the form of additional landscaping would restrict the visibility of the proposal from a number of viewpoints. However, it would take a substantial amount of time to mature and be dependent on a number of factors to be successful. Moreover, I am not persuaded that it would fully mitigate the visual impacts.

- 17 For these reasons, the proposal would not be a suitable site for housing in terms of location and would cause significant harm to the character and appearance of the area. It would therefore conflict with Policy C1 of the LP and Policies E5 and E9 of the HHNP. In addition to the requirements set out above, these policies also require new development to be permitted where it would protect, reinforce and not unduly erode the landscape character of the area. There would also be some conflict with Policies DP10 and DP24 which, seek to protect the countryside in recognition of its intrinsic character and beauty and promote well located and designed development.
- 6.35 Overall it is not considered that the site represents a logical, justified or deliverable site and should not be considered for allocation within the Sites DPD.

#### SA 22 Land north of Burleigh Lane, Crawley Down

6.36 No comments.

#### SA 23 Land at Hanlye Lane to the east of Ardingly Road, Cuckfield

6.37 The site is within close proximity to the High Weald AONB. Previous comments made in relation to the requirements of the NPPF in relation to AONB for other allocations apply equally to this site.

#### SA 24 Land to the north of Shepherds Walk, Hassocks

6.38 The access for this site is through an adjacent parcel of land which has a ransom strip over this land. The deliverability of this site is therefore in doubt unless a right of access can be confirmed by the site owners.

#### SA 25 Land west of Selsfield Road, Ardingly

6.39 This site is located within the AONB and comments made in this regard to other proposed allocations apply to this site. The SA references this impact as follows:

There is a 'Very Negative' impact against objective (9) due to its location within the High Weald AONB, however the AONB unit have concluded that there is Moderate Impact as opposed to High Impact

6.40 The conclusions of the AONB unit have not been provided as part of the evidence base and requires further scrutiny in order to assess the impact of development of this site in this regard.

#### SA 26 Land south of Hammerwood Road, Ashurst Wood

6.41 The site is within the AONB and it is considered it is inappropriate to allocate this site for development without thorough appraisal of reasonable alternatives as previously set out.

#### SA 27 Land at St. Martin Close, Handcross

6.42 No comments.

#### SA28 Land South of The Old Police House, Birchgrove Road, Horsted Keynes

6.43 No comments.

#### SA 29 Land south of St. Stephens Church, Hamsland, Horsted Keynes

6.44 The site is within the AONB and it is considered it is inappropriate to allocate this site for development without thorough appraisal of reasonable alternatives as previously set out.

#### SA 30 Land to the north Lyndon, Reeds Lane, Sayers Common

- 6.45 The sustainability of this site has been considered in the SA which sets out that the site is more than 20 minutes away from services such as GP and the School. It is therefore not considered that the development of this site would be justified in sustainability terms.
- 6.46 The site is located within the Brick Clay (Weald) Mineral Safeguarding Area. No further evidence has been provided which demonstrates that the site is required for further mineral extraction.

#### SA 31 Land to the rear Firlands, Church Road, Scaynes Hill

6.47 The site is located within the Building Stone (Cuckfield) Mineral safeguarding Area. No further evidence has been provided which demonstrates that the site is required for further mineral extraction.

#### SA 32 Withypitts Farm, Selsfield Road, Turners Hill

- 6.48 The site is within the AONB and it is considered it is inappropriate to allocate this site for development without thorough appraisal of reasonable alternatives as previously set out.
- 6.49 The site is located within the Brick Clay (Weald) Mineral Safeguarding Area. No further evidence has been provided which demonstrates that the site is required for further mineral extraction.

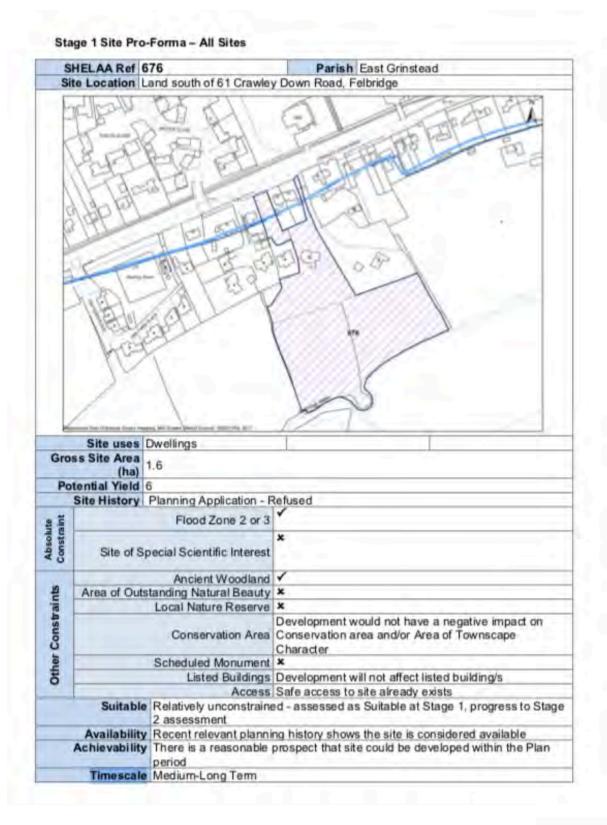
#### SA 33 Ansty Cross Garage, Cuckfield Road, Ansty

6.50 This site is not considered to be a sustainable location. A total of four separate sites were considered within Ansty with this being the only one accepted. The only difference between this and the other sites was that this scored slightly higher in the SA due to it being PDL. Whilst this is correct it is not considered that the PDL nature of this site makes it appropriate for allocation within the Sites DPD.

#### 7. Conclusions

- 7.1 Overall, the principle of extending the Built Up Area Boundary to the south of Crawley Down Road to include the site within the control of Vanderbilt Homes is logical and supported.
- 7.2 The site has been identified within the SHELAA as being Suitable, Available and Achievable. However, given that the site is adjoined on one side by an allocated site and on another side by a site with the benefit of planning permission, it is considered that it would be entirely appropriate for the site to be allocated for development.
- 7.3 Detailed consideration of the sites identified for allocation within the SADPD show that there are some significant technical constraints and policy issues with many of the sites. These are matters which have been previously raised as part of regulation 18 representations and the council has done nothing to address these matters.
- 7.4 The analysis of the proposed allocations demonstrates there are some significant failings in the deliverability of the sites which requires reconsideration of the appropriateness of these allocations and selection of alternative sites.
- 7.5 The selection of sites with significant heritage constraints and also location within the AONB is not considered to be a sound approach. The assessment of reasonable alternatives is significantly lacking and requires further retesting which would logically include this site. As a result, it is not considered that the SADPD is positively prepared or justified and therefore fails the test as set out in the NPPF as a result.
- 7.6 It is clear that the adoption of the SADPD is of significance importance to Mid Sussex in demonstrating a robust and deliverable five year housing land supply. It is therefore suggested that consideration is given to the allocation of the site as set out within these representations which can deliver much needed housing in the early part of the plan period.

#### 8. Appendix 1 – SHELAA Extract – February 2020



## MSDC – Draft Site Allocations DPD (Regulation 19) Consultation Representation on behalf of Vanderbilt Homes – Land South of 61 Crawley Down Road, Felbridge

### **Site Allocations DPD: Regulation 19 Consultation Response**

## Policy: SA30

ID: 2107

Response Ref: Reg19/2107/1
Respondent: Ms K Lamb
Organisation: DMH Stallard

On Behalf Of: Reside - SA30 Lyndon Sayers Common

Category: Promoter

Appear at Examination? ✓

Stevenson, Holly <Holly.Stevenson@dmhstallard.com> From:

28 September 2020 13:00 Sent:

To: Idfconsultation Cc: Lamb, Katie

Subject: Representations - Mid Sussex Site Allocations DPD Regulation 19 Consultation

(DMH Stallard Ref:315317-7)

**Attachments:** LTR Site Allocations DPD Regulation 19.pdf; sa301-site-layout.pdf; sa302-

arboricultural-report.pdf; sa303-archaeological-assessment.pdf

**Follow Up Flag:** Follow up Completed Flag Status:

**Categories: TBC** 

Dear Sirs.

Site Allocations DPD - Regulation 19 Consultation Land to the rear of Lyndon, Reeds Lane, Sayers Common - Policy SA30 On behalf of Reside Developments Ltd

Please find herewith, our representations in relation to the Mid Sussex Site Allocations DPD Regulation 19 consultation.

NB- I will send the required attachments in this email and three following emails, as they are too large to be sent in one email.

Regards

Holly Stevenson | Paralegal | Tel: +44 1293 663521

For and on behalf of DMH Stallard LLP

3rd Floor, Origin One, 108 High Street, Crawley, West Sussex, RH10 1BD



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Planning Policy
Mid Sussex District Council
Oaklands House
Oaklands Road
Haywards Heath
RH16 1SS

Date 28 September 2020

Your ref SA30

Our ref 0704/315317-7

Dear Sirs

Site Allocations DPD - Regulation 19 Consultation
Land to the rear of Lyndon, Reeds Lane, Sayers Common – Policy SA30
On behalf of Reside Developments Ltd

DMH Stallard LLP act on behalf of Reside Developments Limited ("Reside") in relation to the promotion of land north of Lyndon, Reeds Lane, Sayers Common, as allocated within the Regulation 19 Site Allocations DPD ("SA DPD") under policy SA30. These representations refer to Policy SA30 and the assessment of land north of Lyndon, which we submit is sound.

Policy SA30 identifies the land north of Lyndon, Reeds Lane, Sayers Common for 35 dwellings, we wholly support the identification of the site, which is based on sound evidence, submitted to the Council as part of the Call for Sites process. The Council's detailed assessment of the site, through the SHELAA site assessment and the Sustainability Appraisal (SA), is sound and robust. The SHELAA assessment of the site reflects the detailed site assessment work submitted to the Council which has then followed through to the SA process, identifying the site as a part of a suite of sites 'that perform well'. These are sites that perform well individually but are also assessed as being compliant with the District Plan strategy.

Additionally, the site has been subject of a previous planning application which considered the suitability of the site for housing development. That application, which was submitted prior to the adoption of the District Plan, was only dismissed on the basis of prematurity, that it was outside the development boundary on land not allocated for development; the Council and their statutory consultees otherwise accepted the suitability of the site, particularly from a technical perspective. That

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information has been uploaded to the Council's Site Library which also accompanies these representations.

A site layout has been submitted to the Council, and accompanies these representations, this demonstrates that the 35 dwellings proposed can be accommodated on the site, whilst also providing a good mix of dwellings types, sizes and tenures, including a policy compliant proportion of affordable housing. This reflects the wording of the emerging policy, demonstrating that the scheme can deliver against the proposed urban design principles whilst ensuring the numbers identified within the policy can be delivered.

At Regulation 18 stage, Reside submitted representations requesting small changes to the policy wording, this included a request for the policy wording to reflect a slight variation in final numbers achieved on the site (higher or lower). We submit that the policy, or the SA DPD, is made to clearer to ensure that there is flexibility in the number that can be delivered on the site, for example, that it is allocated for <u>around 35</u>, the current policy wording states a fixed figure.

Additionally, it was submitted that the policy should not place onerous requirements on connectivity to adjoining sites where this may not be possible for reasons outside the control of the developer, for example, the final design and layout of the adjoining scheme. We welcome the amendments that have been made thus far, but request that a minor policy revision is considered, to ensure connectivity where possible, we suggest the following policy wording:

Enhance connectivity with Sayers Common village by providing pedestrian and/or cycle links to adjacent existing networks-, where possible.

We submit that the allocation of land north of Lyndon, Reeds Lane (Policy SA30) will make an important contribution towards meeting the residual housing needs arising from the District Plan and the housing requirement. We also welcome the Council's approach to the distribution of housing, noting the importance of distributing housing throughout the sustainable settlements of the district, including Sayers Common, a category 3 settlement. Furthermore, we support the Council's identification of a range of site sizes which will assist in the delivery of new homes across the District. The identification of land north of Lyndon, a small – medium sized site, will make an important contribution towards housing delivery, particularly in the first 5 year period. The NPPF (paragraph 68) acknowledges that sites such as this make an important contribution, noting that they are often built-out relatively quickly and we welcome the council's approach in this regard.

Reside are committed to early delivery of the proposal and intend to bring forwards a planning application at the earliest opportunity, aiding the early delivery of housing.

Subject to some minor changes to policy SA30, Reside wholly support the allocation of land north of Lyndon at policy SA30, which meets the tests of soundness, as follows:

- a) It is **positively prepared** acknowledging the important contribution the site can makes towards meeting the housing requirement set out in the District Plan.
- b) It is **justified** policy SA30 is based on solid evidence base, including technical site assessment and consideration by the Council's statutory consultees through the planning application process.
- c) It is effective it has been demonstrated that the site is deliverable and capable of coming forwards quickly to meet housing need in the next 5 year housing period. The promoter is a regional housebuilder who intends to make an application as soon as possible in order to bring the site forward and to meet the housing requirement.
- d) It is consistent with national policy policy SA30 will deliver sustainable development in accordance with national policy and the District Plan. It acknowledges the importance of delivering housing to meet local housing needs in a range of settlement sizes. It also recognises the benefits of identifying smallmedium sized sites for development, to aid delivery of housing, in accordance with national policy.

Following submission of the SA DPD to the Secretary of State, Reside would like the opportunity to participate in the Examination Hearings, and look forward to receiving notification in due course. Please contact Katie Lamb (Director of Planning) on 01293 605192 or katie.lamb@dmhstallard.com for further information.

Yours faithfully

DMH Stallard LLP

DMH Havard LLP

**Enclosures:** 

Illustrative Site Layout
Arbirocultural Implications Assessment
Archeological Assessment
Ecological Assessment
Dormouse Survey
Flood Risk and Surface Water Drainage Assessment
Phase 1 Contamination Report
Transport Statement
Stage 1 Safety Audit
Transport Note





CMYK (Planning & Design) Ltd

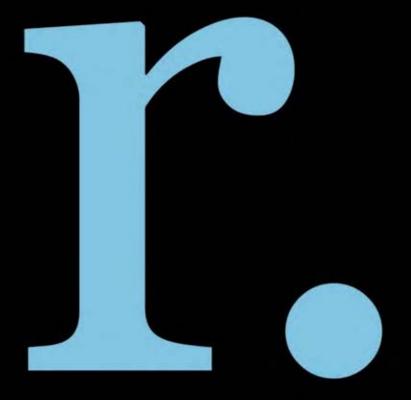
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# reside.

# The Old Brickworks, Reeds Lane Sayers Common

**Arboricultural Implications Report** 





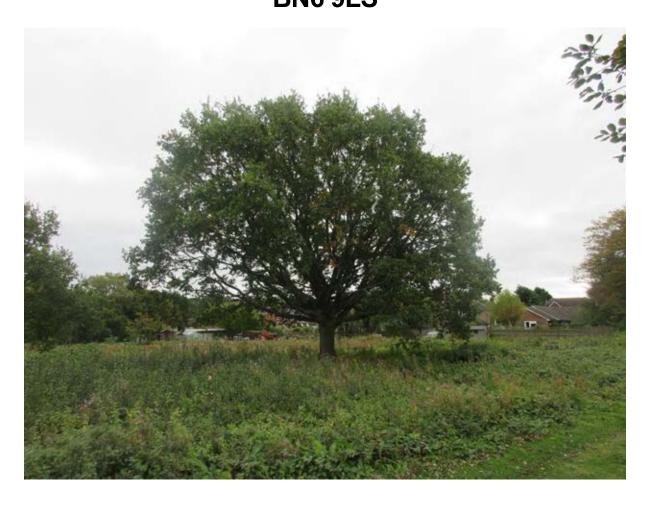
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Tel: (01737) 813058

E-mail: sja@sjatrees.co.uk

Principal: Simon R. M. Jones Dip. Arb. (RFS), F. Arbor. A., Arboricultural Association Registered Consultant

# Arboricultural Implications Report Proposed re-development at Reeds Lane Sayers Common West Sussex BN6 9LS



October 2017

Ref. SJA air 17182-01a

#### **SUMMARY**

- S1. On the basis of our assessment, we conclude that the arboricultural impact of this scheme is of negligible magnitude, as defined according to the categories set out in *Table 1* of this report.
- S2. Our assessment of the impacts on trees concludes that no veteran or ancient trees, no category 'A' trees, and no trees of high landscape or biodiversity value are to be removed. None of the main arboricultural features of the site are to be removed. The proposed removal of twelve individual trees will represent no alteration to the main arboricultural features of the site, and would not have an adverse impact on the arboricultural character and appearance of the local landscape.
- S3. The proposed pruning is minor in extent, will not detract from the health or appearance of these trees, and complies with the current British Standard *BS* 3998:2010 Tree work Recommendations.
- S4. The incursions into the Root Protection Areas of trees to be retained are minor and within the tolerable limits of the species affected; and subject to implementation of the measures recommended on the Tree Protection Plan and set out at **Appendix** 1, no significant or long-term damage to their root systems or rooting environments will occur.
- S5. None of the proposed dwellings are likely to be shaded by retained trees to the extent that this will interfere with their reasonable use or enjoyment by incoming occupiers, and which might otherwise lead to pressure on the Local Planning Authority to permit felling or severe pruning that it could not reasonably resist.
- S6. As the proposed development will protect the trees which contribute to the character of the area, incorporate the existing important trees into the design of the proposed re-development, prevent damage to their root systems through appropriate protection measures and provides space for expected future growth, it complies with Policy C6 of the Mid Sussex Local Plan 2004, and Policies DM24 and DM36 of the Mid Sussex District Plan 2014-2031 Pre-Submission Draft.

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#### **APPENDICES**

- 1. Protection of retained trees
- 2. Tree survey schedule (SJA tss 17182-01)
- 3. Tree locations plan (SJA TL 17182-01)
- 4. Tree protection plan (SJA TPP 17182-01)

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SJA air 17182-01a Page 3

#### 1. INTRODUCTION AND BACKGROUND INFORMATION

#### 1.1. Instructions

- 1.1.1. SJAtrees has been instructed by Reside Developments Limited to visit and survey the trees growing on or immediately adjacent to this site.
- 1.1.2. We are further asked to identify which trees are worthy of retention within a proposed re-development of the site; to assess the implications of the development proposals on these specimens, and to advise how they should be protected from unacceptable damage during construction.

#### 1.2. Scope of report

- 1.2.1. This report and its appendices reflect the scope of our instructions, as set out above. It is intended to accompany an outline planning application to be submitted to Mid Sussex District Council, and complies with local validation requirements, and with the recommendations of British Standard BS 5837:2012, *Trees in relation to design, demolition and construction Recommendations* ('BS 5837').
- 1.2.2. The proposed development comprises the construction of 29 residential dwellings, associated hard surfacing including access from Reeds Lane to the south, landscaping and surface water drainage features.
- 1.2.3. The report summarises and sets out the main conclusions of the baseline data collected during the tree survey, and identifies those trees or groups of trees whose removal could result in a significant adverse impact on the character or appearance of the local area (Section 3). It then details and assesses the impacts of the proposed development on trees, including those to be removed (Section 4), those to be pruned (Section 5), and those which might incur root damage that might threaten their viability (Section 6). The report also considers whether the proposed development could result in pressure to remove trees in the future as a result of them causing unreasonable apprehension or excessive shading (Section 7). A summary and conclusion, with regard to local planning policy, are presented in Section 8.

#### 1.3. Site inspection

1.3.1. A site visit and tree inspection was undertaken by Matt Jones of SJAtrees on Wednesday 11<sup>th</sup> October 2017. Weather conditions at the time were clear, dry and bright. Deciduous trees were in partial leaf.

#### 1.4. Site description

- 1.4.1. The site is located on the north side of Reeds Lane, to the north of the King Business Centre. The north boundary is formed by a post and wire fence which extends from the north-west corner of the site, eastwards along the southern extent of a large woodland (W1), to the eastern boundary, where the fence then diverts southwards along the eastern boundary to form the application site. The southern boundary abuts the northern boundary of the King Business Centre. The western boundary meets another open field and is separated by a post and wire fence which extends to the north-west corner of the site. The site is currently accessed via a narrow finger of land extending from Reeds Lane along the western boundary of the King Business Centre.
- 1.4.2. The site currently comprises a small outbuilding in the south-east corner, but is otherwise derelict. The topography of the site is generally flat in the open portion of the site, but slopes down from south-west to north-east along the eastern boundary adjacent to an existing pond.

#### 1.5. Statutory controls

- 1.5.1. At the time of writing we understand that none of these trees are covered by a tree preservation order (TPO).
- 1.5.2. The site is not within a conservation area, and therefore there are no constraints relating to existing trees in this regard.

1.5.3. There are no hedgerows on site which could meet the criteria to be deemed "Important" in the context of the landscape and wildlife criteria of the Hedgerows Regulations, 1997<sup>1</sup>.

#### 1.6. Non-statutory designations

1.6.1. There are no woodlands within or abutting the site that are classified as 'Ancient'. Ancient woodland is considered an important and irreplaceable habitat, and is defined by Natural England as "land that has had continuous woodland cover since at least 1600 AD".

<sup>1</sup> The Hedgerows Regulations 1997; STATUTORY INSTRUMENTS 1997 No. 1160.

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#### 2. METHODOLOGY

#### 2.1. National policy context

- 2.1.1. Under Section 197 of the Town and Country Planning Act 1990, local authorities have a statutory duty to consider the protection and planting of trees when considering planning applications. The effects of proposed development on trees are therefore a material consideration, and this is normally reflected in local planning policies.
- 2.1.2. Paragraph 14 of the National Planning Policy Framework (NPPF), (March 2012), states that there is a presumption in favour of sustainable development: "At the heart of the National Planning Policy Framework is a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan-making and decision-taking."
- 2.1.3. At paragraph 17, the NPPF provides a set of 12 core planning principles which underpin both plan-making and decision-taking. Three of these (bullet points 4, 5 and 7) can be applied to trees and their role in sustainable development. They state that planning should:
- "(4) seek to secure ... a good standard of amenity for all existing and future occupants of land and buildings
- (5) take account of the different roles and character of different areas, ..... recognise the intrinsic character and beauty of the countryside
- (7) contribute to conserving and enhancing the natural environment"
- 2.1.4. The NPPF makes it clear that planning permission for development should be granted unless the proposal is inconsistent with the above principles or with the policies within the local development plan, unless the benefits of the proposal significantly and demonstrably outweigh its adverse effects, or unless the NPPF itself indicates that the proposal should be restricted.
- 2.1.5. Trees are mentioned specifically at paragraph 118 of the NPPF, which states: "planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged

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or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss."

#### 2.2. Local policy context

- 2.2.1. Local planning policies are contained with the Mid Sussex Local Plan 2004, and the Mid Sussex District Plan 2014-2031 Pre-Submission Draft.
- 2.2.2. Policy C6 of the Mid Sussex Local Plan 2004 states:
- "Development resulting in the loss of woodlands, hedgerows and trees which are important in the landscape, or as natural habitats, or historically, will be resisted."
- 2.2.3. Policy DP24 "Character and Design" of the District Plan states:
- "All development and surrounding spaces, including alterations and extensions to existing buildings and replacement dwellings, will be well designed and reflect the distinctive character of the towns and villages while being sensitive to the countryside. All applicants will be required to demonstrate that development: Protects open spaces, trees and gardens that contribute to the character of the area."
- 2.2.4. Policy DP36 "Trees, Woodland and Hedgerows" of the District Plan states:
- "Development that will damage or lead to the loss of trees, woodland or hedgerows that contribute, either individually or as part of a group, to the visual amenity value or character of an area, and/ or that have landscape, historic or wildlife importance, will not normally be permitted. Trees, woodland and hedgerows will be protected and enhanced by ensuring development:
- incorporates existing important trees, woodland and hedgerows into the design of new development and its landscape scheme; and
- prevents damage to root systems and takes account of expected future growth; and
- where possible, incorporates retained trees, woodland and hedgerows within public open space rather than private space to safeguard their long-term management; and
- has appropriate protection measures throughout the development process; and

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- takes opportunities to plant new trees, woodland and hedgerows within the new development to enhance green infrastructure and increase resilience to the effects of climate change; and
- does not sever ecological corridors created by these assets."

#### 2.3. Tree survey and baseline information

- 2.3.1. We surveyed individual trees with trunk diameters of 75mm and above<sup>2</sup>, trees with trunk diameters of 150mm and above growing in groups or woodlands, and shrub masses, hedges and hedgerows<sup>3</sup> growing within or immediately adjacent to the site; and recorded their locations, species, dimensions, ages, condition, and visual importance in accordance with BS 5837 recommendations.
- 2.3.2. We attached numbered plastic tags to the trunks of all on-site trees surveyed as individuals. The numbers on these tags correspond with the numbers in our tree survey schedule and on our tree location and protection plans (at **Appendices 3** and **4**). In practical terms, this aids identification of trees on the ground, allows them to be cross-referenced with our survey schedule, and ensures that if and when it comes to site clearance or felling, the potential for mistakes to occur is limited, and the correct trees are retained.
- 2.3.3. The baseline information collected during our site survey was recorded on site using a hand-held digital device. This information was then imported into an Excel spreadsheet and used to produce the tree survey schedule at **Appendix 2**.
- 2.3.4. We surveyed trees as groups where we considered that they had grown together to form cohesive arboricultural features, either aerodynamically (trees that provide companion shelter), visually (e.g. avenues or screens) or culturally<sup>4</sup>. However, where we considered that it might be necessary to differentiate between specific trees within these groups, we also surveyed these individually.

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<sup>&</sup>lt;sup>2</sup> BS 5837, paragraph 4.2.4 b), recommends that all trees over 75mm stem diameter should be included in a preplanning land and tree survey.

<sup>&</sup>lt;sup>3</sup> Ibid, 4.4.2.7

<sup>&</sup>lt;sup>4</sup> Ibid, 4.4.2.3

- 2.3.5. We inspected the trees from the ground only, aided by binoculars as appropriate, but did not climb them. We took no samples of wood, roots or fungi. We did not undertake a full hazard or risk assessment of the trees, and therefore can give no guarantee, either expressed or implied, of their safety or stability.
- 2.3.6. We have categorised the trees in accordance with BS 5837, and details of the criteria used for this process can be found in the notes that accompany the tree survey schedule.
- 2.3.7. We have applied this methodology in line with the thrust of the NPPF's presumption in favour of sustainable development, giving greater weighting to the contribution of a tree to the character and appearance of the local landscape, to amenity, or to biodiversity, where its removal might have a significant adverse impact on these factors.

#### 2.4. Tree locations plan

2.4.1. The information in the tree survey schedule has been used to produce the tree locations plan at **Appendix 3**, which is based on the topographical survey plan provided. The locations of some additional trees, not shown on this plan, have been plotted using our own measurements taken on site.

#### 2.5. Tree constraints

- 2.5.1. In line with the NPPF's presumption in favour of sustainable development, we assessed whether any trees should be retained in the context of a proposed redevelopment. To do this, we identified the main arboricultural features within or immediately adjacent to the site, whose removal we considered could have an adverse impact on the character and appearance of the local landscape, on amenity or on biodiversity.
- 2.5.2. Whilst BS 5837 states that trees in categories 'A', 'B' and 'C' are all a material consideration in the development process, the retention of category 'C' trees, being of low quality or of only limited or short-term potential, will not normally be considered necessary should they impose a significant constraint on development.

2.5.3. Furthermore, BS 5837 makes it clear that young trees, even those of good form and vitality, which have the potential to develop into quality specimens when mature "need not necessarily be a significant constraint on the site's potential"<sup>5</sup>.

2.5.4. Moreover, BS 5837 states that "....care should be taken to avoid misplaced tree retention; attempts to retain too many or unsuitable trees on a site can result in excessive pressure on the trees during demolition or construction work, or post-completion demands for their removal" 6.

2.5.5. The 'Root Protection Areas' (RPAs)<sup>7</sup> of the trees identified for retention were calculated in accordance with Section 4.6 of BS 5837; and were assessed taking account of factors such as the likely tolerance of a tree to root disturbance or damage, the morphology and disposition of roots as influenced by existing site conditions (including the presence of existing roads or structures), as well as soil type, topography and drainage. Where considered appropriate, the shapes of the RPAs (although not their areas) were modified as a result of these considerations, so that they reflect more accurately the likely root distribution of the relevant trees.

2.5.6. To assess whether the trees identified for retention would be in harmony with the proposed development (without casting excessive shade or otherwise unreasonably interfering with incoming residents' prospects of enjoying their properties, and thereby leading inevitably to requests for consents to fell), we plotted a segment or "shading arc" from each trunk, with a radius equal to the current height of the tree concerned, from due north-west to due east. This gave an indication of potential direct obstruction of sunlight and the shadow pattern cast through the main part of the day<sup>8</sup>.

2.5.7. Based on these principles and recommendations, the tree survey and our assessment of suitability for retention informed the production of a tree constraints

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<sup>&</sup>lt;sup>5</sup> Ibid. 4.5.10.

<sup>&</sup>lt;sup>6</sup> Ibid. 5.1.1.

<sup>&</sup>lt;sup>7</sup> The minimum area around a retained tree "deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority." BS 5837, paragraph 3.7

<sup>&</sup>lt;sup>8</sup> BS 5837, paragraph 5.2.2 Note 1.

plan (TCP) which showed the most suitable trees for retention, and their associated below-ground and above-ground constraints.

- 2.5.8. As a design tool, the TCP showed how close to those trees selected for retention the proposed development could be positioned, in terms of three key criteria:
- a). avoidance of unacceptable root damage;
- b). avoidance of the necessity for unacceptable pruning works; and
- c). avoidance of future felling or pruning works to prevent unacceptable shading or apprehension on behalf of the occupants.
- 2.5.9. The TCP was then used to inform the siting of the proposed dwellings and areas of hard surfacing, about both of which we were consulted on during the design process. In this way, it has been ensured that the existing trees have made a significant contribution to the design of the proposed development, rather than the design having dictated which trees are to be removed.

#### 2.6. Arboricultural impact assessment and tree protection plan

- 2.6.1. Once finalised, we assessed the arboricultural impacts of the proposed layout, by overlaying it onto our TCP, and produced the tree protection plan (TPP) presented at **Appendix 4.** This is based on the proposed site layout plan by CMYK Architects, drawing no. 1636/P/10.02.
- 2.6.2. The TPP identifies the trees which will be removed to accommodate the proposed development, either because they are situated within the footprints of proposed structures or surfaces, or because in our judgment they are too close to these structures or surfaces to enable them to be retained. These are shown by means of **red crosses** on the TPP.
- 2.6.3. The TPP also shows how trees to be retained will be protected from damage during construction, and the measures identified are set out and described at **Appendix 1** to this report. The implementation of, and adherence to, these measures can readily be secured by the imposition of appropriate planning conditions.

- 2.6.4. For the trees shown to be retained, all measurements for pruning specifications, percentage estimates of RPA incursions and shading issues have been calculated using AutoCAD software.
- 2.6.5. Details of the impacts identified within these categories, and our assessment of their respective significance, are analysed in Sections 4 to 7 below.
- 2.6.6. On the basis of these findings, we have assessed the magnitude of the overall arboricultural impact of the proposals according to the categories defined in *Table 1* below;

Category	Description			
High	Total loss of or major alteration to main elements/ features/ characteristics of the baseline, post-development situation fundamentally different			
Medium	Partial loss of or alteration to main elements/ features/ characteristics of the baseline, post- development situation will be partially changed			
Low	Minor loss of or alteration to main elements/ features/ characteristics of the baseline, post- development changes will be discernible but the underlying situation will remain similar to the baseline			
Negligible	Very minor loss of or alteration to main elements/ features/ characteristics of the baseline, post-development changes will be barely discernible, approximating to the 'no change' situation			

Table 1: Magnitude of impacts9

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<sup>&</sup>lt;sup>9</sup> Determination of magnitude based on DETR (2000) Guidance on the Methodology for Multi-Modal Studies, as modified and extended.

#### 3. THE TREES

#### 3.1. Survey findings

- 3.1.1. We surveyed a total of 44 individual trees, seven groups of trees, one hedgerow and one area of woodland growing within or immediately adjacent to the site. Their details are found in the tree survey schedule at **Appendix 2**.
- 3.1.2. The trees on and adjacent to the site are typical in size, species-mix and age class of rural West Sussex. The principal species in English oak which is found as large, roadside trees along Reeds Lane, and in the tree belts and woodland that define the site boundaries. The English oaks are supplemented by other native, broad-leafed species such as goat willow, ash, hornbeam and sycamore. There are non-native coniferous specimens, including blue cedar and Leyland cypress. In terms of density, the south, east and north boundaries are heavily populated with trees. Beyond the northern boundary is a large area of woodland, within which English oak is the dominant species.

#### 3.2. Assessment of suitability for retention

- 3.2.1. The main arboricultural features within or immediately adjacent to the site, whose removal we consider could have an adverse impact on the character and appearance of the local landscape, on amenity or on biodiversity, are as follows:
- the large off-site area of woodland (W1) beyond the northern boundary of the main part of the site, which is readily visible in long-range views across the site, and provides a dense backdrop to the site in views from Reeds Lane;
- the large off-site English oak (no. 4) located within the rear garden of "The Badgers" along the southern boundary of the site, which is readily visible and screens the trees beyond it in views from Reeds Lane;
- the off-site group of Leyland cypress (G7) which provides boundary screening between the site and the King Business Centre, therefore obscuring views of the trees within the site in views from Reeds Lane; and

- the line of five off-site English oaks (nos.1, 2 and 8-10), which grow along the northern side of Reeds Lane, and are visible by pedestrians and vehicles in long-range views along this road.
- 3.2.2. None of the individual trees have been assessed as category 'U'.
- 3.2.3. There are no category 'A' trees but 24 category 'B' specimens. The remaining 20 trees are assessed as category 'C' trees, being either of low quality, very limited merit, only low landscape benefits, no material cultural or conservation value, or only limited or short-term potential; or young trees with trunk diameters below 150mm; or a combination of these.
- 3.2.4. Of the groups of trees, hedgerow and woodland, the woodland (W1) has been assessed as category 'A'. Three groups (G2, G5 and G7) have been assessed as category 'B', and the remaining three groups (G3, G4 and G6) and hedgerow (H1) as category 'C'.

#### 4. TREES TO BE REMOVED

#### 4.1. Details

- 4.1.1. To accommodate the proposed development, as shown on the proposed layout plan, 13 individual trees are to be removed, either because they are situated within the footprints of proposed structures or surfaces, or because they are too close to these to enable them to be retained.
- 4.1.2. Of the trees to be removed, three are category 'B' and ten are category 'C'. The category 'B' trees to be removed are shown and listed on the TPP and at *Table 2* below.

Tree no.	Species	Height	Trunk diameter	Age class	BS category
5	Blue cedar	13m	est. 575mm	Semi-mature	B (12)
30	Hornbeam	11m	505mm	Semi-mature	B (12)
31	English oak	13m	290mm 345mm 495mm (all over ivy)	Semi-mature	B (12)

Table 2: Category "B" trees to be removed

- 4.1.3. None of the individual trees to be removed are covered by a TPO (see 2.2.1 above).
- 4.1.4. Two groups of trees (G2 and G5) will be partially removed as part of the proposals. These groups are not covered by the TPO.

#### 4.2. Assessment

- 4.2.1. All those trees or groups of trees that constitute the main arboricultural features of the site, and which make the greatest contribution to the character and appearance of the local landscape, to amenity or to biodiversity (see paragraph 3.2.1), will be retained.
- 4.2.2. As there are no ancient or veteran trees on site, none will be removed.

- 4.2.3. Twenty-one of the 24 category 'B' trees are to be retained, but three, blue cedar (no. 5), hornbeam (no. 30) and English oak (no. 31) are to be removed, as shown in *Table 2* above.
- 4.2.4. The two broad-leafed category 'B' trees to be removed (hornbeam, no. 30 and English oak, no. 31) are not large trees; nor are they mature. The hornbeam is 11m tall and the English oak 13m, with trunk diameters of 505mm and 290mm, 345mm and 495mm (all over ivy) respectively. Moreover, they are located in the southern portion of the site, immediately adjacent to the site boundaries which in turn are abutted by off-site trees. The row of private residential properties along Reeds Lane to the south and south-east of the trees, and the belt of trees, including the large individual English oak (no. 4) located within the curtilage of the westernmost property, "The Badgers", screen the upper canopies of both trees to be removed in views from Reeds Lane.
- 4.2.5. The trees are also screened in views from the south-west along Reeds Lane, and from within the King Business Centre by the presence of the mixed-species belt of trees around the perimeter of the business centre (G1), and the established Leyland cypress hedge (G7) which extends along the eastern boundary of the King Business Centre from Reeds Lane. Therefore, the removal of hornbeam (no. 30) and English oak (no. 31) will go largely unnoticed from the surrounding public viewpoints, and will not have an adverse impact on the arboricultural character or appearance of the site.
- 4.2.6. The third category 'B' tree to be removed is the blue cedar (no. 5), currently growing within the rear garden of a residential property accessed via Reeds Lane. Again, it is not a tall specimen, measured at 13m tall with a trunk diameter estimated at 575mm due to limited access to the garden.
- 4.2.7. Blue cedar is a non-native, coniferous specimen, and this tree is likely to have been planted by the owner of the property in which it is found. At present, it is visible in views from Reeds Lane, and from the junction with Meadow View to the south, but only the upper 6m is distinguishable from this viewpoint.
- 4.2.8. As a species, cedar is often considered unsuitable for retention in close proximity to residential dwellings for a number of reasons. It can achieve heights in excess of 30m, and on sites with appropriate conditions, can grow very rapidly. The tallest cedar in the UK was measured at 38m in height, in 2007. Furthermore, mature

cedars tend to develop large and spreading crowns, which if standing alone in the open can often become broader than the tree is tall, comprising large and heavy low branches.

- 4.2.9. The species also has a high propensity to form weak forks and for fork failure. The brittle wood characteristics tends to form heavy branches which are prone to failure. These can become laden with ice or snow in the winter months, increasing the likelihood of entire branch failure. Such branches are also at risk of failure following a major wind event, particularly if they are already situated in a wind-exposed position within a site.
- 4.2.10. The crowns of mature trees of this genus are often dense, and can be found growing in layers. Consequently, the typical shade cast by cedar is dense, restricting the access of sunlight and daylight through the canopy; sometimes to such an extent that in conjunction with the high volume of debris created by the tree that covers the ground beneath the canopy (dead needles, cones and small twigs) the ability to grow anything beneath them is lost.
- 4.2.11. For the reasons discussed above, the removal of the blue cedar (no. 5) will not be to the detriment of the local landscape. Conversely, it will remove a non-native, large-growing specimen from a site where the surrounding trees are native, broad-leafed trees and will enhance the arboricultural character of the wider landscape following completion of the proposals.
- 4.2.12. Ten of the 20 category 'C' trees on site are to be retained; the remaining ten category 'C' trees are to be removed: these are either of low quality, low value, or short-term potential. For these reasons, their removal will have no significant impact on the character or appearance of the area.
- 4.2.13. Three of the trees to be removed (English oaks nos. 35, 36 and 40) are young specimens, which BS 5837 states "need not necessarily be a significant constraint on the site's potential" 10.

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<sup>&</sup>lt;sup>10</sup> Ibid. 4.5.10.

- 4.2.14. Furthermore, the proposals incorporate considerable replacement tree planting; this is shown on the proposed site layout produced by CMYK Architects (ref: 1636/P/10.02) submitted with the application. To distinguish between the existing trees, and those that are proposed, the proposed have been coloured dark green on the appended TPP. The inclusion of the replacement planting will mitigate the proposed removals, improve the age class balance of the trees on site, enhance the local landscape, and re-establish a framework for the ongoing and long-term character of the site. The establishment of the proposed replacement planting will progressively reduce the magnitude of the impact of the proposed removals on the character and appearance of the site
- 4.2.15. In the light of these considerations, and taking account of the numbers, sizes and locations of the trees to be retained, including those that are off-site, the felling of the trees and groups identified for removal will represent no alteration to the main arboricultural features of the site.

#### 5. TREES TO BE PRUNED

#### 5.1. Details

5.1.1. Three individual trees to be retained are to be pruned to facilitate implementation of the proposals. These are shown at *Table 3* below.

Tree no.	Species	Proposed works
111	English oak	Crown lift to 5m above the proposed road and parking bays beneath the southern portion of canopy
114	English oak	Crown lift to 5m above the proposed road and parking bays beneath the southern portion of canopy
116	English oak	Crown lift to 5m above the proposed road and parking bays beneath the southern portion of canopy

Table 3: Proposed pruning works

5.1.2. Moreover, two groups of trees (G1 and G5) will be pruned to facilitate the proposals. The lateral growth of the mixed-species belt of off-site trees (G1) will be cut back to 2m beyond the site boundary. The group of small self-seeded trees (G5) along the eastern boundary will be cut back, or individual trees removed if necessary, to give adequate space for the proposed swale to be constructed in the north-east corner of the site

#### 5.2. Assessment

- 5.2.1. The extent of pruning proposed to the trees listed in *Table 3* is minor. Branches to be removed are mostly small in size, and will result in a maximum wound size no greater than 100mm in diameter; this will have an insignificant effect on the health and physiological condition of these trees, and complies with the recommendations of British Standard BS 3998:2010, *Tree work Recommendations*.
- 5.2.2. The loss of individual specimens within group G5 along the eastern boundary of the site will go largely unnoticed, even from internal viewpoints, due to the dense screen that will remain following the proposed tree work.
- 5.2.3. In terms of impact upon the landscape, the proposed pruning is minor in extent, and will be largely screened in views by either the remainder of the trees' canopies, or by other trees growing within or adjacent to the site. It will have a negligible effect on

the appearance of the trees when viewed from outside the site itself, and accordingly will not detract from the character or appearance of the site.

5.2.4. Following the pruning specified, none of the proposed dwellings will lie within 2m of the extents of the canopies of trees to be retained, thereby providing adequate working space for construction, and a reasonable margin of clearance for future growth.

#### 6. ROOT PROTECTION AREA INCURSIONS

#### 6.1. Details

6.1.1. Parts of the proposed hard surfacing will encroach within the RPAs of four of the trees to be retained. These are shown in *Table 4* below.

Tree no.	Species	Description	% of RPA
37	English oak	Proposed footpath	3.7%
104	English oak	Proposed parking space	1.7%
105	English oak	Proposed parking space	0.2%
116	English oak	Proposed road	6.1%

Table 4: Proposed incursions within RPAs

#### 6.2. Assessment

- 6.2.1. The incursions set out above are exclusively by areas of hard surfacing, as opposed to proposed dwellings or other structures which would require more significant founding and construction.
- 6.2.2. As the incursions into the RPAs of trees nos. 37, 104, 105 and 116 are by roads, footpaths and parking spaces, subject to proposed levels, some degree of excavation will likely be required. To minimise impacts on these specimens, excavation within these RPAs will be undertaken manually, under the direct control and supervision of an appointed arboricultural consultant, so that any over dig into the RPAs is avoided, and any roots encountered can be treated appropriately.
- 6.2.3. As a species, mature English oaks often show a negative response to RPA incursions in excess of 10% of individual RPAs. As the largest proposed incursion is 6.1%, and because the individuals affected are semi-mature, there is no reason to suggest that these incursions will result in significant or irreversible damage to the roots or rooting environments of the four English oaks (nos. 37, 104, 105 and 116), particularly as they are of average physiological condition (the highest level of physiology ascribed to a tree by SJAtrees).

6.2.4. The incursions into the RPAs of the four trees listed above do not extend to more than 6.1% of individual RPAs, inclusive of a 500mm construction margin, and therefore they do not exceed the 20% maximum incursion into currently unsurfaced ground recommended in BS 5837<sup>11</sup>.

6.2.5. Moreover, with the exception of English oak (no. 37), the English oaks affected by RPA incursions are semi-mature, and therefore within a period of their genetic lifespan where growth is rapid, allowing for additional energy reserves to be produced and stored to adapt to changes in their rooting environments. The incursion into the mature English oak (no. 37) equates to just 3.5% and therefore, is small enough to be unlikely to have a significant impact upon the physiological condition of the tree.

6.2.6. Additionally, as this is an outline planning application, once the principle of the proposed re-development is agreed to by the LPA, the minor RPA incursions can be designed out at the detailed design stage, further reducing the impact of the trees set out in this report.

6.2.7. Implementation of measures to prevent other incursions into the RPAs of retained trees and to protect them during construction can be assured by the erection of appropriate protective fencing, as shown on the TPP at **Appendix 4**.

6.2.8. Accordingly, subject to implementation of the above measures, and considering the ages, current physiological condition and tolerance of disturbance of these retained trees, no significant or long-term damage to their root systems or environments will occur as a result of the proposed development.

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<sup>&</sup>lt;sup>11</sup> BS 5837, paragraph 7.4.2.3.

# 7. RELATIONSHIP OF RETAINED TREES TO NEW DWELLINGS

# 7.1. Details

7.1.1. None of the proposed dwellings have their main habitable rooms directly facing trees within the shadow patterns<sup>12</sup> of which they are situated; that is, where proposed dwellings are sited in an arc between the north-west and the east of retained trees, and are closer to them than the current heights of these specimens.

### 7.2. Assessment

7.2.1. As none of the proposed dwellings lie within the shadow patterns of any retained trees, they will also not be shaded by retained trees to the extent that this will interfere with their reasonable use or enjoyment by incoming occupiers; which might otherwise lead to pressure to permit felling or severe pruning that the LPA could not reasonably resist.

7.2.2. The sizes and dispositions of the proposed private gardens are such that in our assessment they will not be unduly shaded, and will receive reasonable sunlight and daylight. Their use is thus unlikely to lead to demands for felling or severe pruning of trees that the LPA would find difficult to resist.

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<sup>&</sup>lt;sup>12</sup> BS 5837, 5.2.2, Note 1: "An indication of potential direct obstruction of sunlight can be illustrated by plotting a segment, with a radius from the centre of the stem equal to the height of the tree, drawn from due north-west to due east, indicating the shadow pattern through the main part of the day."

# 8. CONCLUSIONS

# 8.1. Summary

- 8.1.1. Our assessment of the impacts on trees concludes that no veteran or ancient trees, no category 'A' trees, and no trees of high landscape or biodiversity value are to be removed. None of the main arboricultural features of the site are to be removed. The proposed removal of twelve individual trees will represent no alteration to the main arboricultural features of the site, and would not have an adverse impact on the arboricultural character and appearance of the local landscape.
- 8.1.2. The proposed pruning is minor in extent, will not detract from the health or appearance of these trees, and complies with the current British Standard *BS* 3998:2010 Tree work Recommendations.
- 8.1.3. The incursions into the Root Protection Areas of trees to be retained are minor and within the tolerable limits of the species affected; and subject to implementation of the measures recommended on the Tree Protection Plan and set out at **Appendix** 1, no significant or long-term damage to their root systems or rooting environments will occur.
- 8.1.4. None of the proposed dwellings are likely to be shaded by retained trees to the extent that this will interfere with their reasonable use or enjoyment by incoming occupiers, and which might otherwise lead to pressure on the Local Planning Authority to permit felling or severe pruning that it could not reasonably resist.
- 8.1.5. The sizes and dispositions of the proposed private gardens are such that in our assessment they will not be unduly shaded, and will receive reasonable sunlight and daylight. Their use is thus unlikely to lead to future demands for felling or severe pruning of trees.

# 8.2. Compliance with national planning guidance

8.2.1. As the proposals will not involve the removal of any ancient, veteran or "aged" trees, they comply with paragraph 118 of the NPPF.

8.2.2. As the proposed development will maintain all the main arboricultural features of the site, and thereby will not have an adverse impact on the arboricultural character and appearance of the local landscape, or on trees of significant amenity or biodiversity value, it complies with national planning policy guidance.

# 8.3. Compliance with local planning policies

8.3.1. As the proposed development will protect the trees which contribute to the character of the area, incorporate the existing important trees into the design of the proposed re-development, prevent damage to their root systems through appropriate protection measures and provides space for expected future growth, it complies with Policy C6 of the Mid Sussex Local Plan 2004, and Policies DM24 and DM36 of the Mid Sussex District Plan 2014-2031 Pre-Submission Draft.

## 8.4. Conclusion

8.4.1. On the basis of our assessment, we conclude that the arboricultural impact of this scheme is of negligible magnitude, as defined according to the categories set out in *Table 1* of this report.

# APPENDIX 1 Protection of retained trees

### A1.1. Tree Protection Plan

A1.1.1. The TPP at **Appendix 4** shows the general and specific provisions to be taken during construction of the proposed development, to ensure that no unacceptable damage is caused to the root systems, trunks or crowns of the trees identified for retention. These measures are indicated by coloured notations in areas where construction activities are to occur either within, or in proximity to, retained trees, as described in the relevant panels on the drawing.

# A1.2. Pre-start meeting

A1.2.1. Prior to the commencement of any site clearance or construction works the developer will convene a pre-start site meeting. This shall be attended by the developer's contract manager or site manager, the fencing/boarding contractor, the groundwork contractor(s) and the arboricultural consultant. The LPA tree officer will be invited to attend. If appropriate, the tree felling/surgery contractor should also attend. At that meeting contact numbers will be exchanged, and the methods of tree protection shall be fully discussed, so that all aspects of their implementation and sequencing are made clear to all parties. Any clarifications or modifications to the TPP required as a result of the meeting shall be circulated to all attendees.

# A1.3. Protective fencing

A1.3.1. Construction exclusion zones (CEZs) will be formed by erecting protective fencing around the RPAs of all on-site trees to the specification recommended in BS 5837, Section 6.2, prior to the commencement of construction. This will consist of a scaffold framework comprising a vertical and horizontal framework, well braced to resist impacts, with vertical tubes spaced at maximum intervals of 3.5m. Onto this, welded mesh panels should be securely fixed with wire or scaffold clamps, as shown in **Figure 2** of that document. **"TREE PROTECTION ZONE - KEEP OUT"** or similar notices will be attached with cable ties to every third panel.

- A1.3.2. The RPAs of the off-site trees will also be enforced by the erection of protective fencing to the same specification, prior to the commencement of construction, thereby safeguarding them from incursions by plant or machinery, storage and mixing of materials, or other construction-related activities which could have a detrimental effect on their root systems.
- A1.3.3. The recommended positions of the protective fencing are shown by **bold blue lines** on the TPP. The precise positioning of the fencing around the trees will be considered in conjunction with any other protective hoarding/fencing which may be required around the site boundary.

A1.3.4. Within the CEZs safeguarded by the protective fencing, there will be no changes in ground levels, **no soil stripping**, and no plant, equipment, or materials will be stored. Oil, bitumen, diesel, and cement will not be stored or discharged within 10m of any trees. Areas for the storage or mixing of such materials will be agreed in advance and be clearly marked. No notice boards, or power or telephone cables, will be attached to any of the trees. No fires will be lit within 10m of any part of any tree.

## A1.4. Manual excavation within RPAs

A1.4.1. The first 750mm depth of excavations required within the RPAs of the trees to be retained (as shown by **bold orange lines** on the TPP) will be dug by hand, using a compressed air soil pick if appropriate, and under on-site arboricultural supervision, in order to safeguard against the possibility of unacceptable root damage being caused to these specimens. Any roots encountered of over 25mm diameter will be cut back cleanly to the face of the dig nearest to the tree, using a sharp hand saw or secateurs, and their cut ends covered with hessian to prevent desiccation.

# APPENDIX 3 Tree Survey Schedule



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# **Tree Survey Schedule**

Reeds Lane, Sayers Common, West Sussex, BN6 9LS

October 2017

# **Tree Survey Schedule: Explanatory Notes**

# Reeds Lane, Sayers Common, West Sussex, BN6 9LS

This schedule is based on a tree inspection undertaken by Matt Jones of SJAtrees (the trading name of Simon Jones Associates Ltd.), on Wednesday the 11th October 2017. Weather conditions at the time were clear, dry and bright. Deciduous trees were in partial leaf.

The information contained in this schedule covers only those trees that were examined, and reflects the condition of these specimens at the time of inspection. We did not have access to the trees from any adjacent properties; observations are thus confined to what was visible from within the site and from surrounding public areas.

The trees were inspected from the ground only and were not climbed, and no samples of wood, roots or fungi were taken. A full hazard or risk assessment of the trees was not undertaken, and therefore no guarantee, either expressed or implied, of their safety or stability can be given.

Trees are dynamic organisms and are subject to continual growth and change; therefore the dimensions and assessments presented in this schedule should not be relied upon in relation to any development of the site for more than twelve months from the survey date.

#### 1. Tree no.

Given in sequential order, commencing at "1". Numbers correspond with numbering on topographical survey plan.

### 2. Species.

'Common names' are given, taken from MITCHELL, A. (1978) A Field Guide to the Trees of Britain and Northern Europe.

Botanical names are shown in italics

### 3. Height.

Estimated with the aid of a hypsometer, given in metres.

#### 4. Trunk diameter.

Trunk diameter measured at approx. 1.5m above ground level; or where the trunk forks into separate stems between ground level and 1.5m, measured at the narrowest point beneath the fork. Given in millimetres.

#### 5. Radial crown spread.

The linear extent of branches from the base of the trunk to the main cardinal points, rounded up to the closest half metre, unless shown otherwise. For small trees with reasonably symmetrical crowns, a single averaged figure is guoted.

### 6. Crown break.

Height above ground and direction of growth of first significant live branch.

### 7. Crown clearance.

Distance from adjacent ground level to lowest part of lowest branch, in metres.

### 8. Age class.

Young: Age less than 1/3 life expectancy Semi-mature: 1/3 to 2/3 life expectancy Mature: Over 2/3 life expectancy

Over-mature: Mature, and in a state of decline

Veteran: Mature, with a large trunk diameter for the species; but showing signs of ancientness, irrespective of actual age, with decay or hollowing, and a crown that has undergone some retrenchment and has a structure characteristic of the latter stages of life.

Ancient: Beyond the typical age range and with a very large trunk diameter for species; with extensive decay or hollowing; and a crown that has undergone retrenchment and has a structure characteristic of the latter stages of life.

### 9. Physiology.

Health, condition and function of the tree, in comparison to a normal specimen of its species and age.

#### 10. Structure.

Structural condition of the tree – based on both the structure of its roots, trunk and major stems and branches, and on the presence of any structural defects or decay.

Very good: No significant physiological or structural defects, an upright and reasonably symmetrical structure; a particularly good example of its species.

Good: No significant physiological or structural defects, and an upright and reasonably symmetrical structure.

Moderate: No significant pathological defects, but a slightly impaired physiological structure; however, not to the extent that the tree is at immediate or early risk of collapse.

Indifferent: Significant physiological or pathological defects; but these are either remediable or do not put the tree at immediate or early risk of collapse.

Poor: Significant and irremediable physiological or pathological defects, such that there may be a risk of early or premature collapse.

Hazardous: Significant and irremediable physiological or pathological defects, with a risk of imminent collapse.

#### 11. Comments.

Where appropriate comments have been made relating to:

- -Health and condition
- -Safety, particularly close to areas of public access
- -Structure and form
- -Estimated life expectancy or potential

### 12. Category.

Based on the British Standard "Trees in relation to design, demolition and construction - Recommendations", BS 5837: 2012, Table 1, adjusted to give a greater weighting to trees that contribute to the character and appearance of the local landscape, to amenity, or to biodiversity.

**Category U:** Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.

- Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category 'U' trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning).
- Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline.
- Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality.

**Category A**: Trees of high quality with an estimated remaining life expectancy of at least 40 years.

- (1) Trees that are particularly good examples of their species, especially if rare or unusual.
- (2) Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features.
- (3) Trees, groups or woodlands of significant conservation, historical, commemorative or other value.

**Category B**: Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.

- (1) Trees that might be included in category 'A', but are downgraded because of impaired condition (e.g. presence of significant though remediable defects including unsympathetic past management and minor storm damage) such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category 'A' designation.
- (2) Trees present in numbers, usually growing as groups or woodlands, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals; or trees present in numbers but situated so as to make little visual contribution to the wider locality.
- (3) Trees with material conservation or other cultural value.

**Category C**: Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.

- (1) Unremarkable trees of very limited merit or of such impaired condition that they do not qualify in higher categories.
- (2) Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value, and/or trees offering low or only temporary landscape benefits.
- (3) Trees with no material limited conservation or other cultural value.



# TREE SURVEY SCHEDULE

# Reeds Lane, Sayers Common, West Sussex, BN6 9LS

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear- ance	Age class	Physio - logy	Structure	Comments	Cate gory
1	English oak	11m	680mm (over ivy)	6.5m N 6m E 5.25m S 7m W	2.5m	2m	Mature	Average	Indifferent	Off-site tree; prominent buttress roots; evidence of animal burrowing near base; asymmetrical crown as suppressed by adjacent specimens; visible from Reeds Lane; significant component of the immediate landscape; of moderate quality and landscape value; of long-term potential.	B (12)
2	English oak	11m	905mm	9.25m N 7.75m E 8m S 8m W	3m	2m	Mature	Average	Indifferent	Off-site tree; twin-stemmed from 3m; significant compression fork with evidence of included bark; extends from 1m to 3m to bifurcation; 'elephant ear' formation evident on S side; smaller than normal leaf size; visible from Reeds Lane; significant component of the immediate landscape; of moderate quality and landscape value; of long-term potential.	B (12)
3	Ash	12m	415mm	2.5m N 4m E 6.25m S 1.75m W	3.5m	4m	Semi- mature	Average	Poor	Off-site tree; many surface roots, damaged on upper sides, probably by mowers; cavity at base; decay at base; heavily cut back from adjacent power lines; visible from Reeds Lane; inessential component of the immediate landscape; of low quality; of moderate landscape value; of medium-term potential.	
4	English oak	11m	est. 550mm	8.25m N 9.75m E 6m S 7m W	3m	2m	Semi- mature	Average	Moderate	Off-site tree; asymmetrical crown as suppressed by adjacent specimens; tree showing characteristics consistent with species; upper canopy partially visible from Reeds Lane; significant component of the immediate landscape; of moderate quality and landscape value; of long-term potential.	B (12)
5	Blue cedar	13m	est. 575mm	7m N 8m E 6m S 5.5m W	0.5m	0.75m N	Semi- mature	Average	Moderate	Off-site tree; asymmetrical crown as suppressed by adjacent specimens; upper canopy partially visible from Reeds Lane; significant component of the immediate landscape; of moderate quality and landscape value; of long-term potential.	B (12)
6	English oak	9m	est. 725mm	0m N 12m E 0m S -1.5m W	0m	0m	Mature	Average	Poor	Off-site tree; on-site tree which has failed at root plate in the past; now lying across boundary but has regrown to contribute to the screening along this boundary; inessential component of the immediate landscape; of low quality, of low landscape value, but of long-term potential.	C - (123)
7	English oak	13m	885mm (over ivy)	7m N 7m E 3.75m S 7.25m W	3m	3m	Mature	Average	Moderate	Off-site tree; asymmetrical crown as suppressed by adjacent specimens; field boundary specimen; largely screened in views from Reeds Lane by the presence of other trees; significant component of the immediate landscape; of moderate quality and landscape value; of long-term potential.	B (12)
8	English oak	8.5m	490mm	5.25m N 4.5m E 6m S 5.5m W	3m	2.5m	Semi- mature	Average	Moderate	Off-site tree; much epicormic growth on trunk; asymmetrical crown as suppressed by adjacent specimens; visible from Reeds Lane; significant component of the immediate landscape; of moderate quality and landscape value; of long-term potential.	B (12)



No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear-ance	Age class	Physio - logy	Structure	Comments	Cate gory
9	English oak	11m	790mm	6.5m N 6.5m E 6.75m S 8m W	4m	5m	Mature	Average	Moderate	Off-site tree; crown has been heavily reduced or "topped" in past; visible from Reeds Lane; significant component of the immediate landscape; of moderate quality and landscape value; of long-term potential.	B (12)
10	English oak	12m	660mm	5m N 6.25m E 5.75m S 5m W	5m	4m	Mature	Below average	Moderate	Off-site tree; above average dead wood in crown; sparsely foliated; visible from Reeds Lane; significant component of the immediate landscape; of moderate quality and landscape value; of medium-term potential.	B (12)
27	Goat willow	8.5m	250mm 315mm @1m 260mm	5.5m N 5.25m E 6.25m S 6.25m W	1m	1m	Semi- mature	Average	Indifferent	Abnormal swelling or 'Bottle-butt' at base; three-stemmed from base; tight compression forks with evidence of included bark; small self-seeded specimen; largely screened in views from Reeds Lane by the presence of other trees; visible from public footpath in adjacent field; of moderate quality and of long-term potential; but of low landscape value.	C (1)
28	English oak	9.5m	300mm @1.25m	4.5m N 4m E 3.5m S 3.75m W	2m	2m	Semi- mature	Average	Indifferent	Twin-stemmed from 2m; tight compression fork with evidence of included bark; asymmetrical crown as suppressed by adjacent specimens; small self-seeded specimen; largely screened in views from Reeds Lane by the presence of other trees; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (1)
29	English oak	8m	270mm 285mm 250mm	5.25m N 5m E 4m S 5m W	1.5m	1m	Semi- mature	Average	Indifferent	Three-stemmed from base; no evidence of included bark; small self-seeded specimen; largely screened in views from Reeds Lane by the presence of other trees; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (1)
30	Hornbeam	11m	505mm	8.5m N 9.75m E 3m S 7m W	2.5m	2m	Semi- mature	Average	Moderate	Twin-stemmed from 3m; no evidence of included bark; asymmetrical crown as suppressed by adjacent specimens; largely screened in views from Reeds Lane by the presence of other trees; significant component of the immediate landscape; of moderate quality and landscape value; of long-term potential.	B (12)
31	English oak	13m	290mm 345mm 495mm (all over ivy)	5.25m N 7m E 7.5m S 7.5m W	4.5m	3m	Semi- mature	Average	Indifferent	Three-stemmed from base; tight compression forks with evidence of included bark; asymmetrical crown as suppressed by adjacent specimens; notable reduction of leaves and buds on lowest branch on E side, originating at 2.75m; significant component of the immediate landscape; of moderate quality and landscape value; of long-term potential.	B (12)
32	English oak	6.5m	360mm @1.25m	4.5m N 3.5m E 4.5m S 3.75m W	1.5m	1.5m	Semi- mature	Average		Much epicormic growth on trunk; small self-seeded specimen; short, squat specimen; not visible from outside the site; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (1)
33	English oak	7.5m	420mm (over ivy) est. 175mm (over ivy)	3.5m N 5m E 5.5m S 5.25m W	3m	3m	Semi- mature	Average	Moderate	Heavily ivy-covered; dense ivy impedes inspection of lower trunk; asymmetrical crown as suppressed by adjacent specimens; field boundary specimen; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (12)



No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear-ance	Age class	Physio - logy	Structure	Comments	Cate gory
34	English oak	9m	310mm (over ivy) 320mm (over ivy)	5.5m N 4.5m E 4.25m S 4.5m W	3m	3m	Semi- mature	Average	Moderate	Twin-stemmed from base; tight compression fork with evidence of included bark; ivy-covered; asymmetrical crown as suppressed by adjacent specimens; field boundary specimen; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	
35- 36	English oak	9m 8m	#35 195mm #36 105mm #36 170mm	3.25m N 4m E 3.75m S 4m W	2m	1.25m	Young	Average	Moderate	Small self-seeded specimen; not visible from outside the site; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	
37	English oak	11.5m	765mm	9.25m N 8.75m NE 8.5m E 8.75m SE 9m S 8.75m SW 7.5m W 6.75m NW	2m	2m	Mature	Average	Moderate	Buttress and surface roots extend to 1.6m N, 1.1m E, 1.6m S, 1.1m W; evidence of historic crown lifting; woundwood development around historic wounds appears sound; many tight branch attachment points in close proximity; bark to bark contact between a 45-degree angle branch and a lateral branch on SW at 2m; beginning to fuse together; short, squat specimen due to open growing location; largely screened in views from the public road to S by presence of other trees and dwellings; physiological and structural capacity to become a main arboricultural feature in future, but currently of low value in the wider landscape due to small size, significant component of the immediate landscape from internal viewpoints; of moderate quality and landscape value; of long-term potential.	- B (1)
38	Goat willow	8.5m	275mm @1.25m 250mm 275mm	5.5m N 4.25m E 5.5m S 4.75m W	1.5m	1m	Semi- mature	Average	Indifferent	Three-stemmed from base; tight compression forks with evidence of included bark; small self-seeded specimen; not visible from outside the site; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (12)
39	English oak	7m	215mm	4.5m	2m	1.5m	Semi- mature	Average	Moderate	Suppressed crown as overtopped by adjacent specimens; small self-seeded specimen; not visible from outside the site; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (1)
40	English oak	6m	195mm	3.5m	2m	1.5m	Young	Average	Moderate	Small self-seeded specimen; not visible from outside the site; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (12)
101	English oak	9m	350mm 470mm	7m N 6m E 6m S 6.75m W	2.5m	2m	Semi- mature	Average	Moderate	Twin-stemmed from base; no evidence of included bark; field boundary specimen; significant component of the immediate landscape; of moderate quality and landscape value; of long-term potential.	B (12)



No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear-ance	Age class	Physio - logy	Structure	Comments	Cate gory
102	Goat willow	9m	310mm	4.75m N 4m E 4m S 4.25m W	3m	0m	Semi- mature	Average	Moderate	Broken branches hung up in crown; storm damage in crown; small self-seeded specimen; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (12)
103	Hawthorn	6.5m	270mm (over ivy)	3.5m N 3.5m E 3.5m S 3.5m W	1.5m	1.5m	Semi- mature	Average	Moderate	Small self-seeded specimen; not visible from outside the site; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (1)
104	English oak	12m	535mm (over ivy)	5m N 6.5m E 7.5m S 6m W	3m	3m	Semi- mature	Average	Moderate	Significant tree growing on the edge of an area of wet soil colonised by willow and hawthorn specimens; asymmetrical crown as suppressed by adjacent specimens; significant component of the immediate landscape; of moderate quality and landscape value; of long-term potential.	B (12)
105	English oak	8m	415mm	3.25m N 2.75m E 5m S 7m W	2m	2m S 0.25m W	Semi- mature	Average	Indifferent	Suppressed crown as overtopped by adjacent specimens; one-sided crown as suppressed by adjacent specimens; significant tree growing on the edge of an area of wet soil colonised by willow and hawthorn specimens; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	
106	English oak	8m	505mm (over ivy)	3.5m N 3m E 3m S 5.5m W	3m	1m	Semi- mature	Average	Moderate	Ivy-covered; asymmetrical crown as suppressed by adjacent specimens; significant tree growing on the edge of an area of wet soil colonised by willow and hawthorn specimens; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (1)
107	Sycamore	11m	355mm	3m N 2m E 2m S 2m W	3m	4m	Semi- mature	Average	Indifferent	Squirrel damage in crown; suppressed specimen; not visible from outside the site; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (1)
108	English oak	11m	450mm	4m N 4m E 4m S 7m W	2m	2m	Semi- mature	Average	Moderate	Tree showing characteristics consistent with species; not visible from outside the site; significant component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (12)



No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear-ance	Age class	Physio - logy	Structure	Comments	Cate gory
109- 119	English oak	17m to 20m	#109 545mm (over ivy) #110 645mm (over ivy) #111 530mm #112 450mm #113 415mm 330mm (over ivy) #114 610mm #115 430mm #116 755mm #117 660mm #118 290mm 425mm 310mm #119 480mm	5m N 5m E 0m S 5m W	3m	3m	Semi- mature	Average	Moderate	#8 prominent buttress roots on all sides, particularly to N, extending to 1m from trunk; #118 three-stemmed from base, evidence of fungal fruiting bodies consistent with the decay fungus <i>Fistulina hepatica</i> (Beefsteak fungus) found at ground level on W side; codominant stems; significant dieback at branch tips; #109-119 eleven individual specimens which make up S boundary of woodland (W1) along N boundary of main part of the site; all are significant components of the woodland and woodland edge in which they stand; largely screened in views from road to S by presence of other trees and buildings; but the wider woodland is readily visible from Reeds Lane; of moderate quality and landscape value; of long-term potential.	B (12)
120	English oak	8m	245mm	4m N 4m E 4m S 4m W	2m	2m	Semi- mature	Average	Moderate	Small self-seeded specimen; visible from public footpath in adjacent field; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (1)
G1	Various	Up to 14m	Up to est. 325mm	8m N 8m E 8m S 8m W	3m	1.5m	Semi- mature	Average	Indifferent	Off-site, mixed-species group of trees; species include goat willow, white poplar, and hornbeam. hawthorn, elder and English oak; predominantly white willow with an understorey of specimens of other species; many twin-stemmed or multi-stemmed from near base with evidence of included bark, mutually drawn-up and supressed; growing predominantly towards N; individual poplar specimens throughout appear to have been topped in the past, not consistent across other species within group; provides screening between this and adjacent site; screens majority of trees further N in views from Reeds Lane; of moderate quality and of long-term potential; but of low landscape value.	C (12)



No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear-ance	Age class	Physio - logy	Structure	Comments	Cate gory
G2	Various	Up to 15m	Up to est. 425mm	4m N 4m E 4m S 4m W	1m	1m	Semi- mature	Average	Indifferent	Row of closely growing specimens, forming a hedge or screen; species include hornbeam, English oak, sycamore and hawthorn; aerodynamic group with meshing crowns providing companion shelter; provides significant screening in views from adjacent commercial premises; essential component of the immediate landscape; of moderate quality and landscape value; of long-term potential.	B (12)
G3	Various	Up to 4m	Up to est. 40mm	2m N 3m E 2m S 1.5m W	0.5m	0.5m	Young	Average	Indifferent	Off-site group of closely growing specimens forming a hedge or screen; species include hawthorn, blackthorn and goat willow; aerodynamic group with meshing crowns providing companion shelter; of only low-level screening value; of moderate quality and of long-term potential; but of low landscape value.	C (1)
G4	Hawthorn	Up to 8m	Up to est. 250mm	4m N 4m E 4m S 4m W	2m	2m	Semi- mature	Average	Indifferent	Belt of small self-seeded specimens; not visible from outside the site; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (1)
G5	Various	Up to 14m	Up to est. 350mm	5m N 5m E 5m S 5m W	1m	1m	Semi- mature	Average	Indifferent	Large group of self-seeded specimens forming boundary screening; species include hawthorn, goat willow, sycamore, English oak, ash and silver birch; predominantly goat willow but includes small areas of English oak; drawn-up and mutually supressed; of moderate quality and landscape value; of long-term potential.	B (12)
G6	Ash	Up to 13m	Up to est. 325mm	4m N 4m E 4m S 4m W	4m	4m	Semi- mature	Average	Moderate	Pair of self-seeded specimens; not visible from outside the site; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (1)
G7	Leyland cypress	Up to 8m	Up to est. 200mm	2.5m N 2.5m E 2.5m S 2.5m W	0.25m	0.25m	Young	Average	Indifferent	Off-site group of trees; row of closely planted specimens, designed to form a hedge or screen; appears to be regularly managed; of only low-level screening value; of moderate quality and landscape value; of long-term potential.	B (12)
H1	Hornbeam	Up to 3.5m	Up to est. 40mm	0.5m N 0.5m E 0.5m S 0.5m W	0.25m	0.25m	Young	Average	Indifferent	Off-site tree; row of closely planted specimens, designed to form a hedge or screen; appears to be regularly managed; of only low-level screening value; of moderate quality and landscape value; of long-term potential.	C (1)
W1	Various	Up to 15m	Up to est. 600mm	5m N 5m E 5m S 5m W	2m	2m	Mature	Average	Indifferent	Species include English oak, hazel, holly, goat willow and ash; large area of woodland which extends beyond site boundaries; principal overstorey species is English oak; occasional ash specimens throughout; provides a dense backdrop to the site; essential component of the immediate landscape; of moderate quality and high landscape value; of long-term potential.	A (2)



# **Root Protection Areas (RPAs)**

Root Protection Areas have been calculated in accordance with paragraph 4.6.1 of the British Standard 'Trees in relation to design, demolition and construction – Recommendations', BS 5837:2012. This is the minimum area which should be left undisturbed around each retained tree. RPAs are portrayed initially as a circle of a fixed radius from the centre of the trunk; but where there appear to be restrictions to root growth the circle is modified to reflect more accurately the likely distribution of roots.

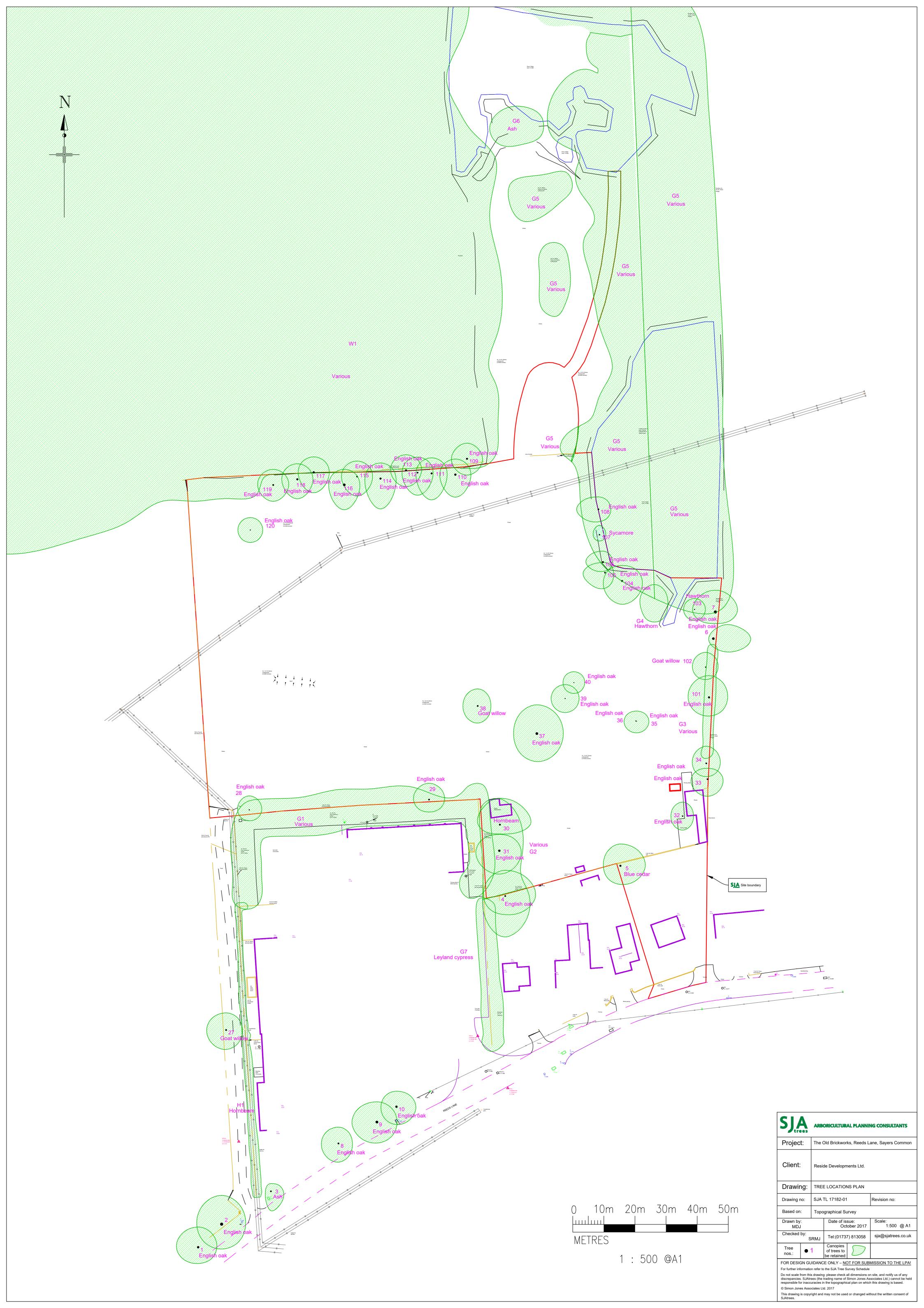
Tree No.	Species	RPA	RPA Radius
1	English oak	209.2m <sup>2</sup>	8.16m
2	English oak	370.5m <sup>2</sup>	10.86m
3	Ash	77.9m <sup>2</sup>	4.98m
4	English oak	136.87m <sup>2</sup>	6.6m
5	Blue cedar	149.6m <sup>2</sup>	6.9m
6	English oak	237.8m <sup>2</sup>	8.7m
7	English oak	354.3m <sup>2</sup>	10.62m
8	English oak	108.6m <sup>2</sup>	5.88m
9	English oak	282.3m <sup>2</sup>	9.48m
10	English oak	197.1m <sup>2</sup>	7.92m
27	Goat willow	103.7m <sup>2</sup>	5.75m
28	English oak	40.7m <sup>2</sup>	3.6m
29	English oak	98.0m <sup>2</sup>	5.59m
30	Hornbeam	115.4m <sup>2</sup>	6.06m
31	English oak	202.7m <sup>2</sup>	8.03m
32	English oak	58.6m <sup>2</sup>	4.32m
33	English oak	93.7m <sup>2</sup>	5.46m
34	English oak	89.8m <sup>2</sup>	5.35m
35-36	English oak	17.2m <sup>2</sup>	2.34m
33-30	Eligiisii oak	18.1m <sup>2</sup>	2.4m
37	English oak	264.7m <sup>2</sup>	9.18m
38	Goat willow	96.7m <sup>2</sup>	5.55m
39	English oak	20.9m <sup>2</sup>	2.58m
40	English oak	17.2m <sup>2</sup>	2.34m
101	English oak	155.4m <sup>2</sup>	7.03m
102	Goat willow	43.5m <sup>2</sup>	3.72m
103	Hawthorn	33.0m <sup>2</sup>	3.24m
104	English oak	129.5m <sup>2</sup>	6.42m
105	English oak	77.9m <sup>2</sup>	4.98m
106	English oak	115.4m <sup>2</sup>	6.06m
107	Sycamore	57.0m <sup>2</sup>	4.26m
108	English oak	91.6m <sup>2</sup>	5.4m



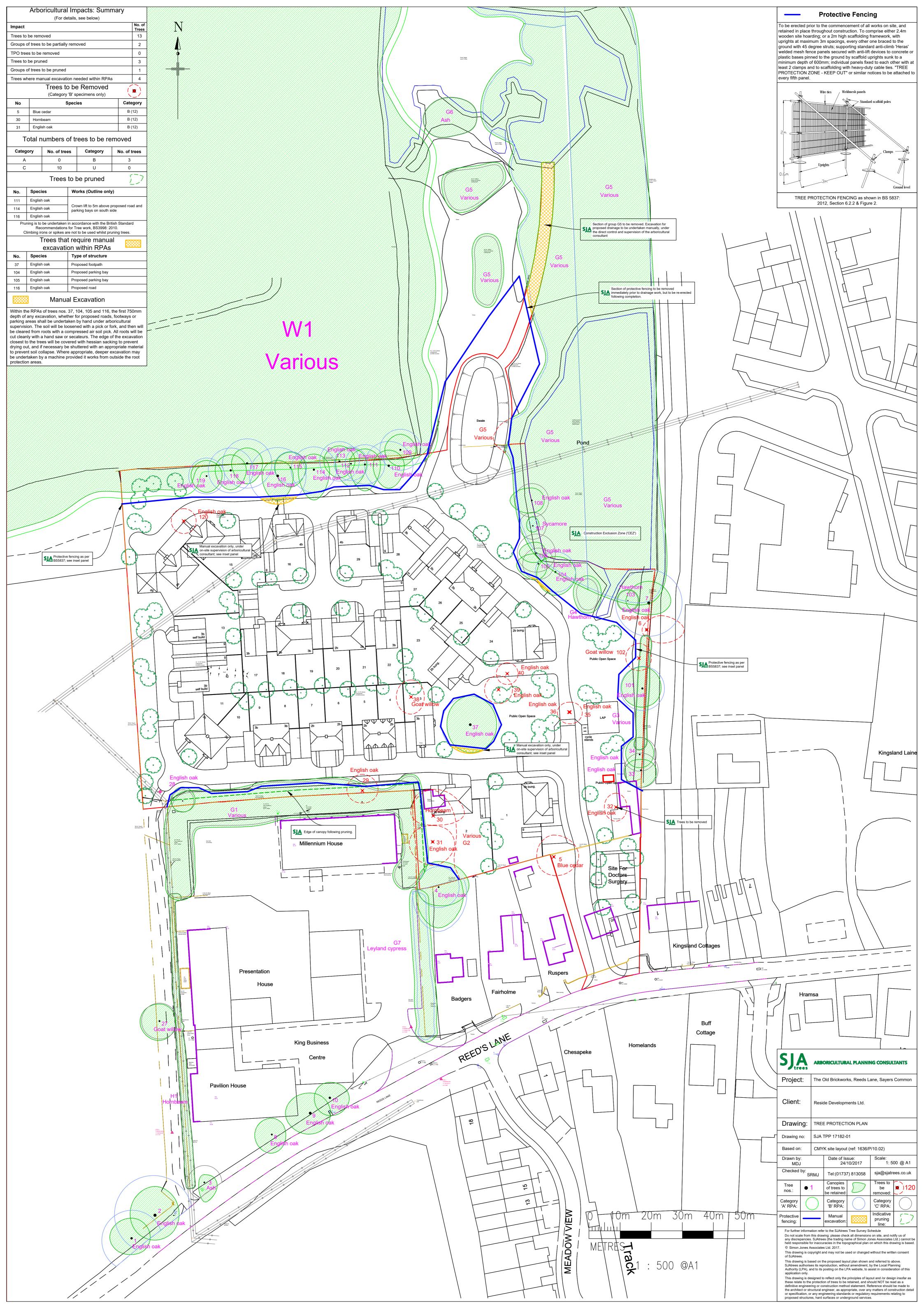
109-119	English oak	134.4m <sup>2</sup> 188.2m <sup>2</sup> 127.1m <sup>2</sup> 91.6m <sup>2</sup> 127.2m <sup>2</sup> 168.3m <sup>2</sup> 83.6m <sup>2</sup> 257.9m <sup>2</sup> 197.1m <sup>2</sup> 163.2m <sup>2</sup>	6.54m 7.74m 6.36m 5.4m 6.36m 7.32m 5.16m 9.06m 7.92m 7.21m 5.76m
120	English oak	27.2m <sup>2</sup>	2.94m
G1	Various	47.8m <sup>2</sup>	3.9m
G2	Various	81.7m <sup>2</sup>	5.1m
G3	Various	7.1m <sup>2</sup>	1.5m
G4	Hawthorn	28.3m <sup>2</sup>	3.0m
G5	Various	55.4m <sup>2</sup>	4.2m
G6	Ash	47.8m <sup>2</sup>	3.9m
G7	Leyland cypress	18.1m <sup>2</sup>	2.4m
H1	Hornbeam	7.1m <sup>2</sup>	1.5m
W1	Various	162.9m <sup>2</sup>	7.2m



# APPENDIX 4 Tree Location Plan



# **APPENDIX 5 Tree Protection Plan**





# Report presented by



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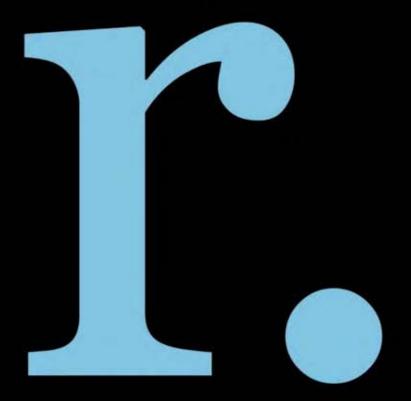
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# reside.

# The Old Brickworks, Reeds Lane Sayers Common

Archaeological Desk Based Assessment



# Local Planning Authority: Mid Sussex District Council

Site centred at: **TQ 26409 18311** 

Author:
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Suzanne Gailey BA (Hons) MA
MCIfA

Report Status: Final

Issue Date: October 2017

CgMs Ref: JA/SG/23804

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## **EXECUTIVE SUMMARY**

- Land at the Old Brickworks, Reeds Lane, Sayers Common, West Sussex, has been considered for its below ground archaeological potential.
- No designated heritage assets are recorded on or in close proximity to the study site, and the site is not considered to affect the setting of any nearby listed buildings. The study site is not located within an Archaeological Notification Area as defined by Mid Sussex District Council.
- Due to the extent of past quarrying across the site (Appendix 1), the proposed development is unlikely to have a significant archaeological impact. At most the development will impact industrial remains associated with the former brick and tile works, considered to be of no more than a local significance.

## 1.0 INTRODUCTION AND SCOPE OF STUDY

- 1.1 This archaeological desk-based assessment has been researched by Edward Hawkins and prepared by James Archer of CgMs Consulting on behalf of Reside Developments Ltd.
- 1.2 The assessment considers land, also referred to as the study site, at the Old Brickworks, Reeds Lane, Sayers Common, West Sussex. The site is centred at National Grid Reference TQ 26409 18311 and is approximately 2.01ha in size (Fig. 1), and the wider site is c.3.5ha.
- 1.3 In accordance with relevant government policy and guidance on archaeology and planning, and in accordance with the 'Standard and Guidance for historic environment desk based assessments' (Chartered Institute for Archaeologists August 2014), this assessment draws together the available archaeological, topographic and land-use information in order to clarify the archaeological potential of the site.
- 1.4 This assessment comprises an examination of evidence in the West Sussex Historic Environment Record (HER), considers the results of nearby archaeological investigations, incorporates published and unpublished material and charts historic land-use through a map regression exercise. A site visit was undertaken in September 2017.
- 1.5 As a result, the assessment enables relevant parties to assess the archaeological potential of the site and to consider the need for design, civil engineering, and/or archaeological solutions to the potential identified.

# 2.0 DEVELOPMENT PLAN FRAMEWORK

- 2.1 In March 2012, the government published the National Planning Policy Framework (NPPF), which replaced previous national policy relating to heritage and archaeology (PPS5: Planning Policy Statement 5: Planning for the Historic Environment). The National Planning Practice Guidance (NPPG) was published online 6<sup>th</sup> March 2014 and updated 10<sup>th</sup> April 2014 (<a href="http://planningguidance.planninggortal.gov.uk">http://planningguidance.planninggortal.gov.uk</a>).
- 2.2 Section 12 of the NPPF, entitled *Conserving and Enhancing the Historic Environment* provides guidance for planning authorities, property owners, developers and others on the conservation and investigation of heritage assets. Overall, the objectives of Section 12 of the NPPF can be summarised as seeking the:
  - Delivery of sustainable development
  - Understanding the wider social, cultural, economic and environmental benefits brought by the conservation of the historic environment
  - Conservation of England's heritage assets in a manner appropriate to their significance, and
  - Recognition of the contribution that heritage assets make to our understanding of the past.
- 2.3 Section 12 of the NPPF recognises that intelligently managed change may sometimes be necessary if heritage assets are to be maintained for the long term. Paragraph 128 states that planning decisions should be based on the significance of the heritage asset, and that level of detail supplied by an applicant should be proportionate to the importance of the asset and should be *no more than sufficient* to review the potential impact of the proposal upon the significance of that asset.
- 2.4 Heritage Assets are defined in Annex 2 of the NPPF as: a building, monument, site, place, area or landscape positively identified as having a degree of significance meriting consideration in planning decisions. They include designated heritage assets (as defined in the NPPF) and assets identified by the local planning authority during the process of decision-making or through the plan-making process.
- 2.5 Annex 2 also defines *Archaeological Interest* as a heritage asset which holds or potentially could hold, evidence of past human activity worthy of expert investigation at some point. Heritage assets with archaeological interest are the primary source of evidence about the substance and evolution of places, and of the people and cultures that made them.

- 2.6 A *Designated Heritage Asset* comprises a: World Heritage Site, Scheduled Monument, Listed Building, Protected Wreck Site, Registered Park and Garden, Registered Battlefield or Conservation Area.
- 2.7 Significance is defined as: The value of a heritage asset to this and future generations because of its heritage interest. This interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting.
- 2.8 **Setting** is defined as: The surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral.
- 2.9 In short, government policy provides a framework which:
  - Protects nationally important designated Heritage Assets (which include World Heritage Sites, Scheduled Ancient Monuments, Listed Buildings, Protected Wreck Sites, Registered Parks and Gardens, Registered Battlefields or Conservation Areas)
  - Protects the settings of such designations
  - In appropriate circumstances seeks adequate information (from desk based assessment and field evaluation where necessary) to enable informed decisions
  - Provides for the excavation and investigation of sites not significant enough to merit *in-situ* preservation.
- 2.10 In considering any planning application for development, the planning authority will be mindful of the framework set by government policy, in this instance the NPPF, by current Development Plan Policy and by other material considerations.
- 2.11 The Mid Sussex Local Plan (2004) contains the following saved policy relating to archaeology:

### **B18**

SITES OF ARCHAEOLOGICAL INTEREST AND THEIR SETTINGS WILL BE PROTECTED AND ENHANCED WHERE POSSIBLE. IN PARTICULAR, THE FABRIC AND SETTING OF SCHEDULED ANCIENT MONUMENTS AND OTHER NATIONALLY IMPORTANT ARCHAEOLOGICAL SITES SHOULD BE PRESERVED INTACT.

DEVELOPMENT PROPOSALS OR CHANGES OF USE OR MANAGEMENT WHICH WOULD HAVE A DETRIMENTAL IMPACT ON SITES OF ARCHAEOLOGICAL IMPORTANCE AND THEIR SETTINGS WILL NOT NORMALLY BE PERMITTED. AN EXCEPTION MAY BE MADE ONLY WHERE THE BENEFITS OF THE PROPOSAL (WHICH CANNOT REASONABLY BE LOCATED ELSEWHERE) ARE SO GREAT AS TO OUTWEIGH THE POSSIBLE EFFECTS ON THE ARCHAEOLOGICAL IMPORTANCE OF THE SITE.

WHERE IT APPEARS THAT A PROPOSED DEVELOPMENT MAY AFFECT THE ARCHAEOLOGICAL OR HISTORIC INTEREST OF A KNOWN OR POTENTIAL SITE OF ARCHAEOLOGICAL IMPORTANCE, THE APPLICANT WILL BE REQUIRED TO CARRY OUT AN ARCHAEOLOGICAL ASSESSMENT AND FIELD EVALUATION. A STATEMENT OF THE FINDINGS WILL BE REQUIRED TO ACCOMPANY THE PLANNING APPLICATION. THERE WILL BE PREFERENCE FOR PRESERVATION IN-SITU IN PREFERENCE TO EXCAVATION RECORDING AND PUBLICATION OF FINDINGS.

WHERE APPROVED DEVELOPMENT WILL AFFECT A SITE OF ARCHAEOLOGICAL INTEREST, THE DEVELOPER WILL BE REQUIRED EITHER BY AGREEMENT OR BY CONDITIONS OF PLANNING PERMISSION TO HAVE UNDERTAKEN A FULL INVESTIGATION AND RECORDING BY EXCAVATION AND THE PUBLICATION OF FINDINGS.

2.12 The Mid Sussex District Plan 2014 – 2031 Consultation Draft contains the following draft policy relating to archaeology:

### **DP35: Archaeological Sites and Heritage Assets**

Strategic Objectives: 3) To protect valued landscapes for their visual, historical and biodiversity qualities.

Evidence Base: West Sussex Historic Environment Record.

Sites of archaeological interest (such as scheduled Ancient Monuments) and their settings will be protected and enhanced.

Development that would have a detrimental impact on sites of archaeological importance and their settings will only be permitted where the benefits of the proposal (which cannot reasonably be located elsewhere) are so great as to outweigh the possible effects on the archaeological importance of the site.

Where it appears that a development may impact upon heritage assets with archaeological interest, applicants will be required to carry out an appropriate archaeological assessment including, where necessary, a field evaluation.

- 2.14 In terms of designated heritage assets, as defined above and as shown on Fig. 2, no World Heritage Sites, Scheduled Monuments, Registered Parks or Gardens, Historic Battlefields or Historic Wreck sites lie within the study area.
- 2.15 The study site does not lie within a Conservation Area, as designated by Mid Sussex District Council and the **Grade II Listed Buildings 'Aymers Sayers' and 'Kingscot' are** recorded c.200m east of the study site. The remaining Listed Buildings within the study area are more than 500m away from the study site and are not considered further in this report.
- 2.16 The study site is not located within an Archaeological Notification Area as defined by Mid Sussex District Council.
- 2.17 In line with existing national and local planning policy and guidance, this desk based assessment seeks to clarify the site's archaeological potential and the need or otherwise for additional mitigation measures.

# 3.0 GEOLOGY AND TOPOGRAPHY

# 3.1 **Geology**

3.1.1 The British Geological Survey (BGS Online 2017) records the underlying geology of the study site as Weald Clay Formation (Mudstone), with a band of Weald Clay Formation (Sandstone) running east-west through the centre of the study site. No superficial deposits are recorded.

# 3.2 **Topography**

- 3.2.1 The study site is generally level at a height of c.17m Above Ordnance Datum (AOD).
- 3.2.2 There are a number of unnamed watercourses within the study area, the nearest of which is c.60m north of the study site.
- 3.2.3 There are two large ponds within the northern area of the study site which were formerly extraction pits.

# 4.0 <u>ARCHAEOLOGICAL AND HISTORICAL BACKGROUND</u>, <u>WITH ASSESSMENT OF SIGNIFICANCE</u>

(Including Map Regression Exercise)

Timescales used in this report:

Р	re	eh	IS	t	r	IC

Palaeolithic	450,000 -	12,000 BC
Mesolithic	12,000 -	4,000 BC
Neolithic	4,000 -	1,800 BC
Bronze Age	1,800 -	600 BC
Iron Age	600 -	AD 43

### **Historic**

Roman	AD 43 -	410
Anglo Saxon/Early Medieval	AD 410 -	1066
Medieval	AD 1066 -	1485
Post Medieval	AD 1486 -	1799
Modern	AD 1800 -	Present

# 4.1 **Introduction**

- 4.1.1 What follows is a consideration of findspots within a 1.25km radius of the study site, also referred to as the study area, held on the West Sussex Historic Environment Record (HER), together with a map regression exercise charting the history of the study site from the 18<sup>th</sup> century until the present day (Fig. 2).
- 4.1.2 This chapter reviews the available archaeological evidence for the study site and the archaeological/historical background of the general area, and, in accordance with NPPF, considers the potential for any as yet to be discovered archaeological evidence on the study site.
- 4.1.3 Chapter 5 subsequently considers the site conditions and whether the proposed development will impact the theoretical archaeological potential identified below.

# 4.2 **Prehistoric**

4.2.1 Prehistoric findspots within the study area are limited to isolated finds, including five flint flakes recorded c.900m south east of the study site (HER Ref: MWS3763, TQ 2698

- 1745), a scatter of Mesolithic flintwork found c.650m south east of the study site (HER Ref: MWS3764, TQ 2701 1783), and an Early Bronze Age macehead recorded in the same area (HER Ref: MWS1246, TQ 270 180).
- 4.2.2 This absence of prehistoric remains within the study area could be, at least in part, a product of a lack of previous systematic archaeological survey in the area. However, despite this, it is likely that the study site lay within woodland from at least the Mesolithic period, and it is considered to have a low potential for prehistoric remains.

# 4.3 Roman

- 4.3.1 There are no records of Roman remains within the study area. The nearest recorded Roman road is c.3km to the south (Margary 1955).
- 4.3.2 The study site most likely lay within woodland during the Roman period and therefore will have probably been located away from areas of occupation or intensive human activity. Therefore a low archaeological potential is identified for this period at the study site.

# 4.4 Anglo Saxon/Early Medieval & Medieval

- 4.4.1 No records of Saxon remains are recorded by the HER within the study area.
- 4.4.2 Sayers Common is not mentioned in the Domesday Survey of 1086 and the nearest recorded estates were at Benefeld and Hurstpierpoint (Domesday Online 2017).
- 4.4.3 The remains of a rectangular moat are recorded at Moat Barn, Twineham c.1km north of the study site (HER Ref: MWS881, TQ 2623 1956). Traces of a wall were found, as well as Medieval roof tile fragments, indicating that the site was most likely a Medieval moated homestead.
- 4.4.4 The surrounding area was most likely characterised by scattered farmsteads during the Medieval period and the study site itself most likely lay within common land from which the settlement name 'Sayers Common' would later be derived. Therefore, a low archaeological potential is identified for Anglo-Saxon and Medieval settlement evidence.

# 4.5 **Post Medieval and Modern**

- 4.5.1 The study area remains characterised as a landscape comprising scattered farmsteads during the Post Medieval period. A number of these farmsteads are recorded by the HER, although none are relevant to the study site.
- 4.5.2 The 1724 Budgen Map of Sussex (Fig. 4) depicts the study site within probable common land north of a very small settlement at 'Sawyers Common'.
- 4.5.3 The 1797 Ordnance Survey Drawing (Fig. 5) shows the study site within open fields north of Sawyers Common. A stream can be seen immediately north of the study site. A similar situation is shown in 1813 (Fig. 6).
- 4.5.4 The 1839 Albourne & 1842 Hurstpierpoint Tithe Maps (Fig. 7) depict the study site forming part of 4 parcels of land. Field name evidence suggests that the site was historically occupied by a brick field and brick kiln and the HER records a brickworks on the site (HER Ref: MWS5141, TQ2640 1825). The associated Tithe Awards describe the study site as:
  - 17 Brick Yard Field (Arable)
  - 743 Sayers Common (House & Garden)
  - 744 Brick Kiln Field (Pasture)
  - 745 Brick Kiln Field (Pasture)
- 4.5.5 This industrial activity continued into the 19<sup>th</sup> century. By 1879 (Fig. 8) the eastern half of the study site comprised brick fields and extraction pits, whilst a brick kiln and works buildings are shown in the south east corner. Much of the area north of the study site is now shown as gorse, similar to the 'Furzefield' to the north west. The western half of the study site comprised agricultural land by this date.
- 4.5.6 By 1899 (Fig. 9) the east of the site comprised a brick and tile works, and by 1912 (Fig. 10), the clay extraction pits had extended into the west of the site.
- 4.5.7 By the 1930s (Fig. 11) quarrying extended across much of the western area and the pits to the north east of the site were also extended by this date.
- 4.5.8 By 1963 (Fig. 12), the Brick & Tile Works buildings in the eastern area of the study site had largely been removed, and many of the extraction pits in the study site backfilled. A track extended into the south east of the site.

- 4.5.9 Between 1963 and 1976 (Fig. 13) two large pits and one small pit remained north east of the study site, most likely filled with water, and all the remaining brickwork buildings were removed. A probable residential property and associated garden have been constructed in the south east corner.
- 4.5.10 A similar situation is shown by 2001 (Fig. 14), although much of the remaining pits to the north are obscured by woodland. The south west access road is now a semi-permanent track leading into the study site and along the southern boundary to the south east corner.
- 4.5.11 The 2015 Google Earth Image (Fig. 15) shows a small structure has been constructed in the south east corner of the study site (see also Plate 2).
- 4.5.12 The south western quarter of the study site is recorded as a Post Medieval fieldscape by the West Sussex Historic Landscape Characterisation data (not reproduced here), whilst the remainder of the site is recorded as Modern woodland.
- 4.5.13 The archaeological potential for Post Medieval settlement evidence is considered to be low. From the 19<sup>th</sup> century, the site comprised brick and tile works and industrial evidence relating to the former works buildings and brick kiln can be anticipated.

# 4.6 **LiDAR Data (Fig. 3)**

4.6.1 No obvious archaeological features are shown on the LiDAR plot. Evidence for former quarry activity can be seen throughout the study site.

## 4.7 Assessment of Significance

- 4.7.1 Existing national policy guidance for archaeology (the NPPF as referenced in section 2) enshrines the concept of the 'significance' of heritage assets. Significance as defined in the NPPF centres on the value of an archaeological or historic asset for its 'heritage interest' to this or future generations.
- 4.7.2 No designated heritage assets are recorded on or in close proximity to the study site. The study site is not located within an Archaeological Notification Area as defined by Mid Sussex District Council.
- 4.7.3 The Grade II Listed Buildings 'Aymers Sayers' and 'Kingscot' recorded c.200m east of the study site are nationally designated. There is no intervisibility between these heritage assets and the study site due to existing woodland and development.

- 4.7.4 The site has a low archaeological potential for settlement evidence dating from the prehistoric periods through to the Post Medieval period. From the 19<sup>th</sup> century the site comprised brick and tile works. Evidence of former industrial activity including a brick kiln can be anticipated.
- 4.7.5 Any remains, should they occur on the study site, would in the context of the Secretary of State's non-statutory criteria for Scheduled Monuments (DCMS 2013) be of local significance.

### 5.0 <u>SITE CONDITIONS, THE PROPOSED DEVELOPMENT & IMPACT ON</u> ARCHAEOLOGICAL ASSETS

### 5.1 **Site Conditions**

- 5.1.1 A site visit was undertaken in September 2017. Two ponds (the remains of two former extraction pits) lie in the north eastern area whilst the southern area is generally overgrown (Plates 1-8). There are a number of small structures in the south east corner, and there is a trackway entrance at the south west corner of the study site running from Reeds Lane.
- 5.1.2 Quarrying across the bulk of the site will have removed any archaeological potential predating the 19<sup>th</sup>/20<sup>th</sup> century (see Appendix 1).

### 5.2 **The Proposed Development (Fig. 16)**

5.2.1 Development proposals comprise up to 27 one, two, three and four-bedroom dwellings and 2 Self/Custom build plots and GP Surgery, with associated infrastructure, landscaping and access.

### 5.3 Review of Potential Development Impacts upon Archaeological Assets

- 5.3.1 As identified above, there are no designated heritage assets, as defined in the NPPF, recorded on the study site. Therefore, development will not directly impact on any designated archaeological assets.
- 5.3.2 The Grade II Listed Buildings 'Aymers Sayers' and 'Kingscot' are recorded c.200m east of the study site. Given the existing development and areas of woodland between these designated heritage assets and the study site, it is considered unlikely that the proposed development would have either a direct or indirect impact upon the setting of these assets.
- 5.3.3 Due to the extent of past quarrying across the site (Appendix 1), the proposed development is unlikely to have a significant archaeological impact. At most the development will impact industrial remains associated with the former brick and tile works, considered to be of no more than a local significance.

### 6.0 SUMMARY AND CONCLUSIONS

- 6.1 Land at the Old Brickworks, Reeds Lane, Sayers Common, West Sussex, has been considered for its below ground archaeological potential.
- 6.2 No designated heritage assets are recorded on or in close proximity to the study site.

  The study site is not located within an Archaeological Notification Area as defined by Mid Sussex District Council.
- 6.3 The Grade II Listed Buildings 'Aymers Sayers' and 'Kingscot' are recorded c.200m east of the study site. Given the existing development and areas of woodland between these designated heritage assets and the study site, it is considered unlikely that the proposed development would have either a direct or indirect impact upon these assets.
- 6.4 Quarrying across the bulk of the site will have removed any archaeological potential predating the 19<sup>th</sup>/20<sup>th</sup> century.
- 6.5 Due to the extent of past quarrying across the site (Appendix 1), the proposed development is unlikely to have a significant archaeological impact. At most the development will impact industrial remains associated with the former brick and tile works, considered to be of no more than a local significance.

### **SOURCES CONSULTED**

### **General**

British Library

The National Archives

West Sussex Historic Environment Record

West Sussex Record Office

### **Internet**

Bombsight - <a href="http://bombsight.org/#17/51.49200/-0.03924">http://bombsight.org/#17/51.49200/-0.03924</a>

British Geological Survey -

http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html

British History Online - <a href="http://www.british-history.ac.uk/">http://www.british-history.ac.uk/</a>

Domesday Online - <a href="http://www.domesdaybook.co.uk/">http://www.domesdaybook.co.uk/</a>

Historic England: The National Heritage List for England -

http://www.historicengland.org.uk/listing/the-list/

Portable Antiquities Scheme - www.finds.org.uk

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Historic England *Historic Environment Good Practice Advice in Planning: 2 Managing Significance in Decision-Taking in the Historic Environment* July 2015 unpublished document

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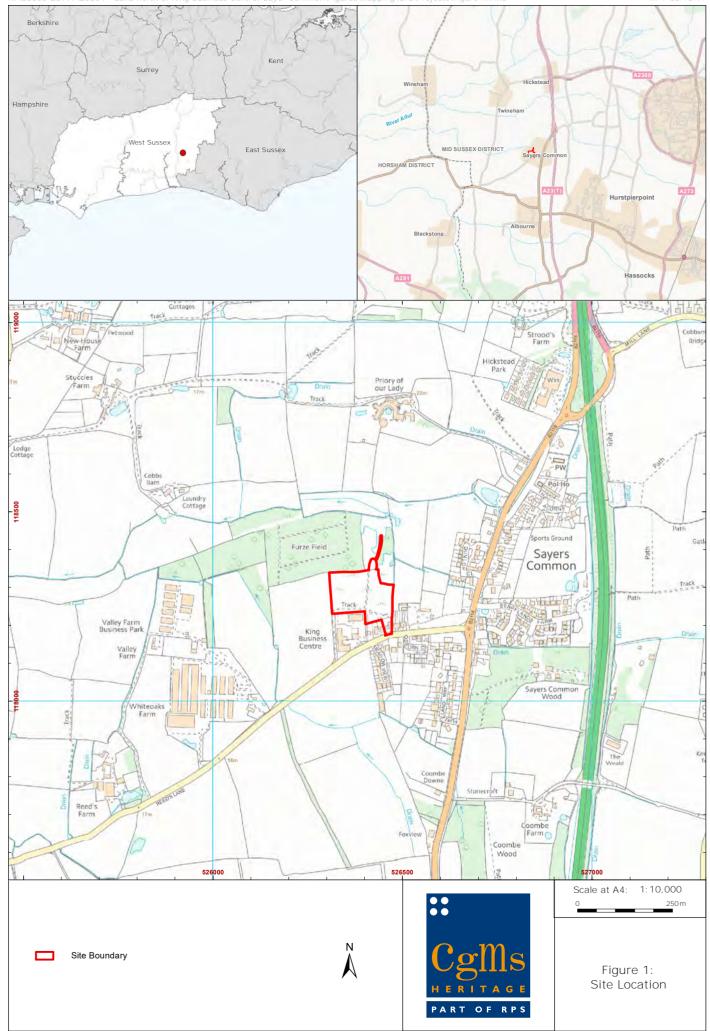
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Mills, A.D. A Dictionary of British Place Names 1991

Victoria County History A History of the County of Sussex 1940

#### **Cartographic**

- 1724 Budgen's Map of Sussex
- 1740 Overton & Bowles Map of Sussex
- 1795 Gardner & Gream Map of Sussex
- 1798 Ordnance Survey Drawing
- 1813 OS Old Series
- 1826 Greenwood Map of Sussex
- 1839 Albourne Tithe Map
- 1842 Hurstpierpoint Tithe Map
- 1879 Ordnance Survey (1:10560)
- 1899 Ordnance Survey (1:10560)
- 1912 Ordnance Survey (1:10560)
- 1938 Ordnance Survey (1:10560)
- 1963 Ordnance Survey (1:10560)
- 1976 Ordnance Survey (1:10000)
- 2001 Google Earth Image
- 2009 Google Earth Image
- 2012 Google Earth Image
- 2015 Google Earth Image



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Figure 2:

HER Data Plot (Data from West Sussex HER)

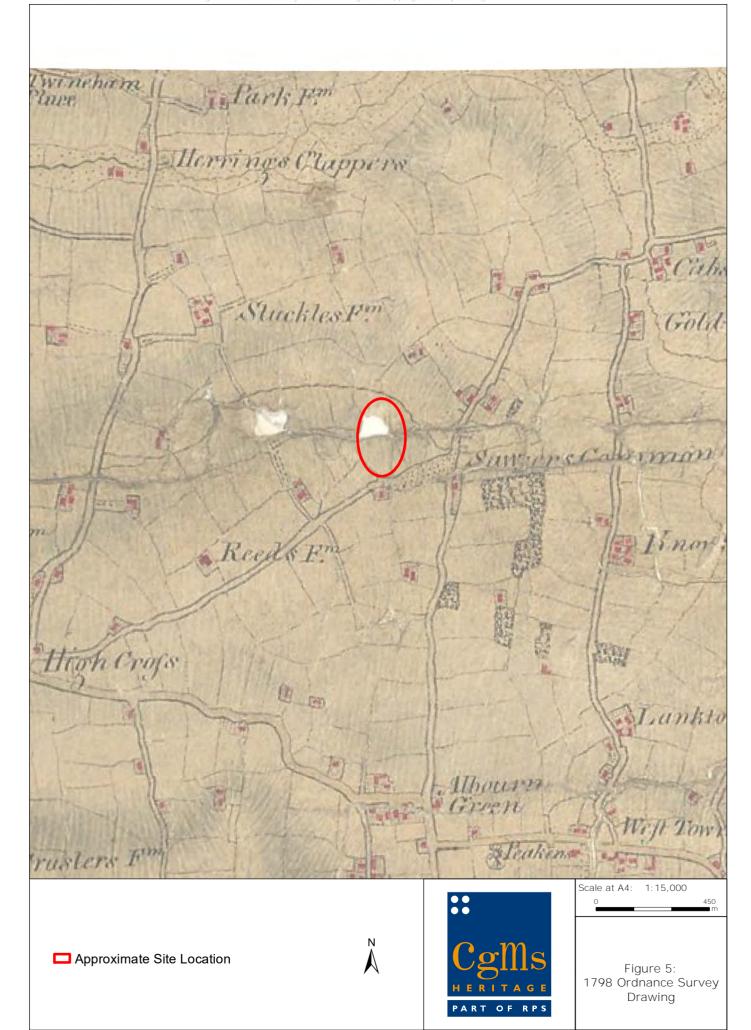
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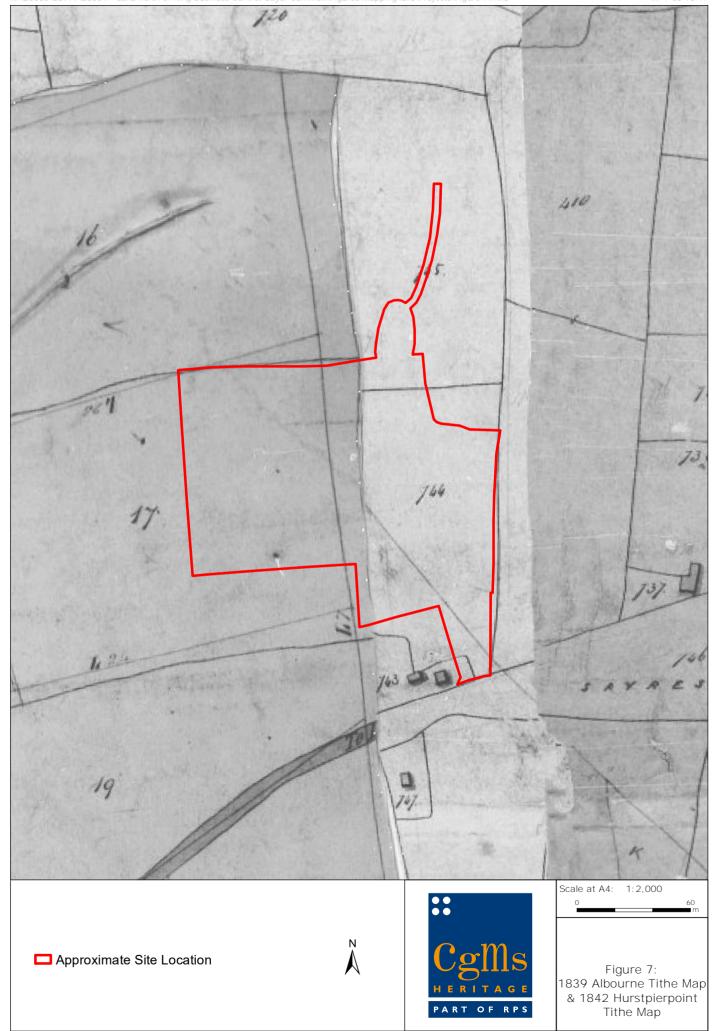
■ Approximate Site Location

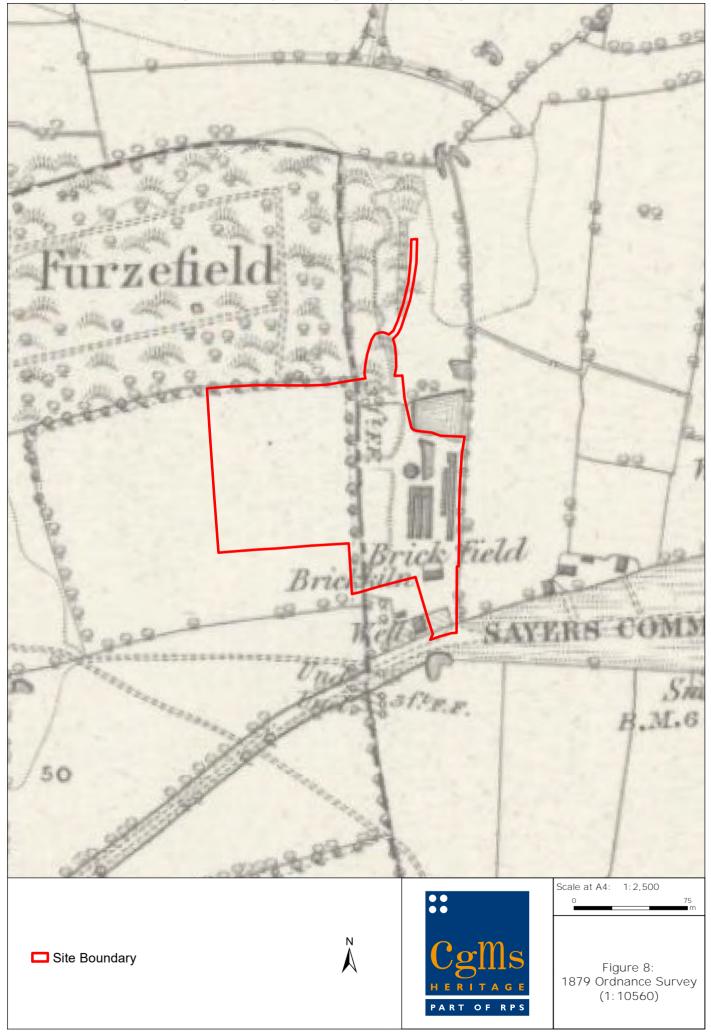


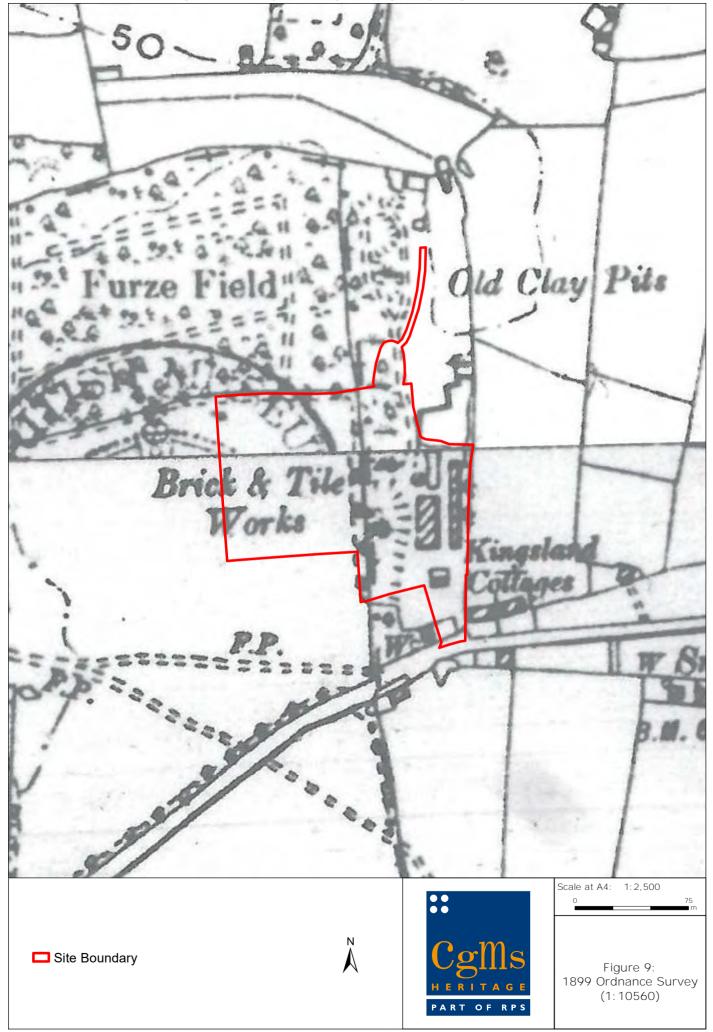


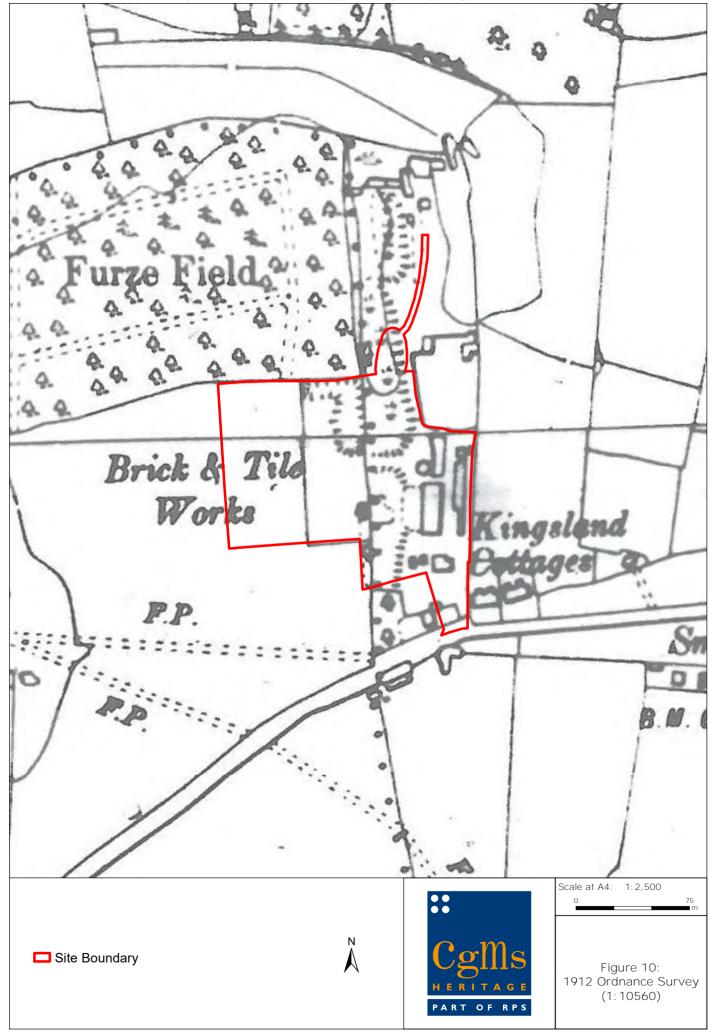
Scale at A4: 1:25,000

Figure 6: 1813 Ordnance Survey Old Series

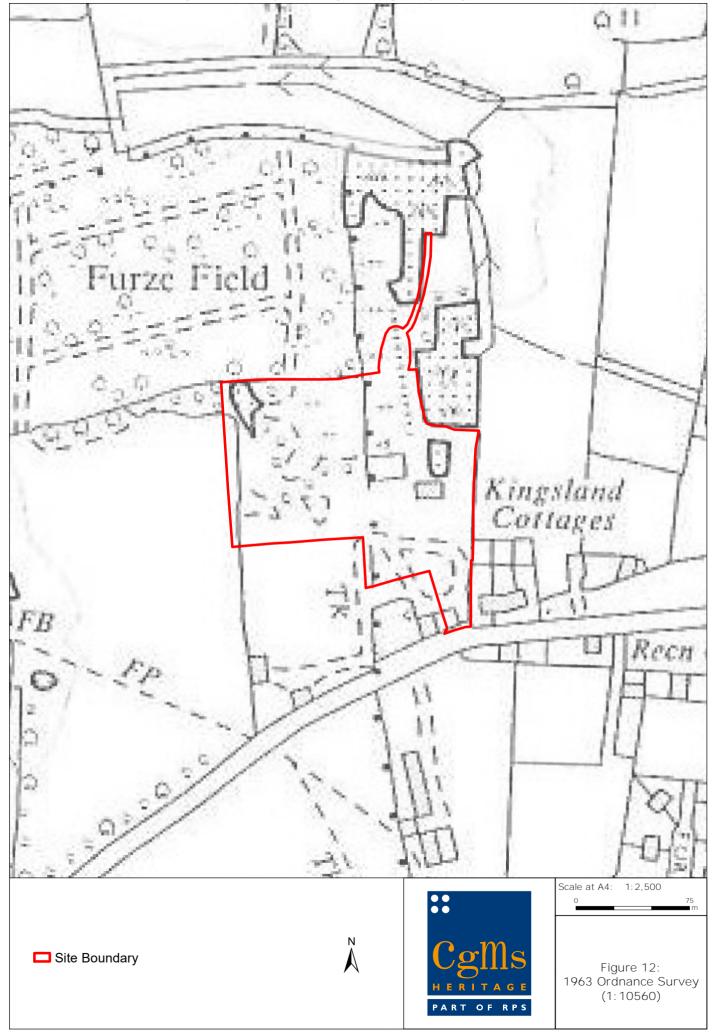


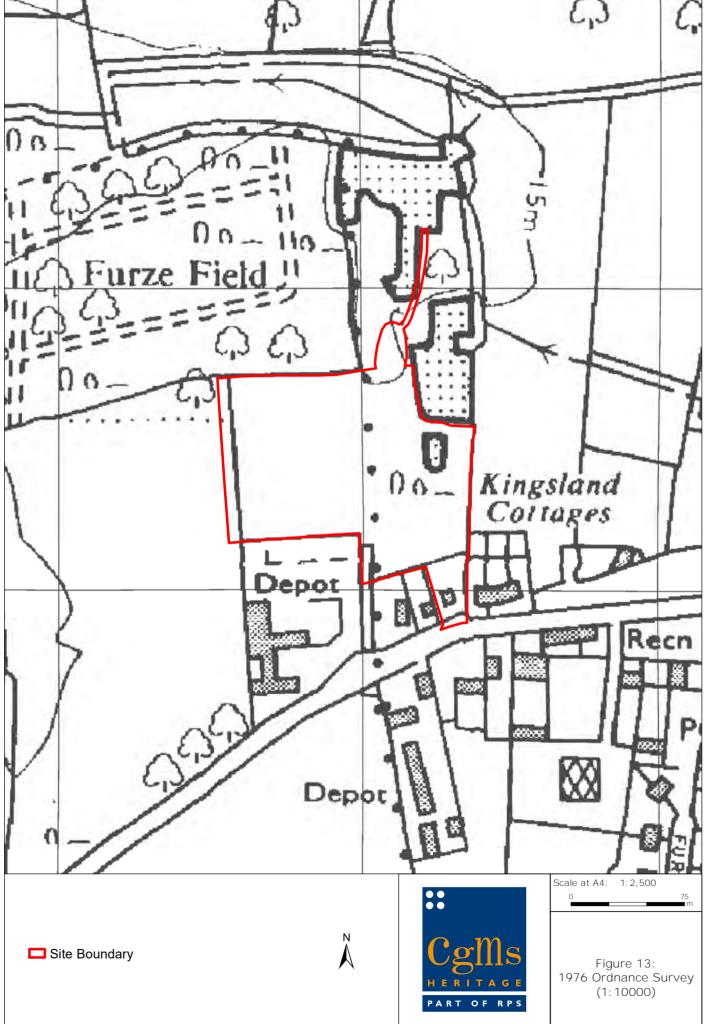


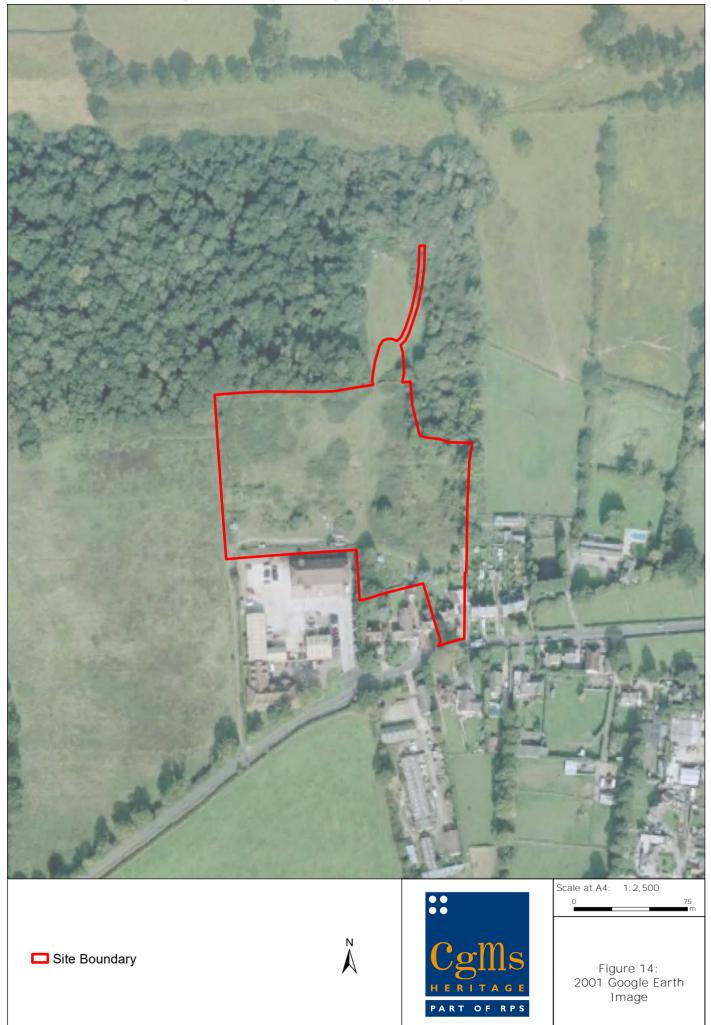


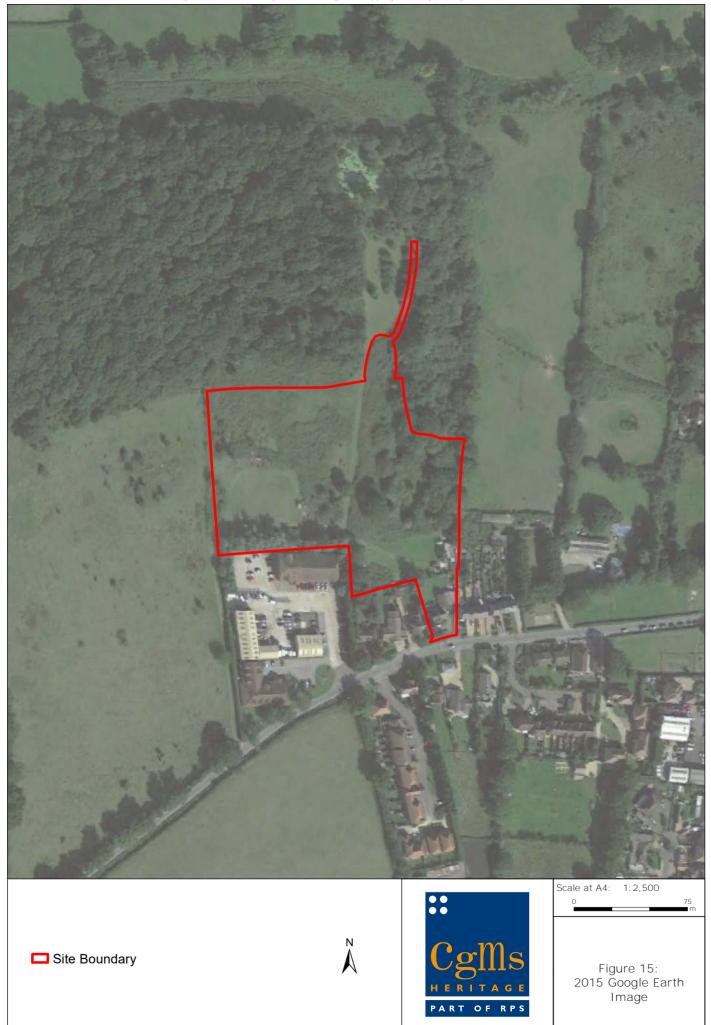












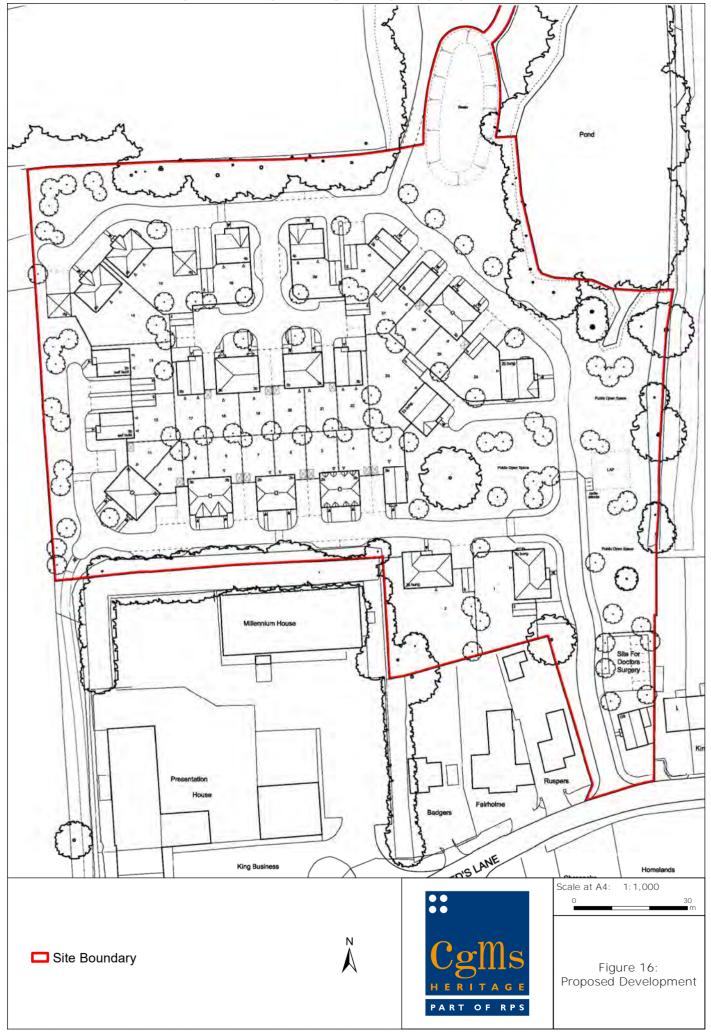






Plate 1: View of study site from south west corner facing north east



Plate 2: View of study site's south east corner, facing east





Plate 3: View of centre of study site facing north from southern boundary



Plate 4: View of southern area of study site facing south from centre of study site





Plate 5: View towards south east corner of study site from centre of study site



Plate 6: View of northern former extraction pit, facing east





Plate 7: View of northern former extraction pit, facing south east from north west corner



Plate 8: View of northern area of study site, adjacent to former extraction pits, facing south





Plate 9: View of southern former extraction pit, facing north



Plate 10: View facing south towards south east corner of study site from southern former extraction pit





Plate 11: View facing north west from south east area of study site, showing woodland along northern boundary



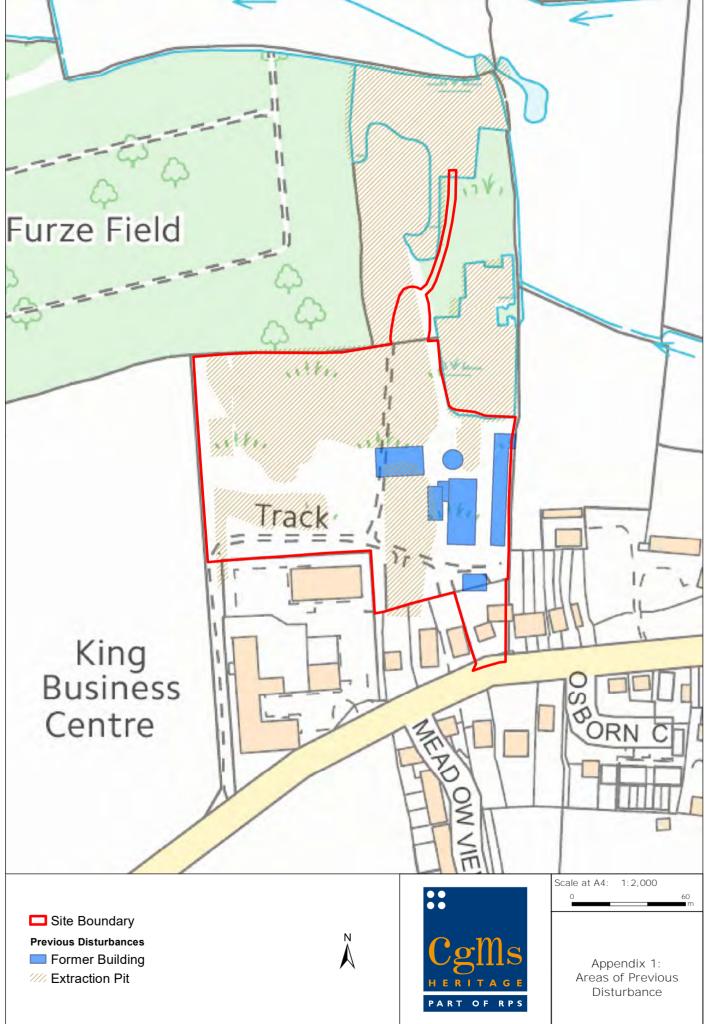
Plate 12: View facing east from western boundary of study site





Plate 13: View facing north of trackway entrance to study site

**Appendix One:** Areas of Previous Disturbance





### Report presented by



Reside Developments Ltd The Dutch House 132-134 High Street Dorking RH4 1BG

Telephone: 01306 877500

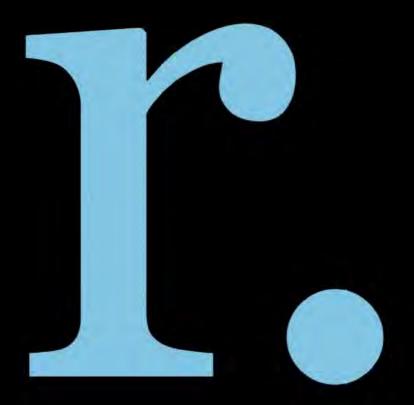
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residedevelopments.co.uk

# reside.

## The Old Brickworks, Reeds Lane Sayers Common

ECOLOGICAL ASSESSMENT



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### 1. INTRODUCTION

### 1.1. Background & Proposals

- 1.1.1. Ecology Solutions was commissioned by Reside Developments Ltd. to undertake an Ecological Assessment of land at The Old Brickworks Reeds Lane Sayers Common (see Plan ECO1), hereafter referred to as the Application Site.
- 1.1.2. Outline planning permission is being sought to provide up to 27 one, two, three and four-bedroom dwellings and two self/custom build plots (Use Class C3) and a GP surgery (Use Class D1) with associated infrastructure, landscaping and access.

### 1.2. Application Site Characteristics

- 1.2.1. The Application Site is located off Reeds Lane, Sayers Common. To the immediate south lies existing commercial/light industrial development with Reeds Lane beyond. To the southeast lies existing residential development. To the north lies a woodland block (Furze Field woodland) and an area containing open water, wet woodland, short grassland and wetland vegetation. To the east and west lie fields comprising grazed pasture.
- 1.2.2. The Application Site itself is dominated by a matrix of scrub with taller semi-improved grassland (limited), dense stands of ruderal vegetation, short (mown) grassland, stock piled (e.g. garden) debris and an existing residential property with associated formal gardens. The wider survey area extends to include the area of wet woodland, grassland, wetland vegetation and open water located immediately north of the Application Site.
- 1.2.3. The area to the north, described above, will form a key component of the ecological mitigation and enhancement strategy associated with the Development Proposals.

### 1.3. Ecological Assessment

- 1.3.1. This document assesses the ecological interest of the Application Site as a whole. The importance of the habitats present is evaluated with regard to current guidance published by the Chartered Institute of Ecology and Environmental Management (CIEEM)<sup>1</sup>.
- 1.3.2. The report also sets out the existing baseline conditions for the Application Site, setting these in the correct planning policy and legal framework and assessing any potential impacts which may occur from the proposed development. Appropriate mitigation where necessary is identified such that it will offset any negative impacts and where possible provide for an ecological

<sup>&</sup>lt;sup>1</sup> CIEEM (2016) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, 2<sup>nd</sup> Edition. Chartered Institute of Ecology and Environmental Management, Winchester.

Ecology Solutions 7092.EcoAss.vf1

enhancement of the Application Site, in accordance with relevant planning policy.

#### 2. SURVEY METHODOLOGY

2.1. The methodology utilised for the survey work can be split into three areas, namely desk study, habitat survey and faunal survey. These are discussed in more detail below.

## 2.2. Desk Study

- 2.2.1. In order to compile background information on the Application Site and its immediate surroundings, Ecology Solutions contacted the Sussex Biological Records Centre (SxBRC).
- 2.2.2. Information has been provided by SxBRC. This information is referenced wherever appropriate. Information regarding designated sites is also shown where appropriate on Plan ECO1.
- 2.2.3. Further information on designated sites from a wider search area was also obtained from the online Multi-Agency Geographic Information for the Countryside (MAGIC)<sup>2</sup> database. This information is reproduced at Appendix 1 and where appropriate on Plan ECO1.

## 2.3. Habitat Survey Methodology

- 2.3.1. Habitat surveys were carried out in May 2016 to ascertain the general ecological value of the land contained within the boundaries of the Application Site and wider survey area. The main habitats and associated plant species were identified, with notes on fauna utilising the Application Site. Updated phase 1 survey work was undertaken in September and October 2017.
- 2.3.2. Surveys were based around extended Phase 1 survey methodology<sup>3</sup>, as recommended by Natural England, whereby the habitat types present are identified and mapped, together with an assessment of the species composition of each habitat. This technique provides an inventory of the basic habitat types present and allows identification of areas of greater potential which require further survey. Any such areas identified can then be examined in more detail.
- 2.3.3. Using the above method, the Application Site and wider survey area were classified into areas of similar botanical community types, with a representative species list compiled for each habitat identified. Results are shown graphically at Plan ECO2.
- 2.3.4. All of the species that occur in each habitat would not necessarily be detected during survey work carried out at any given time of the year, since different species are apparent at different seasons. However survey work was undertaken during the optimal period for

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<sup>&</sup>lt;sup>2</sup> http://magic.defra.gov.uk

<sup>&</sup>lt;sup>3</sup> Joint Nature Conservation Committee (2010). *Handbook for Phase 1 Habitat Survey – a Technique for Environmental Audit*. England Field Unit, Nature Conservancy Council, reprinted JNCC, Peterborough.

Phase 1 surveys, and given the habitats present it is considered that an accurate and robust assessment has been made.

# 2.4. Faunal Survey

- 2.4.1. General faunal activity observed during the course of the survey was recorded, whether visually or by call. Specific attention was paid to the potential presence of any protected, rare, notable or Priority species. In addition, specific surveys were undertaken for bats, Badgers *Meles meles*, reptiles and Dormouse.
- 2.4.2. **Bats**. Initial bat habitat suitability surveys were undertaken in May 2016, with an update survey in September 2017. Detailed Bat activity surveys were undertaken in September and October 2017. The work was overseen by an experienced bat worker and aimed to establish the likelihood of presence / absence of bats.
- 2.4.3. Field surveys were undertaken with regard to best practice guidelines issued by Natural England (2004<sup>4</sup>), the Joint Nature Conservation Committee (2004<sup>5</sup>) and the Bat Conservation Trust (2016<sup>6</sup>).
- 2.4.4. Buildings to be impacted by the Development Proposals were the subject of detailed internal and external inspections in October 2017. The buildings were assessed for their potential to support roosting bats, with searches made for any features which could be used by bats for roosting purposes and any obvious roost access points. Searches were also made for any evidence of roosting bats, such as droppings, staining and individuals (either alive or dead).
- 2.4.5. All trees at the Application Site were assessed for their potential to support roosting bats. For a tree to be classed as having some potential for roosting bats it must usually have one or more of the following characteristics:
  - obvious holes, e.g. rot holes and old woodpecker holes;
  - dark staining on the tree below a hole;
  - tiny scratch marks around a hole from bats' claws;
  - cavities, splits and/or loose bark from broken or fallen branches, lightning strikes etc.; and
  - very dense covering of mature Ivy *Hedera helix* over trunk.
- 2.4.6. From a review of habitat quality, it was considered that the Application Site was likely to be of some value to bats, with interest most likely to be focused on woodland edge habitat. On this basis, evening bat activity surveys were undertaken to inform the assessment. Two activity surveys were undertaken on 19st September 2016 and 6th October 2017.

<sup>&</sup>lt;sup>4</sup> Mitchell-Jones, A. J. (2004). Bat Mitigation Guidelines. English Nature, Peterborough.

<sup>&</sup>lt;sup>5</sup> Mitchell-Jones, A.J. & McLeish, A.P. (Eds.) (2004). *Bat Workers' Manual*. 3<sup>rd</sup> edition. Joint Nature Conservation Committee, Peterborough.

<sup>&</sup>lt;sup>6</sup> Collins, J. (Eds.) (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3<sup>rd</sup> Edition). Bat Conservation Trust, London.

- 2.4.7. The evening activity bat surveys were conducted from 15 minutes before sunset to approximately 2 hours after sunset. Surveyors again utilised EchoMeter 3 (EM3) bat detectors to aid identification of bats and record data. Surveyors walked transects in order to encompass all features of potential value to foraging and commuting bats, including hedgerows, tree and scrub, with all bat activity which was seen noted. All bat data recorded was subsequently analysed using Analook bat sound analysis software.
- 2.4.8. Detectors were also deployed overnight following the activity surveys in strategic locations, to ascertain longer term data regarding the use of the site by foraging and commuting bats. These surveys ran over several nights, with data downloaded and analysed using Analook bat sound analysis software.
- 2.4.9. **Hazel Dormice.** Specific surveys to ascertain the presence or absence of Hazel Dormice were commenced in September 2017. September is recognised as a key month for undertaking such surveys. To date surveys have been undertaken in September and October 2017. A further survey will be undertaken in November 2017, in order to fit with best practice guidelines.
- 2.4.10. The survey technique involves the erection of nest tubes within all scrub, hedgerow and woodland edge habitat considered to be of potential value to Dormice. A total of 100 nest tubes were put up in scrub habitat within the Application Site and accessible woodland edge / hedgerow habitat to the north and west of the Application Site.
- 2.4.11. Nest tubes were placed in accordance with the guidance provided by the Mammal Society and Natural England<sup>7</sup> and as recommended in the Dormouse Conservation Handbook<sup>8</sup>. Tubes were placed at less than 10 metre intervals. The nest tubes were attached with wire ties underneath suitably sturdy horizontal branches and positioned on average at approximately 1.5 metres above ground level.
- 2.4.12. Surveys are scored for effort according to the method developed from the South West Dormouse Project (Chanin and Woods 2003). The system used provides an overall score that reflects the chances of Dormice being discovered if present, and thus provides an indicator of 'thoroughness' of a survey. This score is calculated based on the number of tubes used and the number of months the tubes were in place. The standard minimum number of tubes is set at 50 tubes. Where the number of tubes is doubled 'the monthly score' (see below) is also doubled.
- 2.4.13. The months of the year are weighted according to the likelihood of recording dormice as set out below.

<sup>7</sup> Chanin P. & Woods M. (2003). Research Report 524, *'Surveying Dormice Using Nest Tubes – Results & Experiences from the South West Dormouse Project'*. English Nature, Peterborough.

<sup>&</sup>lt;sup>8</sup> Bright, P, Morris, P. & Mitchell-Jones, T. (2006). *The Dormouse Conservation Handbook*. Second Edition. English Nature, Peterborough.

- 2.4.14. **Badgers.** Surveys were undertaken to search for evidence of Badgers initially in May 2016. An update survey which encompassed a wider survey area, including off-site woodland habitat to the north, was undertaken in early October 2017. For any setts encountered each sett entrance would be recorded and plotted, even if the entrance appeared disused. The following information was recorded if appropriate:
  - i) The number and location of well used or very active entrances; these are clear of any debris or vegetation and are obviously in regular use and may, or may not, have been excavated recently.
  - ii) The number and location of inactive entrances; these are not in regular use and have debris such as leaves and twigs in the entrance or have plants growing in or around the edge of the entrance.
  - iii) The number of disused entrances; these have not been in use for some time, are partly or completely blocked and cannot be used without considerable clearance. If the entrance has been disused for some time all that may be visible is a depression in the ground where the hole used to be and the remains of the spoil heap.
- 2.4.15. Badger activity such as well-worn paths and run-throughs, snagged hair, footprints, latrines and foraging signs were also searched for in order to build up a picture of the use of the Application Site by Badgers.
- 2.4.16. **Reptiles.** Specific surveys to identify the presence or absence of reptiles within the Application Site were undertaken between mid-September 2016 and mid October 2016.
- 2.4.17. Following an initial assessment to identify the most suitable areas of reptile habitat within the Application Site, refugia surveys were undertaken. 104 'tins' (0.5 x 0.5 metre squares of heavy roofing felt which are often used as refuges by reptiles) were distributed throughout suitable reptile habitat within the Application Site.
- 2.4.18. These tins were left in place for around two weeks to 'bed in' and subsequently surveyed for reptiles beneath or upon the tins during suitable weather conditions.
- 2.4.19. All surveys were carried out in suitable weather conditions. (widely accepted as including air temperature is between 10°C and 20°C). Heavy rain and windy conditions were avoided.
- 2.4.20. The tins provide shelter and heat up quicker than the surroundings in the morning and can remain warmer than the surroundings in the late afternoon. Being ectothermic (cold blooded), reptiles use them to bask and raise their body temperature which allows them to forage earlier and later in the day.

Month	Weighting	
April	1	
May	4	
June	2	
July	2	
August	5	
September	7	
October	2	
November	2	

Table 1: Monthly Score Weighting (Chanin & Woods 2003)

- 2.4.21. A score of 20 (or above) is deemed a thorough survey, and a score of 15 to 19 may be regarded as adequate where circumstances do not permit more time or more tubes (particularly if other survey methods have also proved negative).
- 2.4.22. A survey with 100 nest tubes checked between September and November provides a score of 22. For September and October (as reported at this stage) a score of 18 is obtained. It should be noted that Dormouse nest tube surveys are based around 'presence / absence'. Thus, once presence is detected (as in this case) additional survey work adds comparatively little to the evaluation.
- 2.4.23. Great Crested Newts. There are no water bodies present within the Application Site itself, however several ponds and a wet ditch are present in close proximity to the Application Site. These include a matrix of ponds located in land to the immediate north of the Application Site and an on-line pond associated with a ditch to the west. These water bodies are shown graphically at Plan ECO3.
- 2.4.24. All of these waterbodies were subject to Great Crested Newt surveys, using standard methodologies (bottle trapping, torching and egg / refuge searches in spring 2016. Such surveys were undertaken on 12<sup>th</sup> May, 18<sup>th</sup> May, 8<sup>th</sup> June and 13<sup>th</sup> June. Noting the slightly late commencement of the work and not knowing at that time whether a total of six surveys would be required, eDNA assessment work was also undertaken.
- 2.4.25. For the eDNA survey, samples were taken from the online pond and ditch to the west, the large pond and two smaller associated ponds north of the Application Site and the large shallow, heavily scrubbed pond to the north east of the Application Site. Samples were collected on 6<sup>th</sup> June 2016, in line with the accepted survey period for such work. Laboratory testing / analysis was undertaken by SureScreen Scientifics, with the test report dated 13<sup>th</sup> June 2016.

### 3. ECOLOGICAL FEATURES

- 3.1. The Application Site and wider survey area were subject to ecological surveys in May 2016, with additional work undertaken during September and October 2017. The vegetation present enabled the habitat types to be satisfactorily identified and an accurate assessment of the ecological interest of the habitats to be undertaken.
- 3.2. The following main habitat / vegetation types were identified within the Application Site itself:
  - Semi-improved grassland;
  - Tall ruderal;
  - · Scrub / trees; and
  - Amenity garden;
  - Buildings.
- 3.3. In addition, the survey area extended to include land to the north of the Application Site which comprises a matrix of open water, wet woodland / scrub, grassland and ruderal vegetation.
- 3.4. The location of these habitats is shown on Plan ECO2.
- 3.5. Each habitat present is described below with an account of their representative plant species.

### Semi-improved grassland

- 3.5.1. Grassland is present in the south east and south west of the Application Site.
- 3.5.2. In the south west lies an area of short grassland which may have been the subject of grazing in the past (noting the presence of stockpiled manure) but more recently is likely to be maintained short through mowing.
- 3.5.3. Grassland managed as amenity lawn is present in the south east of the Application Site. These areas are subject to regular mowing.
- 3.5.4. Short grassland is also present to the immediate north of the Application Site, as part of the matrix of habitats which form part of the mitigation / enhancement package. It is possible that this area in particular is maintained as having a short sward height through grazing by rabbits, evidence for which was recorded during the course survey work.
- 3.5.5. Species recorded within the grassland habitats include: Perennial Rye Grass Lolium perenne, Yorkshire Fog Holcus lanatus, Cock's Foot Dactylis glomerata, White Clover Trifolium repens, Broadleaved Dock Rumex obtusifolius, Creeping Buttercup Ranunculus repens, Birds-Foot Trefoil Lotus corniculatus, Ground Ivy Glechoma hederacea, Creeping Cinquefoil Potentilla reptans, Common Ragwort Senecio jacobaea, Spotted Medick Medicago arabica, Smooth Sow Thistle Sonchus oleraceus, Selfheal Prunella

- *vulgaris*, Perforate St John's Wort *Hypericum perforatum*, Common Daisy *Bellis perennis* and Scarlet Pimpernel *Anagallis arvensis*.
- 3.5.6. Grassland north of the Application Site also contained Moss sp. indicating damper conditions.

## Tall ruderal

- 3.5.7. Stands of (e.g. tall) ruderal vegetation are common place throughout the Application Site and wider survey area (see plan ECO2).
- 3.5.8. Species recorded in these areas include; Broad-leaved Dock, Comfrey Symphytum officinale, Common Fleabane Pulicaria dysenterica, Common Nettle Urtica dioica, Spear Thistle Cirsium vulgare, Hedge Bindweed Calystegia sepium, Common Mouse-ear Cerastium fontanum, Germander Speedwell Veronica chamaedrys, Yarrow Achillea millefolium, Teasel Dipsacus fullonum, Creeping Thistle, Broad-leaved Willowherb Epilobium montanum, Birds-Foot Trefoil, Soft Rush Juncus effusus, Burdock sp, White Dead-nettle Lamium album, Hogweed Heracleum sphondylium and Evening Primrose Oenothera biennis. Occasional Pendulous Sedge Carex pendula and Bracken Pteridium aquilinum was also recorded.
- 3.5.9. In addition, a small stand of Japanese Knotweed *Fallopia japonica* was recorded in one location in the south of the Application Site (see Plan ECO2).

## Scrub / trees

- 3.5.10. Scattered and dense scrub is present throughout the Application Site and wider survey area. This is dominated by Willow sp. especially in the north and east where damp conditions prevail. Other species recorded include, Ash Fraxinus excelsior, Hawthorn Crataegus monogyna, Blackthorn Prunus spinosa, Dogwood Cornus sanguinea, Pedunculate Oak Quercus robur, Silver Birch Betula pendula and Butterfly Bush Buddleja sp. Hazel Corylus avellana was recorded in the wider survey area at the banks of the ponds to the north.
- 3.5.11. Occasional standard trees are present, most notably along the northern boundary of the Application Site. Trees recorded include Pedunculate Oak, Ash and a Larch *Larix decidua*.

### **Ponds**

- 3.5.12. There are no ponds present within the Application Site itself. Ponds are however present to the north of the Application Site, within the area proposed for ecological enhancement. A series of small waterbodies exist which have clearly been the subject of some management in the recent past with bankside scrub removed.
- 3.5.13. Aquatic vegetation is relatively limited, although stands of Reedmace *Typha* sp., are present in the far north, Lesser Duckweed *Lemna minor* is common place and sedges *Carex* sp.

are present at the bank sides and in shallow margins. Bankside vegetation is relatively diverse comprising Stinking Hellebore Helleborus foetidus, Brome Brachypodium sp., Pendulous Sedge Carex pendula, Burnet Saxifrage Pimpinella saxifraga, Greater Chickweed Stellaria neglecta, Wood Avens Geum urbanum, Sedge Carex, sp., Hairy Bittercress Cardamine hirsuta, Greater Bird's-foot Trefoil Lotus pedunculatus, Marsh Bedstraw Galium palustre, Soft Rush, Meadowsweet Filipendula ulmaria, Creeping Thistle, Creeping Buttercup, Violet Viola sp., Ground Ivy, Wild Strawberry Fragaria vesca, Betony Stachys officinalis, Holly Illex aquifolium, Ivy Hedera helix and Cow Slip Primula veris.

### Buildings and hardstanding

- 3.5.14. A residential property (at the roadside frontage of the plot) with associated annex (to the rear of the plot) is present in the far south of the Application Site. These buildings will be lost to the proposed main access route.
- 3.5.15. Each building is a dormer bungalow, with a small roof space used for storage and each has a flat roofed extension and hanging tiles at the gable ends. The main house also has a small (fairly recent) extension to the western elevation with an apex roof. Roof spaces were for the main part boarded (sarking) and in good, clean condition.
- 3.5.16. Both buildings have been maintained in a good state of repair, with no obvious damage such as slipped or missing tiles, cracks or damage to barge boards at the eaves. Hanging tiles were also in good condition, with no missing or slipped tiles, or obvious gaps considered to offer roosting access to bats. It was noted that a couple of very small gaps are present where roof tiles associated with the apex roofed extension meet the wall of the main house, which is clad in hanging tiles. It was also noted that lead flashing had lifted slightly at the southern aspect of the chimney stack associated with the main house.
- 3.5.17. In addition to the buildings described above, a green house, several wooden sheds and a metal (Anderson style) shelter are present within the Application Site.
- 3.5.18. Hardstanding dominates the driveway and frontage associated with the residential property.

## 3.6. Background Information

3.6.1. The desk study undertaken with SxBRC returned a number of plant records from the local area, with no records returned from within the Application Site boundary. The closest record was of Bloody Crane's-bill *Geranium sanguineum* from a location approximately 0.1km north of the Application Site (within Furze Field woodland), from 2008. Other relevant records are from locations well removed from the Application Site.

### 4. WILDLIFE USE OF THE APPLICATION SITE

4.1. During the surveys that have been undertaken within the Application Site, general observations have been made of any faunal use, with specific attention paid to the potential presence of protected or notable species. Specific surveys were also undertaken for bats, Badgers, reptiles and Dormouse within the Application Site.

#### 4.2. **Bats**

#### Tree Assessment

4.2.1. A survey confirmed that no trees present within or immediately adjacent to the Application Site offer any obvious potential opportunities for roosting bats, with trees, being largely immature and lacking features such as holes, splits, flaking bark and cracks.

### **Building Assessment**

- 4.2.2. Detailed assessments and inspections undertaken in relation to the residential property (main house and annex). Loft voids in both buildings were accessed and external features were examined. The survey did not record any evidence for bat use of the buildings (e.g. droppings, areas of staining or individuals themselves).
- 4.2.3. A couple of very small gaps were noted at the point where roof tiles associated with an extension to the main house meet the hanging tile clad wall of the main house. It is expected that these gaps offer nothing more than superficial opportunities for roosting bats. The slight damage to the flashing at the chimney stack (described previously) is not considered to offer opportunities for roosting bats, since access under tiles does not result, the lifted flashing does not provide a sheltered void.
- 4.2.4. Two small gaps were noted on the chimney stack of the main house, understood to be where damaged mortar had fallen away. No evidence in the form of bat droppings was noted around these features and there is no evidence to suggest that these features are used by bats.
- 4.2.5. It is considered that roosting bats do not represent a constraint to development at the Application Site.

### **Bat Activity Surveys**

4.2.1. Two bat activity, transect surveys were undertaken focussing on the Application Site and contiguous habitat where access was possible (land to the north and west). Table 1 below outlines the weather conditions during each survey visit.

Date	Weather Conditions	
19.09.2017	14C, 100% cloud cover, fresh breeze, dry	
06.10.2017	12C, 100% cloud cover, light breeze, dry	

Table 1: Weather conditions during bat activity surveys

- 4.2.2. The activity survey on September 19<sup>th</sup> recorded mostly Soprano Pipistrelle *Pipistrellus pygmaeus* (54 registrations) and Common Pipistrelle *Pipistrellus pipistrellus* (43 registrations). Many of Soprano Pipistrelle registrations included social calls. Other species recorded include Serotine *Eptesicus serotinus* (17 registrations) and at least one Long-eared species (three registrations). Activity was spread throughout the survey area, with highest activity levels in the north and east, at woodland edge habitat within the Application Site and beyond, within the proposed ecological enhancement area to the north.
- 4.2.3. The activity survey on October 6<sup>th</sup> recorded mostly Soprano Pipistrelle (129 registrations) and Common pipistrelle (46 registrations). Similar to the previous activity survey, many of the Soprano Pipistrelle registrations included social calls. At least one unidentified Myotis species was also recorded (eight registrations). Activity was relatively evenly divided between the Application Site and surrounding land included in the transect, with all recorded species present both on and off-site in similar numbers.

## **Static Monitoring Surveys**

4.2.4. Two static detectors were deployed within the Application Site after each activity survey. They were deployed for six nights following the September 19<sup>th</sup> survey and seven nights following the October 6<sup>th</sup> survey.

September Static Monitoring Survey

19/09/17

Detector 1 – Western Corner

4.2.5. A total of 37 registrations were recorded over the active period. Soprano Pipistrelle was recorded 21 times from 21:44 to 06:21.Common Pipistrelle was recorded 14 times from 19:25 to 20:41. A single Long-eared species *Plecotus sp.* was recorded at 03:58. A single Serotine was recorded at 19:50.

Detector 2 – Central Location

4.2.6. A total of 12 registrations were recorded over the active period. Common Pipistrelle was recorded seven times from 19:23 to 21:18. Soprano pipistrelle was recorded four times from 19:29 to 05:53. A single Long-eared species was recorded at 05:27.

20/09/17

#### Detector 1 – Western Corner

4.2.7. A total of 44 registrations were recorded over the active period. Common Pipistrelle was recorded 35 times from 19:19 to 06:13. Soprano Pipistrelle was recorded seven times from 19:23 to 01:15. A single unidentified Myotis species was recorded at 01:29. A single Serotine was recorded at 00:52.

Detector 2 - Central Location

4.2.8. A total of 42 registrations were recorded over the active period. Soprano Pipistrelle were recorded 33 times from 19:06 to 06:10. Common Pipistrelle were recorded eight times from 19:31 to 05:32. A single Serotine was recorded at 21:22

21/09/17

Detector 1 – Western Corner

4.2.9. A total of 32 registrations were recorded over the active period. Common Pipistrelle was recorded 29 times from 19:25 to 22:19. Soprano Pipistrelle was recorded three times from 19:19 to 21:36.

Detector 2 – Central Location

4.2.10. A total of 29 registrations were recorded over the active period. Soprano Pipistrelle was recorded 14 times from 19:12 to 22:46. Common Pipistrelle was recorded nine times from 19:20 to 21:21. Noctule *Nyctalus noctula* was recorded twice at 19:13 and 19:53. Serotine was recorded twice, at 21:04 and 21:11. A single Longeared species was recorded at 21:36. A single unidentified Myotis species was recorded at 19:51.

22/09/17

Detector 1 – Western Corner

4.2.11. A total of 47 registrations were recorded over the active period. Soprano Pipistrelle was recorded 30 times from 19:06 to 22:17. Common Pipistrelle was recorded 14 times from 19:17 to 06:12. At least one unidentified Myotis species was recorded three times from 23:39 to 04:47.

Detector 2 – Central Location

4.2.12. A total of 18 registrations were recorded over the active period. Soprano Pipistrelle was recorded 11 times from 19:04 to 06:33. Common Pipistrelle was recorded three times from 19:26 to 21:16. Noctule *Nyctalus noctula* was recorded twice at 20:49. Serotine was recorded twice, at 21:29 and 02:41.

23/09/17

Detector 1 – Western Corner

4.2.13. A total of 26 registrations were recorded over the active period. Soprano Pipistrelle was recorded 13 times from 19:09 to 21:55. Common Pipistrelle was recorded 12 times from 19:08 to 04:06. A single Long-eared species was recorded at 22:16

Detector 2 - Central Location

4.2.14. A total of 23 registrations were recorded over the active period. Soprano Pipistrelle was recorded nine times from 19:06 to 06:09. Common Pipistrelle was recorded eight times from 19:25 to 06:20. Noctule was recorded three times from 19:16 to 20:08. Serotine was recorded twice, at 20:43 and 00:11. A single unidentified Myotis species was recorded at 20:19.

24/09/17

Detector 1 – Western Corner

4.2.15. A total of 32 registrations were recorded over the active period. Soprano Pipistrelle was recorded 13 times from 20:34 to 00:00. Common Pipistrelle was recorded 12 times from 19:01 to 06:09. Noctule was recorded four times from 22:22 and 06:07. A Longeared species was recorded twice, at 00:04 and 02:08. A single unidentified Myotis species was recorded at 19:24.

Detector 2 - Central Location

4.2.16. A total of 41 registrations were recorded over the active period. Soprano Pipistrelle was recorded 20 times from 18:53 to 22:26. Common Pipistrelle was recorded eight times from 19:25 to 05:58. Noctule was recorded seven times from 02:07 to 03:03. At least one Long-eared species was recorded four times from 21:26 to 02:41. Serotine was recorded twice, at 21:41 and 23:42.

October 6<sup>th</sup> Static Monitoring Survey

06/10/17

Detector 1 – Central Location

4.2.17. A total of 45 registrations were recorded over the active period. Common Pipistrelle was recorded 28 times from 18:46 to 06:47. Soprano Pipistrelle was recorded six times from 19:10 to 06:51. At least one Long-eared species was recorded five times from 18:58 to 04:50. At least one unidentified Myotis species was recorded six times from 19:06 and 05:54.

### Detector 2 – Southern Boundary

4.2.18. A total of 49 registrations were recorded over the active period. Soprano Pipistrelle was recorded 39 times from 18:45 to 06:50. Common Pipistrelle was recorded eight times from 18:43 to 06:48. At least one unidentified Myotis species was recorded twice, at 21:40 and 06:04.

07/10/17

#### Detector 1 - Central Location

4.2.19. A total of 131 registrations were recorded over the active period. Common Pipistrelle was recorded 51 times from 18:49 to 04:48. Soprano Pipistrelle was recorded 45 times from 18:44 to 06:44. At least one unidentified Myotis species was recorded 27 times from 18:51 to 04:42. At least one Long-eared species was recorded eight times from 19:01 to 02:52.

### Detector 2 – Southern Boundary

4.2.20. A total of 141 registrations were recorded over the active period. Soprano Pipistrelle was recorded 116 times from 18:43 to 06:43. Common Pipistrelle was recorded 15 times from 18:49 to 04:47. At least one unidentified Myotis species was recorded eight times from 18:57 to 04:33. A single Long-eared species was recorded at 23:33. A single Nathusius' Pipistrelle *Pipistrellus nathusii* was recorded at 23:50.

08/10/17

#### Detector 1 – Central Location

4.2.21. A total of 24 registrations were recorded over the active period. Soprano Pipistrelle was recorded nine times from 18:45 to 20:57. Common Pipistrelle was recorded six times from 18:36 to 05:39. At least one unidentified Myotis species was recorded five times from 19:11 to 23:31. At least one Long-eared species was recorded four times from 18:58 to 02:54.

## Detector 2 - Southern Boundary

4.2.22. A total of 20 registrations were recorded over the active period. Common Pipistrelle was recorded 13 times from 18:43 to 06:12. Soprano Pipistrelle was recorded six times from 19:45 to 20:27. A single unidentified Myotis species was recorded at 19:25.

09/10/17

#### Detector 1 - Central Location

4.2.23. A total of 142 registrations were recorded over the active period. Common Pipistrelle was recorded 74 times from 18:42 to 05:09. Soprano Pipistrelle was recorded 43 times from 19:10 to 06:25. At least one unidentified Myotis species was recorded 18 times from 18:48 to 04:15. At least one Long-eared species was recorded five times from 19:30 to 01:56. Serotine was recorded twice, at 19:03 and 23:47.

Detector 2 – Southern Boundary

4.2.24. A total of 72 registrations were recorded over the active period. Soprano Pipistrelle was recorded 48 times from 18:45 to 06:29. Common Pipistrelle was recorded 14 times from 18:42 to 22:15. At least one unidentified Myotis species was recorded ten times from 19:28 to 05:17

10/10/17

Detector 1 - Central Location

4.2.25. A total of 75 registrations were recorded over the active period. Common Pipistrelle was recorded 35 times from 18:36 to 06:32. Soprano Pipistrelle was recorded 34 times from 18:42 to 06:42. At least one unidentified Myotis species was recorded three times from 22:44 to 05:24. Serotine was recorded twice, at 18:51 and 19:12. A single Long-eared species was recorded at 19:10.

Detector 2 – Southern Boundary

4.2.26. A total of 175 registrations were recorded over the active period. Soprano Pipistrelle was recorded 143 times from 18:45 to 06:43. Common Pipistrelle was recorded 28 times from 18:43 to 06:49. At least one unidentified Myotis species was recorded three times from 18:59 to 05:25. A single Serotine was recorded at 18:52.

11/10/17

Detector 1 – Central Location

4.2.27. A total of 92 registrations were recorded over the active period. Common Pipistrelle was recorded 68 times from 18:51 to 02:39. Soprano Pipistrelle was recorded 11 times from 22:09 to 06:22. At least one unidentified Myotis species was recorded eight times from 22:26 to 04:20. A single Long-eared species was recorded five times from 21:20 to 05:47.

Detector 2 – Southern Boundary

4.2.28. A total of 281 registrations were recorded over the active period. Soprano Pipistrelle was recorded 217 times from 18:31 to 02:45. At least one unidentified Myotis species was recorded 45 times from 19:15 to 01:52. Common Pipistrelle was recorded 19 times from 18:51 to 01:01.

12/10/17

### Detector 1 - Central Location

4.2.29. A total of 117 registrations were recorded over the active period. Common Pipistrelle was recorded 67 times from 18:44 to 05:22. Soprano Pipistrelle was recorded 28 times from 18:40 to 06:34. At least one unidentified Myotis species was recorded 20 times from 18:52 to 03:40. At least one Long-eared species was recorded twice, at 20:57 and 21:29.

## Detector 2 – Southern Boundary

- 4.2.30. A total of 96 registrations were recorded over the active period. Soprano Pipistrelle was recorded 61 times from 18:46 to 06:55. Common Pipistrelle was recorded 28 times from 18:37 to 06:45. At least one unidentified Myotis species was recorded six times from 18:52 to 04:31. A single Noctule was recorded at 01:35.
- 4.2.31. **Background Information.** The desk study undertaken with SxBRC returned a small number of recent bat records from the local area. The closest record was of Common Pipistrelle from a location approximately 0.1km north of the Application Site boundary (within Furze Field woodland). The record is associated with a bat box check undertaken in 2015. A record of a Common Pipistrelle maternity roost was also returned from a location approximately 0.4km north-east of the Application Site from 2008.

# 4.3. Badgers

- 4.3.1. No evidence of Badgers, in the form of setts, foraging pits, latrines or footprints, was recorded within the Application Site itself. Evidence of Rabbit activity was noted in several locations.
- 4.3.2. A main Badger sett was recorded within Furze Field woodland to the north of the Application Site. This sett comprises 14 entrances, of which three showed signs of recent use. This sett is located approximately 30m from the Application Site boundary. The sett location is shown on Plan ECO2.
- 4.3.3. **Background Information.** No badger records were returned as part of the desk study with SxBRC.

### 4.4. Reptiles

4.4.1. The Application Site and wider survey area contains suitable habitat for reptile species in the form of a matrix of tall ruderal, grassland and scrub with occasional log piles (stacked timber), a stockpile of manure. In order to ascertain whether the Application Site supports this group, refugia surveys were undertaken in the autumn of 2017, in line with the methodology outlined in Section 2 above.

4.4.2. The results of the survey are summarised in Table 2 below.

Date	Survey Number	Weather Conditions	Reptiles Recorded
26.09.17	1	50% cloud cover, no rain 17°C	None
29.09.17	2	100% cloud cover, no rain 18°C	Slow-worm ♀
3.10.17	3	30% cloud cover, no rain 15°C	None
6.10.17	4	20% cloud cover, no rain 15°C	Common Lizard ♂
13.10.17	5	100% cloud cover, no rain 18°C	None
16.10.17	6	30% cloud cover, no rain 15°C	2 x Slow-worm (1 Juv)
18.10.17	7	100% cloud cover, light rain in part 15°C	Common Lizard ♀ and Slow-worm

Table 1: 2017 Reptile Survey Results (Summary)

- 4.4.3. The surveys recorded low numbers of Common Lizard *Zootoca vivipara* and Slow-worm *Anguis fragilis* within the Application Site.
- 4.4.4. In light of the survey results, it is considered that the Application Site is utilised by small populations of both species. Noting the presence of waterbodies, to the north of the Application Site, in addition to other suitable habitat, it is considered that Grass Snake *Natrix natrix* may also be present within the Application Site and wider area
- 4.4.5. **Background Information.** The desk study undertaken with SxBRC returned a small number of reptile records from the local area, with many records pre-dating the year 2006. As such, any records predating 2006 have not been considered within the desk study. The closest record was of Grass Snake returned from a location approximately 0.3km south-east of the Application Site from 2009.

## 4.5. **Dormice**

- 4.5.1. Woodland edge, scrub and off-site hedgerow habitats were the subject of a Dormouse nest tube survey. Nest tube surveys were undertaken of all suitable habitats within the Application Site in line with the methodology outlined in Section 2 above. Surveys have been completed for September and October 2017, with no evidence for the presence of Dormouse recorded.
- 4.5.2. It is considered that Dormice are absent from the Application Site and suitable Dormouse habitat which is contiguous with it. In line with current guidance, one further survey is required to be completed in November 2017, in order to substantiate the conclusion that Dormice are not present within the Application Site or associated boundary habitat. The results of the final survey will be submitted to the Local Planning Authority (LPA) as soon as they are available. Any relevant mitigation has been put forward within

this assessment on a precautionary basis, such that should Dormice be recorded during the final survey, the authority has all the necessary information available to it in informing the likely residual impact of the scheme on Dormice.

4.5.3. **Background Information.** No Dormouse records were returned as part of the desk study undertaken with SxBRC.

## 4.6. Amphibians (Great Crested Newts)

- 4.6.1. There are no waterbodies present within the Application Site itself, however several are present in close proximity which could provide suitable opportunities for breeding amphibians (including Great Crested Newts *Triturus cristatus*). The locations of these water bodies (e.g. ponds) are shown on Plans ECO2 and ECO3.
- 4.6.2. Relevant waterbodies were the subject of detailed Great Crested Newt surveys during May and June 2016. These included the ponds north of the Application Site, along with a length of ditch with an online pond to the west of the Application Site.
- 4.6.3. In addition to standard survey techniques, eDNA surveys were undertaken.
- 4.6.4. No evidence for the presence of this species was recorded during the standard surveys and the results of the eDNA testing was negative showing that Great Crested Newts do not breed within the water bodies located close to the Application Site. A copy of the eDNA test report is included at Appendix 2.
- 4.6.5. **Background Information.** The desk study undertaken with SxBRC returned a number of amphibian records from the local area. However, the vast majority of these records predate the year 2006 and as such have not been considered within the desk study. The closest record was of Great Crested Newt, returned from a location approximately 0.2km west of the Application Site from 2006. A record of Great Crested Newt was also returned from a location approximately 0.4km north of the Application Site at its closest point from 2013.
- 4.6.6. The grid references provided for the records described above do not match any pond locations shown on Ordnance Survey (OS) mapping or aerial photography. It is considered highly likely that the record location to the west of the Application Site in fact relates to a field boundary pond / section of ditch located slightly closer to the Application Site. This pond and ditch were the subject of survey work in 2016 and negative results were recorded, indicating that Great Created Newts no longer use this habitat.
- 4.6.7. It is considered that the record location, north of the Application Site either relates to a pond which has been lost, or perhaps more likely, should be attributed to one of two ponds located slightly further north, at distances of around 450m and 505m respectively. At these distances, it is very unlikely that Great Crested Newts

would migrate from the breeding pond and access the Application Site.

4.6.8. Overall, on the basis of all evidence available, it is considered that GCN would not be present within the Application Site. As such, no further consideration has been given to this species within this Ecological Assessment.

#### 4.7. **Birds**

- 4.7.1. The Application Site offers opportunities for nesting birds in terms of the scrub, hedgerow and trees.
- 4.7.2. Bird species recorded at the Application Site during surveys include Great Tit *Parus major*, Blue Tit *Cyanistes caeruleus*, Longtailed Tit *Aegithalos caudatus*, Blackbird *Turdus merula*, House Sparrow *Passer domesticus* (UKBAP species), Dunnock *Prunella modularis* (UKBAP species), Robin *Erithacus rubecula*, Wren *Troglodytes troglodytes*, Whitethoat *Sylvia communis*, and Magpie *Pica pica*. A Buzzard *Buteo buteo*, Carrion Crows *Corvus corone* and Jackdaws *Coloeus monedula* were noted flying overhead.
- 4.7.3. **Background Information.** The desk study undertaken with SxBRC returned a large number of notable bird records from the local area. However, many of these records have been returned with low resolution grid references. A small number of records were returned from the 1km grid square which contains the Application Site, including Stock Dove *Columba oenas*, Barn Owl *Tyto alba*, Red Kite *Milvus milvus* and Cuckoo *Cuculus canorus* from between 2007 and 2013.

#### 4.8. Invertebrates

- 4.8.1. The Application Site is expected to support a limited range of common invertebrate species, but there is no evidence to suggest that any protected or notable species are likely to be present, given the habitats present.
- 4.8.2. **Background Information.** The desk study undertaken with SxBRC returned numerous invertebrate records from the local area, however no notable invertebrate species records were returned from within the Application Site. The closest record was of Knot Grass Moth *Acronicta rumicis* (a migratory species) returned from a location approximately 0.3km north-east of the Application Site, from 2007.

#### 5. ECOLOGICAL EVALUATION

### 5.1. The Principles of Site Evaluation

- 5.1.1. The latest guidelines for ecological evaluation produced by CIEEM propose an approach that involves professional judgement, but makes use of available guidance and information, such as the distribution and status of the species or features within the locality of the project.
- 5.1.2. The methods and standards for site evaluation within the British Isles have remained those defined by Ratcliffe<sup>9</sup>. These are broadly used across the United Kingdom to rank sites, so priorities for nature conservation can be attained. For example, current Site of Special Scientific Interest (SSSI) designation maintains a system of data analysis that is roughly tested against Ratcliffe's criteria.
- 5.1.3. In general terms, these criteria are size, diversity, naturalness, rarity and fragility, while additional secondary criteria of typicalness, potential value, intrinsic appeal, recorded history and the position within the ecological / geographical units are also incorporated into the ranking procedure.
- 5.1.4. Any assessment should not judge sites in isolation from others, since several habitats may combine to make it worthy of importance to nature conservation.
- 5.1.5. Further, relying on the national criteria would undoubtedly distort the local variation in assessment and therefore additional factors need to be taken into account, e.g. a woodland type with comparatively poor species diversity, common in the south of England may be of importance at its northern limits, say in the border country.
- 5.1.6. In addition, habitats of local importance are often highlighted within a local Biodiversity Action Plan (BAP). The Sussex BAP highlights a number of habitats and species. This is referred to below where relevant.
- 5.1.7. Levels of importance can be determined within a defined geographical context from the immediate site or locality through to the International level.
- 5.1.8. The legislative and planning policy context are also important considerations and have been given due regard throughout this assessment.

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<sup>&</sup>lt;sup>9</sup> Ratcliffe, D A (1977). A Nature Conservation Review: the Selection of sites of Biological National Importance to Nature Conservation in Britain. Two Volumes. Cambridge University Press, Cambridge.

### 5.2. Habitat Evaluation

## Designated sites

- 5.2.1. **Statutory sites.** There are no statutory designated sites of nature conservation interest located within or immediately adjacent to the Application Site. The nearest statutory designated site is Wolstonbury Hill Site of Special Scientific Interest (SSSI), which is located approximately 4.3km to the south-east of the Application Site boundary at its nearest point (see Plan ECO1). This SSSI is designated on account of its chalk downland and woodland habitats. The next nearest statutory designated site is Bedelands Farm Local Nature Reserve (LNR). The next nearest SSSI is Ditchling Common, located approximately 6.6km to the east of the Application Site.
- 5.2.2. The Application Site is significantly separated from all statutory designated sites in the locality, and as such no likely significant effects on any such designated site is considered to arise.
- 5.2.3. For completeness, there are no European or internationally designated sites of nature conservation interest (including Special Protection Areas, Special Areas of Conservation and Ramsar sites) within 15km of the Application Site boundary. The closest such site is Castle Hill SAC, located just over 15km to the southeast.
- 5.2.4. **Non-statutory sites.** There are no non-statutory designated sites located within or immediately adjacent to the Application Site boundary. The nearest non-statutory designated site is a notable road verge located approximately 1.6km to the north east of the Application Site. The next nearest is a National Park located south of Hurstpierpoint, approximately 2.3km south of the Application Site. No other records for non-statutory designated sites were returned for the 5km x 5km search area used as part of the desk study exercise.
- 5.2.5. Given the distances involved, no significant effects are considered to arise in relation to any non-statutory designated site.
- 5.2.6. There are several sites classified as supporting ancient woodland within the local area. The closest area of ancient woodland is Sayers Common Wood, located approximately 0.2km east of the Application Site. The next closest is located approximately 0.3km west of the Application Site. Both of these woodlands are classified as being ancient and semi-natural woodlands. Neither are directly linked to the Application Site by public rights of way. No direct or indirect adverse impacts are considered likely to arise.

### Habitats within the Application Site

5.2.7. The Application Site is considered to hold no significant ecological value being dominated by stands of ruderal vegetation and scrub, areas of short (e.g. mown), relatively species poor grassland and several standard trees.

- 5.2.8. The Development proposals will result in losses to areas of existing (relatively) species poor grassland, ruderal and scrub vegetation, debris, log piles, amenity garden planting and an existing residential property.
- 5.2.9. Notwithstanding any use of relevant habitats by protected faunal species (discussed further below), in habitat quality terms, it is considered that impacts to these habitats would be of little ecological significance. Those habitats of greater quality in the context of the Application Site are to be retained and enhanced.
- 5.2.10. Wet woodland / scrub, bankside wetland vegetation and open water habitats (not present within the Application Site itself) are of greatest value in the context of the survey area taken as a whole. These habitats lie within the area of land adjacent to the Application Site, to the north.
- 5.2.11. The Application Site extends into an area of short grassland and scrub in the north, where an attenuation basin and swale are proposed. These minor losses of habitat to facilitate drainage features are not considered significant in ecological terms.

## Mitigation / enhancements

- 5.2.12. Existing trees are to be retained wherever possible, with losses limited, in the main, to immature specimens associated with developing scrub.
- 5.2.13. New tree planting is proposed throughout the Application Site and it is recommended that a significant proportion be of native origin and, or, of known value to wildlife. Suggested tree species suitable for inclusion within the planting schedule include:
  - Pedunculate Oak Quercus robur,
  - Silver Birch Betula pendula,
  - Alder Alnus glutinosa,
  - Hazel Corylus avellana.
  - Hawthorn Crataegus monogyna,
  - Blackthorn Prunus spinose, and
  - Crab Apple Malus sylvestris.
- 5.2.14. The Development Proposals provide the opportunity to increase both the ecological value of grassland habitat within the Application Site (and wider survey area).
- 5.2.15. Within the Application Site itself, an area of open space is to be delivered in the east of the site. This area will comprise new species rich meadow grassland. Through the use of a native wildflower seed mixture, and the implementation of an appropriate (low intensity) management regime, it is considered that biodiversity benefits will arise compared to the existing situation at the site.

- 5.2.16. As part of the Development Proposals, in addition to the measures described above, it is proposed that the land to the north, comprising open water, wet woodland / scrub and wetland vegetation will be enhanced and furthermore, gifted to the Parish Council for the benefit of biodiversity in the local area. A standalone iterative management and enhancement plan has been produced and this is included at Appendix 3 of this report. Broadly, the measures can be summarised as follows:
  - Reduction in tree cover / thinning of scrub;
  - Localised dredging of ponds to maintain standing water habitat;
  - Control (e.g. thinning) of any dense stands of emergent vegetation such as *Typha* sp.,
  - New native aquatic planting; and
  - Appropriate cutting regime for grassland and pond banks.
- 5.2.17. It is considered that delivering the suite of measures described above will mitigate for any losses to onsite habitats, and overall result in a net gain in biodiversity value compared to the existing situation. Furthermore, through the use of a range of native tree and shrub species as part of the planting scheme, and the instigation of management for biodiversity, it is considered that opportunities for species such as nesting birds, foraging and commuting bats, invertebrates and mammals would be maintained and enhanced.

### 5.3. Faunal Evaluation

#### Bats

- 5.3.1. **Legislation.** All bats are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and included on Schedule 2 of the Conservation of Habitats and Species Regulations 2010 ("the Habitats Regulations"), as amended. These include provisions making it an offence:
  - Deliberately to kill, injure or take (capture) bats;
  - Deliberately to disturb bats in such a way as to:-
    - (i) be likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or to hibernate or migrate; or
    - (ii) affect significantly the local distribution or abundance of the species to which they belong;
  - To damage or destroy any breeding or resting place used by bats:
  - Intentionally or recklessly to obstruct access to any place used by bats for shelter or protection.
- 5.3.2. While the legislation is deemed to apply even when bats are not in residence, Natural England guidance suggests that certain activities such as re-roofing can be completed outside sensitive periods when bats are not in residence provided these do not damage or destroy the roost.

- 5.3.3. The words deliberately and intentionally include actions where a court can infer that the defendant knew that the action taken would almost inevitably result in an offence, even if that was not the primary purpose of the act.
- 5.3.4. The offence of damaging or destroying a breeding site or resting place (which can be interpreted as making it worse for the bat) is an absolute offence. Such actions do not have to be deliberate for an offence to be committed.
- 5.3.5. European Protected Species licences are available from Natural England in certain circumstances, and permit activities that would otherwise be considered an offence.
- 5.3.6. Licences can usually only be granted if the development is in receipt of full planning permission and it is considered that:
  - (i) The activity to be licensed must be for imperative reasons of overriding public interest or for public health and safety;
  - (ii) There is no satisfactory alternative; and
  - (ii) The action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.
- 5.3.7. **Application Site Evaluation.** Surveys undertaken at the Application Site in the autumn period of 2017 identified use of the site by a small number of common bat species for foraging and commuting. The majority of recorded activity was attributed to Soprano and Common Pipistrelle bats, with very occasional use by Serotine, Noctule, Long-eared and *Myotis* sp. bats. Even for Soprano and Common Pipistrelle bats, the levels of recorded activity were not significant and can be attributed to a small number of individuals.
- 5.3.8. The Application Site is considered to be of some (low) value for foraging and commuting bats. Woodland edge habitat within the Application Site and the sheltered habitats to the north (open water, wet woodland, short grassland and herbs) are of greatest value in the context of the Application Site and wider survey area.
- 5.3.9. The existing residential property to be lost to the proposals has some, very limited potential to support roosting bats. However, no evidence of roosting bats was recorded during detailed internal and external inspections and overall, the buildings are in a good state of repair with regular building maintenance clearly undertaken.
- 5.3.10. **Mitigation and Enhancements.** Overall, it is considered that the site is of relatively limited value for foraging / commuting bat species. No trees with obvious potential to support bats roosts have been identified within the Application Site and the residential property is not considered to support roosting bats.

- 5.3.11. The retention of woodland edge habitat and trees in general coupled with the provision of new tree planting, wetland features (SuDS), and new species rich grassland within the Application Site will maintain foraging and commuting resources for bats post development.
- 5.3.12. A suite of ecological enhancements will be delivered in respect of land to the immediate north of the Application Site. These measures will ensure provision of a diverse habitat matrix with a sheltered microclimate and thus optimal bat foraging habitat.
- 5.3.13. In order to provide new roosting opportunities for bats, a number of bat boxes (e.g. 6) are to be installed on suitable retained trees within the Application Site (such as those on the northern boundary) and wider survey area. Roosting opportunities are also to be provided on new residential properties, with four bat tiles and four bat boxes / bricks to be provided. Examples of suitable bat boxes are provided at Appendix 4.
- 5.3.14. New roosting features will be located such that they will not be subject to any adverse effects from artificial lighting and unobstructed access to foraging habitat or potential flight lines is available. Those properties at the development boundaries would be most suited to such provisions.
- 5.3.15. It is recommended that the lighting scheme for the development is designed to avoid potential impacts from artificial lighting to retained and newly provided habitats, in particular woodland edge habitat. It is recommended that dark corridors are provided where possible, through the use of hoods and cowls to reduce light spill and to direct lighting away from these features. It is understood that lighting can be kept to a minimum and this will ensure that opportunities for foraging and commuting bats will be present post-development.
- 5.3.16. As a precautionary measure, it is also recommended that the residential property to be lost to the proposals ("Lyndon") is subject to a soft demolition protocol. The roof should be demolished under an ecological watching brief, with tiles striped by hand. In the unlikely event that a roosting bat is discovered, works will cease and Natural England contacted in relation to any licensing requirements. It should be noted that the mitigation and enhancement measures described above, would be sufficient for inclusion within any licence application were one to be required (not likely).

### **Badgers**

- 5.3.17. **Legislation & Licensing**. The Protection of Badgers Act 1992 consolidates the previous Badgers Acts of 1973 and 1991. The legislation aims to protect the species from persecution, rather than being a response to an unfavourable conservation status.
- 5.3.18. As well as protecting the animal itself, the 1992 Act also makes the intentional or reckless destruction, damage or obstruction of a

Badger sett an offence. A sett is defined as "any structure or place, which displays signs indicating current use, by a Badger". 'Current use' is defined by Natural England as any use within the preceding 12 months.

- 5.3.19. In addition, the intentional elimination of sufficient foraging area to support a known social group of Badgers may, in certain circumstances, be construed as an offence by constituting 'cruel ill treatment' of a Badger.
- 5.3.20. Local Authorities are therefore obliged to consult Natural England over any application that is likely to adversely affect Badgers.
- 5.3.21. Any work that disturbs Badgers is illegal without a licence granted by Natural England. Unlike the general conservation legislation, the Badgers Act 1992 makes specific provision for the granting of licences for development purposes, including for the destruction of setts.
- 5.3.22. Previous guidance issued by Natural England in 2002 outlines the types of activity that it considers should be licensed within certain distances of sett entrances. For example using heavy machinery within 30 metres of any entrance to an active sett, and lighter machinery within 20 metres, or light work such as hand digging within 10 metres, all may require a license.
- 5.3.23. More recent guidance issued by Natural England specifically states "it is not illegal, and therefore a licence is not required, to carry out disturbing activities in the vicinity of a sett if no badger is disturbed and the sett is not damaged or obstructed."
- 5.3.24. The guidance goes on to state, "Where interference with a sett showing signs of use cannot be avoided during the development, a licence should be sought from Natural England."
- 5.3.25. This guidance no longer makes reference to any 30m/20m/10m radius as a threshold for whether a licence would be required. Nonetheless, it is stated that tunnels may extend for 20m so care needs to be taken when implementing excavating operations within the vicinity of a sett and to take appropriate precautions with vibrations and noise, etc. Fires / chemicals within 20m of a sett should specifically be avoided.
- 5.3.26. The guidance allows greater professional judgement as to whether an offence is likely to be committed by a particular development activity and therefore whether a licence is required or not. For example, if a sett clearly orientates southwards into an embankment it may be somewhat redundant to have a 30m-exclusion zone to the north.
- 5.3.27. It should be noted that a licence couldn't be issued until the site is in receipt of a full and valid planning permission and that generally licences are not granted between December and June inclusive to avoid disruption to the Badger breeding cycle.

- 5.3.28. **Application Site Evaluation.** No Badger setts are present within the Application Site however a main sett is known from a location within woodland to the north. That sett is located approximately 30m from the Application Site boundary. At this distance, no direct or indirect impacts on the sett are likely.
- 5.3.29. **Mitigation and Enhancements.** It is recommended that staff and contractors associated with site clearance and construction operations remain vigilant for any expansion of the existing sett (towards the development footprint) and any Badger digging on site during such works. Any Badger excavations which do not constitute sett construction (incomplete tunnels / blind entrances) should be filled in immediately and the advice of a suitably experienced ecologist should be sought where any doubt exists as to whether the structure constitutes an active sett.
- 5.3.30. Given that Badgers may forage or explore within the development site, it is recommended that any deep excavations should have a means of escape provided for Badgers (either an earth ramp or roughened wooden board placed at an angle). This will prevent a Badger becoming trapped and, or attempting to construct a new sett within the excavation.
- 5.3.31. New meadow grassland creation, tree and shrub planting will provide enhanced foraging opportunities for Badgers within the Application Site.

### **Dormouse**

- 5.3.32. **Legislation.** The Hazel or Common Dormouse has the same protection and licensing requirements as for bats, with a significant group being a mother and dependent young. The Common Dormouse is a scarce UK species that is protected under European and UK law by virtue of its inclusion on:
  - Appendix 3 of the Bonn Convention;
  - Annex IVa of the EC Habitats Directive;
  - Schedule 2 of the Conservation of Habitats and Species Regulations 2010 (as amended); and
  - Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).
- 5.3.33. The legislation prohibits the intentional killing, injuring, taking, the possession of, and the trade in Dormice. In addition, places used for shelter and protection are safeguarded against intentional damage, destruction and obstruction and must not be intentionally disturbed whilst Dormice are in occupation, unless by a Natural England Licence holder for the species.
- 5.3.34. Regulation 53 is concerned with the granting of licenses for certain activities relating to animals and plants. Such licences are relevant to species afforded statutory protection under the legislation described above.

- 5.3.35. In accordance with the Habitats Regulations, the licensing authority (e.g. Natural England ) must apply the three derogation tests as part of the process of considering a licence application. These tests are that:
  - 1. The activity to be licensed must be for imperative reasons of overriding public interest or for public health and safety (Regulation 53(2)(e));
  - 2. There must be no satisfactory alternative (Regulation 53(9)(a)); and
  - 3. The favourable conservation status of the species concerned must be maintained (Regulation 53(9)(b)).
- 5.3.36. Where proposals which could affect a European Species are being considered, the decision taker "must exercise their functions under the enactments relating to nature conservation so as to secure compliance with the requirements of the Habitats Directive" (Regulation 9).
- 5.3.37. Regulation 9(5) refers to the "Competent Authority", or in other words the decision taker. In this case the competent authority is Tunbridge Wells Borough Council and it is their legal duty to consider the development proposals with regard to European Species.
- 5.3.38. The Supreme Court decision in the case of Vivienne Morge v Hampshire County Council handed down on the 19th January 2011 makes plain the way in which the decision taker (in that case the LPA) should discharge their legal duty under Regulation 9(5) when exercising their functions.
- 5.3.39. Insofar as European protected species (e.g. Dormouse) are concerned, the proper understanding of the Competent Authorities role, as a matter of law, when reporting upon and making the decision on this Application is that the case law has established that permission should be granted unless it is concluded that the works envisaged would be "unlikely to be licensed" by Natural England: see Prideaux [2013] EWHC 1054 (Admin) at paragraph 96, and Cheshire East [2014] EWHC 3536 (Admin) at paragraphs 61, 63, 64 both of which apply the Supreme Court's decision in Morge (2011).
- 5.3.40. It is understood that the decision taker has a responsibility to first assess whether a proposal would breach Article 12(1) of the Habitats Directive. If Article 12(1) would be breached, then the decision taker would need to consider whether it is likely that Natural England would not grant a European Protected Species (EPS) licence in relation to the proposals being considered.
- 5.3.41. The decision taker is required to consider the three derogation tests as provided for within the Regulations. These can be considered in broad terms as; Regulation 53(2)(e) The Need Test, Regulation 53(9)(a) The No Satisfactory Alternative Test

- and Regulation 53(9)(b) Maintain the species at a Favourable Conservation Status Test.
- 5.3.42. Conservation Status for species is defined in Article 1(i) of the Habitats Directive as "the sum of influences acting on the species concerned that may affect the long-term distribution and abundance of its populations...", and is taken as Favourable when:
  - "Population dynamics data on the species concerned indicate that it is maintaining itself on a long term basis as a viable component of its natural habitat;
  - The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and;
  - there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis"
- 5.3.43. Consideration of potential effects and the mitigation and enhancement measures associated with Dormouse (European Protected Species) arising from the development proposals are considered in the light of this legislation in this ecological assessment. Specific regard is had to the derogation tests at Regulation 53 of the Habitats Regulations are discussed further below.
- 5.3.44. It is also noted that hedgerows can be defined as important under the Hedgerow Regulations 1997 if the presence of a Schedule 5 species of the Wildlife and Countryside Act (such as Dormouse) are recorded.
- 5.3.45. **Site Evaluation.** Habitats within the Application Site, notably areas of dense scrub provide potential habitat for Dormouse. In isolation these habitats can be considered sub-optimal however, connectivity exists with suitable habitat in the wider area, which includes woodland and hedgerows. It was on this basis that detailed surveys were undertaken across the Application site and accessible connected habitat, such as off-site hedgerows to the west and woodland edge habitat to the north.
- 5.3.46. No evidence for the presence of Dormice was recorded during surveys undertaken in September and October 2017. On current evidence it is considered that Dormice are not present either within the Application Site, or in connected habitat. A final survey is however to be completed in November 2017 to ensure that the survey effort is fully in accordance with the relevant guidelines. It should be noted however, that September is the best month in which to determine presence as numbers are bolstered by the dispersing young from that years breeding season. It is considered that if Dormice were indeed present, they would have been detected in the autumn surveys already undertaken.
- 5.3.47. **Mitigation and Enhancements.** Specific mitigation is not considered necessary given the results of the surveys undertaken. However, consideration is given here to a suitable mitigation strategy, such that the planning authority can be comforted that

- mitigation can be delivered should Dormouse presence be detected during the final November survey.
- 5.3.48. In the unlikely event that Dormouse are recorded as present, it will be a legal requirement to implement a suitable mitigation strategy. Where habitat losses will impact Dormice, a licence granted by Natural England would be required prior to any site clearance works.
- 5.3.49. The Development Proposals will result in a loss of scrub, including bramble scrub and such losses could result in a reduction of Dormouse habitat. Losses of isolated, standard trees, grassland or other features associated with the Application Site, would not be likely to impact Dormice.
- 5.3.50. Any detailed mitigation strategy, such as that required in support of a Natural England licence, would include a strategy based around the phased clearance of suitable Dormouse habitat, forcing them into retained habitat. In this instance, such habitat is limited in extent. Where necessary, areas of suitable habitat could easily be cleared by hand over several days outside of the breeding season (typically June to mid-September) forcing any Dormice into suitable habitat outside of the development footprint. Winter clearance of vegetation would also be an option where the disturbance of any root balls or other features which could support hibernating Dormice can be avoided. Under that scenario, any potential hibernation features would be removed once Dormice are active again (e.g. in late May).
- 5.3.51. As part of any mitigation strategy (and licence application) it would also be necessary to demonstrate that habitat losses can be mitigated. In this instance, the proposals deliver new tree and shrub planting and there is sufficient scope within the proposals to tailor such planting to suite Dormice and provide a net gain for Dormice overall.

### Reptiles

- 5.3.52. **Legislation**. Rare, endangered or declining species receive 'full protection' under the Wildlife and Countryside Act 1981 as well as protection under The Conservation of Habitats and Species Regulations 2010, which transposed into UK law the European Community Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora, more commonly known as the Habitats Directive. Species that are fully protected include Smooth Snake *Coronella austriaca* and Sand Lizard *Lacerta agilis*. These receive the following protection from:
  - killing, injuring, taking;
  - possession or control (of live or dead animals, their parts or derivatives);
  - damage to, destruction of, obstruction of access to any structure or place used for shelter or protection;

- disturbance of any animal occupying such a structure or place; and
- selling, offering for sale, possession or transport for purposes of sale (live or dead animal, part or derivative).
- 5.3.53. These species are not relevant to the Application Site given their specific habitat requirements.
- 5.3.54. Due to their abundance in Britain, Common Lizard, Slow-worm, Grass Snake *Natrix natrix* and Adder *Vipera berus* are only 'partially protected' under the Wildlife and Countryside Act 1981 (as amended) and as such only receive protection from:
  - deliberate killing and injuring;
  - being sold or other forms of trading.
- 5.3.55. **Application Site Evaluation**. Low numbers of Common Lizard and Slow-worm were identified to be utilising the Application Site during the specific surveys undertaken. No other reptile species were recorded within the Application Site.
- 5.3.56. The proposals would have the potential to directly impact upon reptiles during site clearance and construction operations.
- 5.3.57. **Mitigation / Enhancements.** On the basis that the development footprint includes habitat which supports reptiles, it will be necessary to implement a mitigation scheme which safely removes reptiles from this area.
- 5.3.58. It is proposed that a simple translocation exercise is implemented, over a minimum of 30 suitable trapping days during suitable weather conditions, in the active period for reptiles (typically April to October weather dependent).
- 5.3.59. The development footprint will be securely fenced with herpetofauna fencing to prevent inward migration of reptiles and thereafter reptiles will be captured by hand and relocated to a suitable receptor area.
- 5.3.60. It is proposed that reptiles will be relocated to suitable retained habitat on site. Such habitat will be present within the open space delivered in the east of the Application Site and in the habitat matrix to the north, which it is proposed, will deliver ecological enhancements.
- 5.3.61. Those areas which are to function as reptile mitigation habitat will be subject to enhancement through the removal of scrub and dense ruderal vegetation (through cutting) to allow the further development of grassland. In the east of the Application Site and around the attenuation basin proposed in the north east, meadow grassland planting will be undertaken forming a contiguous block of suitable reptile habitat extending along the eastern boundary into the northern ecological enhancement area. Three new bespoke hibernacula are proposed in these areas for the benefit of reptiles.

- 5.3.62. Where appropriate, initial holding areas will be fenced off to facilitate habitat clearance and enhancement without risk of offence. Such area will comprise suitable habitat at an appropriate quantum to support any captured reptiles.
- 5.3.63. It is considered that by implementing the above measures an offence will be avoided and further, that the delivery of new species rich meadow grassland and appropriate future management of proposed ecological mitigation habitats will deliver a net benefit for reptiles.

## **Birds**

- 5.3.64. **Legislation.** Section 1 of the Wildlife and Countryside Act is concerned with the protection of wild birds, whilst Schedule 1 lists species which are protected by special penalties.
- 5.3.65. **Application Site Evaluation.** The scrub and trees within the Application Site are considered to be of potential value to nesting bird species. Losses to scrub will occur and mitigation will be required to prevent an offence being committed.
- 5.3.66. **Mitigation and Enhancements.** As all species of birds receive general protection whilst nesting, to avoid a possible offence it is recommended that any clearance of trees or scrub is undertaken outside the breeding season (between March and the end of July), or alternatively that checks be made for nesting birds by an ecologist immediately prior to any vegetation removal. In the event that a nest is discovered, a buffer of 5m (radius) will be maintained around the nest site until the young are confirmed to have fledged.
- 5.3.67. The Development Proposals will provide new tree and shrub planting of benefit to nesting birds. Planting will include a range of species which will offer additional food sources (e.g. berries and seeds) and a suitable management regime adopted in relation to the Application Site and the ecological enhancement land to the north will provide a net benefit to bird species.
- 5.3.68. In addition, a range of nest boxes (varying designs suited to different species) will be erected as part of the development proposals to increase nesting opportunities for birds within the Application Site. All nest boxes should be situated out of direct sunlight and out of the reach of predators, particularly cats. Examples of suitable nesting boxes are provided at Appendix 5.

### 6. PLANNING POLICY CONTEXT

- 6.1. The planning policy framework that relates to nature conservation in Sayers Common is issued at two main administrative levels: nationally through the National Planning Policy Framework (NPPF); and locally through the Mid Sussex Local Plan, adopted in May 2004. The proposed development will be judged in relation to the policies contained within these documents. The Hurstpierpoint and Sayers Common Neighbourhood Plan was formally 'made' in March 2015 and is also considered.
- 6.2. It is worth noting the Council has proposed the Mid Sussex District Plan and this will become its main planning document within the development plan when adopted. Adoption is currently timetabled for Spring 2018.

## 6.3. National Policy

### National Planning Policy Framework

- 6.3.1. The National Planning Policy Framework (NPPF) sets out the Government's requirements for the planning system and was adopted on 27<sup>th</sup> March 2012. It replaces previous national planning policy, including Planning Policy Statement 9 (Biodiversity and Geological Conservation) [PPS9] which was published in 2005.
- 6.3.2. The key element of the NPPF is that there should be 'a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan-making and decision-taking' (paragraph 14). It is important to note that this presumption 'does not apply where development requiring Appropriate Assessment under the Birds or Habitats Directives is being considered, planned or determined' (paragraph 119).
- 6.3.3. The NPPF also considers the strategic approach which Local Authorities should adopt with regard to the protection, enhancement and management of green infrastructure, priority habitats and ecological networks, and the recovery of priority species.
- 6.3.4. Paragraph 118 of the NPPF comprises a number of principles which Local Authorities should apply, including encouraging opportunities to incorporate biodiversity in and developments; provision for refusal of planning applications if significant harm cannot be avoided, mitigated or compensated for; applying the protection given to European sites to potential SPAs. possible SACs, listed or proposed Ramsar sites and sites identified (or required) as compensatory measures for adverse effects on European sites; and the provision for the refusal for developments resulting in the loss or deterioration of 'irreplaceable' habitats unless the need for, and benefits of, the development in that location clearly outweigh the loss.
- 6.3.5. National policy therefore implicitly recognises the importance of biodiversity and that with sensitive planning and design,

development and conservation of the natural heritage can co-exist and benefits can, in certain circumstances, be obtained.

# 6.4. Local Policy

## Mid Sussex Local Plan

- 6.4.1. The Local Plan, adopted May 2004, sets out the policies and proposals for land use and development in the Mid Sussex district. Several policies within the Local Plan are relevant to nature conservation issues.
- 6.4.2. Policy C5 concerns the protection of statutory and non-statutory designated sites, as well as other areas and features considered important for nature conservation such as ancient woodland, unimproved meadows and wildlife corridors. The policy cites the fact that the weight attached to nature conservation interests reflects the relative significance of the relevant designations. It encourages habitat creation wherever possible.
- 6.4.3. Policy C6 cites that development resulting in the loss of important woodlands, hedgerows, trees and other important wildlife habitat will be resisted. This includes instances when these habitats are important in the landscape, as natural habitats or historically. The protection of these areas is re-affirmed in policy H3.
- 6.4.4. Policy B1 is concerned with development standards for buildings. It encourages protection and enhancement of existing wildlife habitats, including green corridors and river courses.
- 6.4.5. Policy CS16 states development impacting on the nature conservation value of rivers or other water features would not be permitted.

## Mid Sussex Local District Plan (under consideration)

- 6.4.6. The Mid Sussex Local District Plan was submitted to the Secretary of State in August 2016. It is currently under examination by the Planning Inspectorate. The 'Submission Version' of the District Plan, dated August 2016, contains several policies relevant to nature conservation.
- 6.4.7. Principally, these include policies concerned with protection of trees, woodland and hedgerows (DP36), protection of biodiversity in general (DP37) and green infrastructure (DP38).

### The Hurstpierpoint and Sayers Common Neighbourhood Plan

6.4.8. The Hurstpierpoint and Sayers Common Neighbourhood Plan applies to the whole Parish area for the period from 2014 to 2031. It also referred to as Parish 2031. The Neighbourhood Plan was adopted in March 2015. It again contains several policies relevant to nature conservation issues.

- 6.4.9. Policy HurstC2 requires development within the South Downs National Park to conserve and enhance the wildlife value of the National Park. Policy HurstC6 concerns the protection of woodland at Little Park and Tilleys Copse.
- 6.4.10. Policy HurstA1 concerns the provision of a new area of public open space 'Hurst Meadows' that includes areas specifically managed for biodiversity. Hurst Meadows is located in close proximity to Hurstpierpoint.
- 6.4.11. Policy HurstH6 requires new housing developments to conduct an ecological survey and put in place appropriate mitigation and enhancement measures. The policy also states that significant landscape features within sites and along site boundaries should be retained and protected.

#### 6.5. **Discussion**

- 6.5.1. Based on the results of specific surveys and assessments undertaken, the presence and potential presence of protected species has been given due regard and any impacts on habitats of ecological value (including designated sites) have been described. Recommendations have been put forward in this report that would fully safeguard the existing ecological interest of the Application Site. Furthermore, wherever appropriate, measures to enhance ecological and biodiversity value have been set out, delivering net gains for biodiversity including local and national priority (BAP) species.
- 6.5.2. In conclusion, implementation of the measures set out in this report enable the proposals to fully accord with planning policy for ecology and nature conservation at all administrative levels.

#### 7. SUMMARY AND CONCLUSIONS

- 7.1. Ecology Solutions was commissioned by Reside Developments Ltd to undertake an Ecological Assessment of Land at the Old Brickworks, Reeds lane, Sayers Common.
- 7.2. The Development Proposals are for 27 one, two, three and four-bedroom dwellings and two self/custom build plots (Use Class C3) and a GP surgery (Use Class D1) with associated infrastructure, landscaping and access. Full planning permission is sought.
- 7.3. There are no statutory or non-statutory sites designated sites of nature conservation interest situated within or adjacent to the Application Site and no potential adverse impacts on such sites have been identified.
- 7.4. The habitats present within the Application Site hold relatively limited intrinsic ecological value. The Development proposals include the retention of existing more mature trees and the provision of new tree and shrub planting, along with new wildflower meadow grassland and wetland habitat (SuDS feature) creation within the Application Site. In addition, it is proposed that an area located to the north of the Application Site, which comprises a mosaic of open water, wet woodland grassland and ruderal vegetation, will be enhanced and managed for the benefit of wildlife. This area is likely to be gifted to the Parish Council and such a proposal represents a significant benefit of the Development Proposal. Overall, it is considered that any losses o habitats will be fully mitigated and that an overall enhancement in the quality of the habitats present will be delivered post-development.
- 7.5. A suite of protected species surveys and assessments have been undertaken. No bat roosts are considered to be present within the Application Site, and no evidence of the presence of Dormice has been recorded during surveys undertaken. The likely presence of Great Crested Newts has also been ruled out, on the basis of detailed survey and assessments.
- 7.6. The scrub and trees offer nesting and foraging opportunities for birds, and also offer some foraging and navigational resources for bats, although they are not considered to be of significant importance for any local bat populations. Small populations of Common Lizard and Slowworm have been recorded in suitable habitat at the Application Site. Regarding Badgers, a sett (considered to be the main sett for a social group) is located within woodland which lies to the north of the Application Site, approximately 30m from the Application Site boundary.
- 7.7. Relevant mitigation and enhancement measures have been proposed, including measures to safeguard bats, Badgers, nesting birds and reptiles. Consideration has also been given to the ability of the proposals to deliver appropriate mitigation for Dormice, should the final survey detect presence. Subject to the implementation of mitigation measures as outlined above in respect of these species, opportunities will be retained and moreover enhanced post-development.
- 7.8. In conclusion, on the evidence of the ecological surveys undertaken, the Application Site is not considered to be of high intrinsic value from an

ecology and nature conservation perspective. The design of the proposed development and the implementation of mitigation measures as recommended in this report will ensure that there are no adverse effects on any designated sites, protected species or important habitats as a result of development at the Application Site.

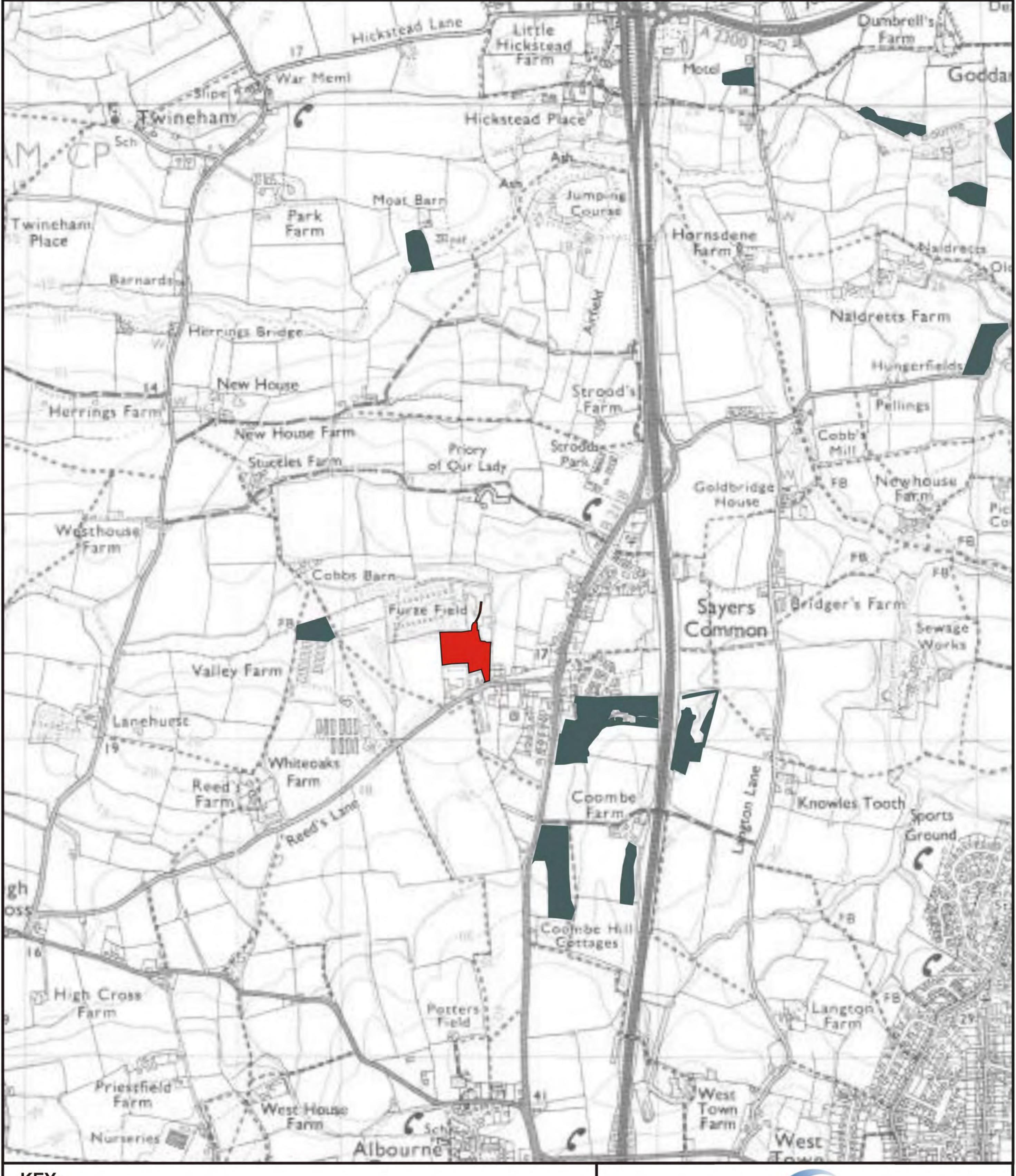
7.9. Moreover it is considered that the proposals offer the potential to deliver enhancements for biodiversity over the existing situation. The proposals are therefore considered to fully accord with current legislation and policy pertinent to ecology and nature conservation.





#### **PLAN ECO1**

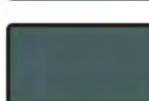
Application Site Location and Ecological Designations



KEY:

AF

APPLICATION SITE LOCATION



ANCIENT AND SEMI-NATURAL WOODLAND

Surrounding statutory and non-staturotry designated sites are well removed from the application site. Further information is included in appendices.



7092: LAND AT SAYERS COMMON

ecology solutions Itd

PLAN ECO1: APPLICATION SITE LOCATION & ECOLOGICAL DESIGNATIONS

#### **PLAN ECO2**

**Ecological Features** 



#### **PLAN ECO3**

Pond Location Plan



KEY:



POND SURVEYED



ecology solutions Itd

7092: LAND AT SAYERS COMMON

PLAN ECO3: LOCATION OF SURVEYED PONDS



#### **APPENDIX 1**

Information obtained from MAGIC



### **Magic Map**



### Legend Local Nature Reserves (England) National Nature Reserves (England) Ramsar Sites (England) Sites of Special Scientific Interest (England) Special Areas of Conservation (England) Special Protection Areas (England) Ancient Woodland (England) Ancient and Semi-Natural Woodland **Ancient Replanted** Moodland Woodpasture and Parkland BAP Priority Habitat (England) Projection = OSGB36 xmin = 5209000.35 vmin = 116100xmax = 531000vmax = 121100Map produced by MAGIC on 26 October, 2017.

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that is being maintained or continually updated by the

originating organisation. Please refer to the metadata for details as information may be illustrative or representative

rather than definitive at this stage.

#### **APPENDIX 2**

GCN eDNA results report



**Technical Report Confidential** 

Folio No D1855 Report No: 1

Client: Ecology Solutions

Order No:

Attn: Tom Smith Date: 13<sup>th</sup> June 2016

#### **TECHNICAL REPORT**

# EXAMINATION OF ENVIRONMENTAL DNA IN POND WATER FOR THE DETECTION OF GREAT CRESTED NEWTS

### <u>T.Wood</u>





#### <u>Methodology</u>

When Great Crested Newts (GCN) inhabit a pond, they deposit traces of their DNA in the water as evidence of their presence. By sampling the water we can analyse these small environmental traces to detect GCN inhabitation.

The laboratory testing is conducted in two phases. The sample first goes through an extraction process where all 6 tubes are pooled together to acquire as much eDNA as possible. The pooled sample is then tested via real time PCR (or q-PCR). This process amplifies select part of DNA allowing it to be detected and measured.

qPCR combines PCR amplification and detection into a single step. This eliminates the need to detect products using gel electrophoresis. With qPCR, fluorescent dyes specific to the target sequence are used to label PCR products during thermal cycling. The accumulation of fluorescent signal during the exponential phase of the reaction is measured for fast and objective data analysis.

The primers used in this process are specific to a part of mitochondrial DNA only found in GCN ensuring no other DNA is amplified.

Samples are tested in a clean room and the different phases of testing are kept separate to reduce any risk of cross contamination.

Each pooled sample is replicated 12 times to ensure results are accurate. If one of the twelve replicates tests positive the sample is declared positive. The sample is only declared negative if no replicates show amplification.

Inhibition and degradation checks are also carried out on each sample using a known DNA marker. Results of these quality control tests are recorded with each sample.



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Results

Lab Ref	Sample	Co- Ordinates	Inhibition Check	Sample integrity	Result
eDNA22616	Sayers Common P1		Acceptable	Acceptable	Negative
eDNA22617	Sayers Common P2	-	Acceptable	Acceptable	Negative
eDNA22618	Sayers Common D1		Acceptable	Acceptable	Negative

#### Advice

Negative results may not indicate the absence of GCN just the presence of eDNA below the detection limits of the method. However this method is extremely sensitive. It is still advised to survey a pond using traditional methods within 2km of a positive result or a known habitat for GCN.

Positive results may be true positives but also may be due to contamination of samples from another pond or improper sampling technique. Please ensure traditional surveys are performed on positive ponds and care is taken to avoid spreading GCN DNA.

Samples undergo integrity scores to check for degradation post sampling. Samples which are not acceptable should be re-sampled. Sample integrity scores are based on the amount of degradation of an artificial DNA marker placed in the kits and analysed by qPCR.

PCR inhibitors can cause false results. Every effort is made to clean the sample preanalysis however some inhibitors cannot be extracted. An unacceptable inhibition check will cause an indeterminate sample and must be sampled again.

Analysed and reported By: Thomas Wood

Checked and approved: Andy Penny



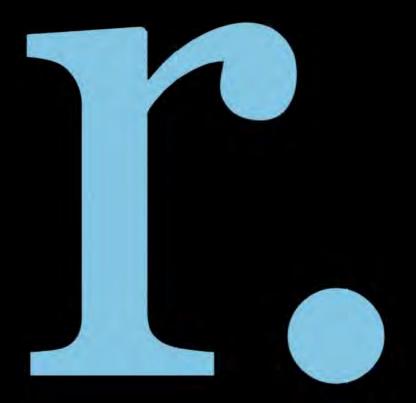
#### **APPENDIX 3**

Iterative Management Plan for off-site habitats

# reside.

# The Old Brickworks, Reeds Lane Sayers Common

ITERATIVE MANAGEMENT PROPOSALS
FOR LAND TO THE EAST OF FURZE FIELD
WOODLAND



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3.	MANAGEMENT OBJECTIVES	4
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#### 1. INTRODUCTION

- 1.1 This Iterative Ecological Management Plan (IEMP) has been prepared by Ecology Solutions Ltd on behalf of Reside Development Ltd in respect of a parcel of land located to the immediate east of Furze Field Woodland, in Sayers Common.
- 1.2 It is proposed that this area is to be managed for the benefit of wildlife, with the land gifted to Hurstpierpoint & Sayers Common Parish Council.
- 1.3 In light of the proposed development at the Application Site known as 'The Old Brickworks Reeds Lane Sayers Common' and the proposed ecological enhancements which flow from the proposals, this IEMP has been produced to guide the future management of the land in question.
- 1.4 This Outline IEMP has been written with reference to published guidance from the Chartered Institute of Ecology and Environmental Management (CIEEM) and in accordance with relevant (e.g. Natural England) guidelines for protected species.
- 1.5 The Outline IEMP is set out as follows:
  - Summary ecological baseline;
  - Objectives of the IEMP; and
  - Management prescriptions including any monitoring requirements.
- 1.6 The ecological value of the land on which this report is focussed, together with that of the wider Application Site are set out within the report titled "The Old Brickworks, Reeds Lane, Sayers Common' Ecological Assessment (October 2017) produced by Ecology Solutions. For the purpose of this IEMP, the term Study Area refers to the land which falls outside of the Application Site (as defined within the various documents supporting the planning application), but within the Blue Line ownership land located to the immediate east of Furze Field Woodland.

#### 2. ECOLOGICAL BASELINE AND EVALUATION

- 2.1 Ecology Solutions has undertaken a series of ecological surveys and assessments within the Study Area (and a wider survey area) during 2016 and 2017.
- 2.2 Habitat surveys were based upon an extended Phase 1 survey technique. The habitats and dominant plant species were recorded, together with conspicuous faunal activity and evidence of the presence, or potential presence, of protected species. Results from the habitat survey were then plotted onto a base map of the Study Area (see Plan ECO2 within the Ecological Assessment).
- 2.3 In addition to general observations of faunal activity, Ecology Solutions undertook specific surveys for Badgers, Bats, Dormice, Great Crested Newts and reptiles.
- 2.4 For details of the survey methodologies used and full results, please see the report titled 'The Old Brickworks, Reeds Lane, Sayers Common' Ecological Assessment (2017).

#### **Summary Results**

#### Habitats

- 2.5 The assessment found that there are no statutory or non-statutory nature conservation designations within the Study Area or immediately adjacent to it.
- 2.6 Habitat features identified within the Study Area include:
  - Short neutral grassland;
  - Scrub / carr woodland;
  - Open Water; and
  - Wetland vegetation.
- 2.7 An area of short neutral grassland, subject to grazing by Rabbits, is present in the south of the Study Area. Moss sp., were common place indicating damper conditions than elsewhere within the wider survey area. However, many of the grass and herb species recorded in the Study Area were common to grassland recorded elsewhere within the wider survey area. For a description of the recorded species composition, please refer to the Ecological Assessment (2017).
- 2.8 Dense scrub is present throughout the Study Area. This is dominated by Goat Willow Salix caprea with other recorded species including, Ash Fraxinus excelsior, Sycamore Acer pseudoplatanus, Hawthorn Crataegus monogyna, Blackthorn Prunus spinosa, Pedunculate Oak Quercus robur, Silver Birch Betula pendula, and Hazel Corylus avellana.
- 2.9 A series of open waterbodies are present, some of which have clearly been the subject of some management in the recent past with bankside scrub removed.

- 2.10 In addition to a larger pond, there are two far smaller ponds, all of which have been subject to bankside clearance in the recent past. The increase in light penetration has allowed the development of a varied wetland plant assemblage (see below). There is however, in addition, a further pond located among (and heavily shaded by) dense scrub in the south east of the Study Area.
- 2.11 True, aquatic vegetation within the ponds is relatively limited, although stands of Reedmace *Typha* sp., are present in the far north, Lesser Duckweed *Lemna minor* is commonplace and sedges *Carex* sp. are frequent at the banks and in shallow margins. Bankside vegetation is relatively diverse comprising Stinking Hellebore *Helleborus foetidus*, Brome *Brachypodium* sp., Pendulous Sedge *Carex pendula*, Burnet Saxifrage *Pimpinella saxifraga*, Greater Chickweed *Stellaria neglecta*, Wood Avens *Geum urbanum*, Sedge *Carex*, sp., Hairy Bittercress *Cardamine hirsuta*, Greater Bird's-foot Trefoil *Lotus pedunculatus*, Marsh Bedstraw *Galium palustre*, Soft Rush, Meadowsweet *Filipendula ulmaria*, Creeping Thistle, Creeping Buttercup, Violet *Viola* sp., Ground Ivy, Wild Strawberry *Fragaria vesca*, Betony *Stachys officinalis*, Holly *Illex aquifolium*, Ivy *Hedera helix* and Cow Slip *Primula veris*.

#### Faunal Species

- 2.12 Protected species, or evidence of use by protected species, noted within the Study Area include:
  - Foraging bats;
  - Nesting Birds; and
  - Common reptiles (Common Lizard and Slow-worm).
- 2.13 A main Badger sett is known from a location to the immediate west, within Furze Field Woodland. Whilst not recorded during survey work, it is considered likely that Grass Snake could use the Study Area.
- 2.14 It is expected that the Study Area will be utilised by a range of common invertebrate species, though there is no evidence to suggest that any specially protected or more notable species would be present.
- 2.15 The full results for the surveys undertaken are set out within the Ecological Assessment (2017).

#### 3. MANAGEMENT OBJECTIVES

- 3.1 The aims and objectives of the IEMP are to maintain and enhance features of ecological interest retained within the Study Area, in addition to conserving populations of protected species, whilst also providing for biodiversity enhancements.
- 3.2 The following objectives have been identified:
  - Objective 1: Maintain and enhance retained and newly created habitats within the Study Area;
  - Objective 2: Maintain and enhance populations of protected species identified within the Study Area; and
  - Objective 3: Increase biodiversity by maximising opportunities for flora and fauna.

#### **Relevant Legislation**

3.3 In undertaking management prescriptions aimed at increasing the biodiversity value of the land, it remains a necessity to adhere to prescribed methodologies, including timing of work, in order to avoid an offence being committed. A brief summary in relation to relevant legislative provisions (as identified through the survey work undertaken to date) is provided below.

#### <u>Bats</u>

- 3.4 Bats are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and included on Schedule 2 of The Conservation of Habitats and Species Regulations 2010 (as amended) ("Habitats Regulations"). These include provisions making it an offence to:
  - Intentionally kill, injure or take (capture) bats;
  - Possess or control any live or dead specimen or anything derived from a bat (unless it can be shown to have been legally acquired);
  - Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for that purpose;
  - Intentionally or recklessly damage, destroy or obstruct any structure or place used for shelter or protection by a bat.

#### **Badgers**

- 3.5 The Protection of Badgers Act 1992 consolidates the previous Badgers Acts of 1973 and 1991. The legislation aims to protect the species from persecution, rather than being a response to an unfavourable conservation status, as the species is in fact common over most of Britain, with particularly high populations in the southwest.
- 3.6 As well as protecting the animal itself, the 1992 Act also makes the intentional or reckless destruction, damage or obstruction of a Badger sett an offence. A sett is defined as "any structure or place which displays signs indicating current use by a Badger". "Current use" of a

Badger sett is defined by Natural England as "how long it takes the signs to disappear", or more precisely, to appear so old as to not indicate "current use".

#### <u>Birds</u>

3.7 All birds, their nests and eggs are protected by law under Part 1 of the Wildlife and Countryside Act 1981 (as amended). It is an offence to damage or destroy the nest or egg of a wild bird. Special protection is afforded to certain birds featured on Schedule 1 of the Act. For these species it is also an offence to disturb a bird whilst nesting.

#### Reptiles

- 3.8 All six British reptile species receive a degree of legislative protection that varies depending on their conservation importance. Smooth Snake *Coronella austriaca* and Sand Lizard *Lacerta agilis* are highly localised in their distribution and receive full protection under the Wildlife and Countryside Act 1981 (as amended) and the Habitats Regulations.
- 3.9 Common Lizard, Slow Worm, Grass Snake and Adder *Vipera berus* are much more common and widespread and are only partially protected under the Wildlife and Countryside Act 1981 (as amended) from:
  - Intentional or reckless killing or injury; and
  - Sale or other forms of trading.
- 3.10 The habitat of common reptiles receives no legal protection.

#### 4. MANAGEMENT AND MONITORING REQUIREMENTS

4.1 Management prescriptions and monitoring requirements have been described below in relation to each of the objectives set out in section 3.

#### Objective 1: Maintain and Enhance Retained and Created Habitats

#### Grassland

- 4.2 Existing semi-improved grassland will be retained and enhanced within the Study Area.
- 4.3 The encroachment of scrub into this grassland will be monitored on at least a biennial basis with removal as necessary, by mechanical means in preference. A glyphosate based herbicide approved by Natural England and the Environment Agency would be acceptable for use if deemed appropriate.
- 4.4 Mowing / strimming annually in early spring (e.g. April) or late summer (late August / early September) will help control scrub encroachment and the proliferation of dominant (e.g. ruderal) species, resulting in greater species diversity.
- 4.5 Areas of longer grassland should be maintained close to areas of retained scrub for the benefit of reptiles and invertebrates (as a shelter and foraging resource).
- 4.6 Management of grassland as described

#### Timing of Works

- The growth of scrub will be monitored on at least a biennial basis and remedial action taken as deemed appropriate to prevent encroachment over the longer term; and
- Mowing / strimming once annually in either April or late August / early September.

#### Dense scrub

- 4.7 Scrub is to be managed to retain its value to faunal species / groups, such as bats, birds, reptiles and invertebrates, whilst preventing encroachment and over shading of waterbodies, wetland vegetation and grassland.
- 4.8 Following site wide inspections, recommendations for appropriate arboricultural management will be made and implemented.
- 4.9 In the first instance it is proposed that the pond in the south east is cleared of scrub, with stumps subject to herbicide treatment (glyphosate or other acceptable for use near aquatic ecosystems). A significant proportion (around 60%) of the dense scrub at the banks should be removed, creating open areas where light penetration will allow a diverse ground flora to establish.

- 4.10 Future arboricultural management works will include the thinning out of weak or etiolated specimens and where appropriate, formative pruning to produce specimens of strong and long-term structure.
- 4.11 A small number of (e.g. Willow sp.) trees (i.e. 10) will be coppiced each year within the Study Area. With such coppicing to be undertaken on a 5 year cycle (each stool coppiced on no less than a ten year cycle).
- 4.12 As a precautionary measure, if works are proposed and it is considered that there are or there are likely to be any protected species present within the tree (e.g. nesting birds, hibernating reptiles or roosting bats) an Ecologist will be consulted prior to any works commencing. Modification of works to avoid risk to bats, reptiles and breeding birds, or indeed further specific surveys, may be required for works to continue. Any works to trees proposed for the period March to July inclusive, must be preceded by a survey to check for nesting birds. Works to trees which have developed splits, cracks, hollows or dense coverings of Ivy will be subject to a specific check for bats by an appropriately experienced / qualified Ecologist.
- 4.13 Outside of areas where the ground is saturated, scrub removal should be undertaken with due regard had to the potential presence of hibernating reptiles. For these drier areas, any removal should either be timed to take place in late September / October, or trees cut to leave a stump no shorter than 15cm, with a layer of brash applied. Brash should be removed in early March as the weather warms, with care taken to avoid disturbing any nesting birds. Any required herbicide application can be undertaken at this time.
- 4.14 All management involving tree removal and remedial arboricultural works to trees will be carried out to the current version of BS3998:2010 by experienced contractors.
- 4.15 The cut timber or arisings in excess of 150mm diameter from any necessary tree works will be stacked in piles within the Study Area, principally for the benefit of saproxilic invertebrates, but also common reptile species.

- The growth of scrub will be monitored on at least a biennial basis and remedial action taken as deemed appropriate to prevent encroachment into other habitats over the longer term;
- Scrub to be cut during the dormant winter season, but with due regard to the potential disturbance of hibernating reptiles; and
- Any required herbicide applications to be undertaken during the growing season (e.g. March to early September)

#### Wetland vegetation

4.16 Open areas around the ponds will be cut on a rotational basis (using brush cutters) creating a mosaic of more mature taller vegetation and

- shorter areas. Such management will increase species diversity over time, preventing more vigorous species from dominating.
- 4.17 One third of the grass / herbaceous bankside vegetation should be cut each year, on a three year rotation. Such management will also help control the spread of woody scrub. Cutting should ideally be undertaken during late summer (e.g. late August / September) to allow plants to set seed.
- 4.18 In the event that non-native species such as Himalayan Balsam occur within the Study Area (not recorded to date) control will be required due to its invasive nature. The control should be based upon 'hand pulling' and applications of a glyphosate herbicide, during the growing season and before seed is set. Himalayan Balsam seed is easily and widely spread through contact with the ripe seed pods which 'explode' on contact expelling seed over large distances. Hence the importance of control early in the plants life-cycle.
- 4.19 Himalayan balsam flowers from June to October and seeds are set from August to October. On this basis, Himalayan Balsam should be systematically removed by hand (pulled) during the period May June once clearly visible. During July any additional / remaining plants should be sprayed with an appropriate herbicide, with care taken to avoid contact with other non-target plants. It is likely that control measures will take at least two / three to have a significant effect. Annual monitoring will be required for the 'management plan period' to ascertain the level at which future measures may be necessary beyond the first year of control.

- Rotational cutting in late August / September;
- Himalayan balsam control by hand pulling in May June, followed by herbicide application in July.

#### **Ponds**

- 4.20 The areas of standing water are potentially of value to species / groups such as bats, reptiles (grass snake), amphibians and aquatic invertebrates.
- 4.21 As an initial enhancement measure, the two large waterbodies (including that currently choked by scrub) will be subject to de-silting, creating deeper areas with a depth in excess of 1m. This should ensure that standing water is present throughout the year.
- 4.22 Routine maintenance checks will be undertaken on an annual basis. Any management requirements (e.g. removal of accumulated debris or de-silting) should be highlighted and programmed for implementation in the following winter period (to avoid impacts on aquatic fauna during the main active periods and breeding cycles.
- 4.23 Emergent vegetation and bankside vegetation should be cut to a height of no lower than 15cm and no more than once a year, in late summer

- (e.g. September). This management regime should be relaxed, with cutting undertaken every other year.
- 4.24 Thinning of any dense stands of emergent vegetation should be undertaken where deemed necessary. Such work should be undertaken over the winter period.
- 4.25 No more than two thirds of the area of the bank should be allowed to develop a thick shrub layer within 5m of the top of the bank. Where necessary scrub should be removed to ground level using hand tools only. In reality the cutting regimes described elsewhere should prevent the development of dense scrub on the banks, but additional measures may prove necessary and the encroachment of bankside scrub should be monitored for the management plan period.

- Initial deepening of ponds following scrub clearance, during winter period;
- Cutting of emergent / bankside vegetation on the banks (as required) in late summer (e.g. late August / September);
- Control of any invasive non-native species such as Himalayan Balsam (see above);
- Annual monitoring of scrub;
- Removal of scrub as required;
- Removal of debris and de-silting as required.
- 4.26 Any use of herbicides must be strictly controlled. Only herbicides appropriate for use in close proximity to watercourses (as recommended by the Environment Agency) will be used. No herbicides will be stored within 10m of a watercourse during the course of any application and spraying will be undertaken in a systematic manner, treating individual plants during appropriate weather conditions (dry and still).

#### Objective 2: Maintain and enhance Populations of Protected Species

4.27 Within the Study Area, habitat creation / retention and the introduction of a sympathetic management regime, will provide for a net enhancement in the quality of those habitats present. This will be of benefit to key species / groups, such as bats, Badgers, reptiles, birds and invertebrates.

#### <u>Bats</u>

- 4.28 Retention and management of existing features currently used by bats or with potential to be used by bats (trees, woodland edge features, etc), and creation of enhanced wetland habitat, will enhance existing feeding and commuting opportunities for bats.
- 4.29 Bat boxes, erected as part of the enhancements package delivered through the Development proposals associated with the Application Site, will be maintained on more mature trees within the Study Area,

fixed in a south-westerly and south-easterly facing direction. This measure will provide additional roosting habitat.

- 4.30 The Schwegler bat box type 1FF is designed to be attached to trees and requires no maintenance once installed. This bat box is designed to be used by both Pipistrelle (the most prevalent species recorded on site) and Noctule bat species. It is proposed that this design should be installed and maintained on site.
- 4.31 Where bat boxes are located on trees to be removed or subject to arboricultural works, these should be removed (during the winter months), and relocated to another suitable tree.

#### Timing of Works

- For any more mature trees to be felled or subject to arboricultural works, checks for features offering roosting opportunities should be undertaken ahead of works. Should such features exist, work should be postponed until appropriate advice has been obtained from a suitably experienced ecologist;
- Bat boxes will be erected as soon as possible following the grant of consent;
- Damaged bat boxes should be repaired or replaced ahead of the next active season (i.e. before mid March); and
- Any required relocation of bat boxes should be undertaken during the winter period.

#### **Badgers**

- 4.32 Badgers which use the Study Area and wider local area will benefit from the protection afforded to the Study Area and the management prescribed within this management plan. Opportunities for sett building will be maintained and foraging opportunities will be enhanced as the result of the proposed grassland and scrub management / enhancement. The enhanced wetland area will continue to provide a readily available and easily accessible source of fresh water.
- 4.33 There are no specific management considerations for this species, with prescriptions discussed elsewhere providing for the protection and enhancement of this species within the Study Area.

#### Reptiles

- 4.34 Areas of suitable reptile habitat will be maintained within the Study Area. Areas of longer grassland will be provided, in order to provide suitable foraging habitat. The proposed thinning / coppicing and soft vegetation management prescribed above will ensure that suitably open (warm and sunny) areas are maintained for this group.
- 4.35 In addition, log piles will be created as a result of the future management in order to provide suitable hibernacula for reptiles.

- Grassland is generally to be left to develop a tall and tussocky structure. Where cutting is required, this is to be undertaken during warm weather in late summer /autumn when reptiles will still be active: and
- Log piles to be created as applicable following any tree works.

#### <u>Birds</u>

- 4.36 Birds will benefit from the proposed habitat management, as this will provide enhanced nesting/roosting habitat in additional to an enhanced foraging resource.
- 4.37 Management of habitats will be undertaken with due consideration for potential use by birds. Any necessary management of vegetation, particularly new and existing trees which will provide important nesting habitats, will be undertaken outside of the main bird breeding season (March July inclusive) wherever possible.
- 4.38 Nesting boxes (delivered through the Development proposals associated with the Application Site) will be maintained on trees retained within the Study Area. Bird boxes will be of varying types are available to encourage a variety of species. Bird boxes will be cleaned once a year (by persons to be agreed) and any damaged boxes will be repaired or replaced as and when necessary.
- 4.39 Where nest boxes are located on trees to be removed or subject to arboricultural works, these should be removed (outside of the nesting season or once the lack of an active nest has been confirmed), and relocated to another suitable tree.

#### Timing of Works

- Bird boxes will be erected as soon as possible following the grant of consent:
- Bird boxes to be cleaned out and checked for defects annually, during the winter period when birds will not be nesting;
- Any damaged bird boxes are to be repaired or replaced ahead of the next breeding season (i.e. before the end of February); and
- Any required relocation of bird boxes should be undertaken during the winter period.

### Objective 3: Increase Biodiversity by Maximising Opportunities for Flora and Fauna

- 4.40 Scrub and grassland management will focus on maintaining viable and diverse habitats of ecological value over the long term. Benefits will arise in relation to bats, Badgers, common reptile species, birds and invertebrates.
- 4.41 Log piles will be created (following scrub management) to provide suitable hibernacula for reptiles and foraging / shelter for a range of invertebrate fauna.

The Old Brickworks Reeds Lane Sayers Common Iterative Management Plan for land east of Furze Field Woodland October 2017

- 4.42 Wetland habitat will be maintained and enhanced, which will benefit a range of faunal species such as Bats, common reptiles (Grass Snake) amphibians, birds and aquatic invertebrates.
- 4.43 Bat roosting boxes and bird nesting boxes will be maintained.



## Report presented by



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#### **APPENDIX 4**

Example Bat boxes

# Bat Boxes

Schwegler bat boxes are made from 'woodcrete' and have the highest rates of occupation of all types of box.

The 75% wood sawdust, clay and concrete mixture is ideal, being durable whilst allowing natural respiration and temperature stability. These boxes are rot and predator proof and extremely long lasting.

Boxes can be hung from a branch near the tree trunk or fixed using 'tree-friendly' aluminum nails.



#### **1FF Bat Box**

The rectangular shape makes the 1FF suitable for attaching to the sides of buildings or in sites such as bridges, though it may also be used on trees. It has a narrow crevice-like internal space to attract Pipistrelle and Noctule bats.

Woodcrete (75% wood sawdust, concrete and clay mixture)

Width: 27cm Height: 43cm Weight: 8.3kg

#### **2FN Bat Box**

A large bat box featuring a wide access slit at the base as well as an access hole on the underside. Particularly successful in attracting Noctule and Bechstein's bats.

Woodcrete construction, 16cm diameter, height 36cm.





#### **APPENDIX 5**

Example Bird boxes

# Bird Boxes

Schwegler bird boxes have the highest rates of occupation of all types of box.

They are designed to mimic natural nest sites and provide a stable environment with the right thermal properties for chick rearing and winter roosting.

Boxes are made from 'Woodcrete'. This 75% wood sawdust, clay and concrete mixture is breathable and very durable making these bird boxes extremely long lasting.



#### 1B Bird Box

This is the most popular box for garden birds and appeals to a wide range of species. The box can be hung from a branch or nailed to the trunk of a tree with a 'tree-friendly' aluminium nail.

Available in four colours and three entrance hole sizes. 26mm for small tits, 32mm standard size and oval, for redstarts.

#### 2H Bird Box

This box is attractive to robins, pied wagtails, spotted flycatcher, wrens and **black redstarts**.

Best sited on the walls of buildings with the entrance on one side.

Schwegler boxes have the highest occupation rates of all box types. They are carefully designed to mimic natural nest sites and provide a stable environment for chick rearing and winter roosting. They can be expected to last 25 years or more without maintenance.



#### 2M Bird Box

 $\label{lem:continuous} A \, \text{free-hanging box offering greater protection from predators}.$ 

Supplied complete with hanger which loops and fastens around a branch.

With standard general-purpose 32mm diameter entrance hole.

Schwegler boxes have the highest occupation rates of all box types. They are carefully designed to mimic natural nest sites and provide a stable environment for chick rearing and winter roosting. They can be expected to last 25 years or more without maintenance.

ecology solutions Itd



## Report presented by



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7092: THE OLD BRICKWORKS, REEDS LANE, SAYERS COMMON

Addendum: Dormouse Survey Results

#### <u>Introduction</u>

Ecology Solutions was commissioned by Reside Developments Ltd. to undertake an Ecological Assessment (document reference: 7092.EcoAss.vf1) of land at The Old Brickworks Reeds Lane Sayers Common, hereafter referred to as the 'Application Site'. A report containing the findings of the Ecological Assessment was submitted in support of the planning application for development of the Application Site.

Given the timings of the submission it was not possible to fully complete all aspects of the survey work and present the results within the Ecological Assessment. However, this was limited to a single remaining survey check for Dormouse and as stated within the Ecological Assessment:

"4.5.2 It is considered that Dormice are absent from the Application Site and suitable Dormouse habitat which is contiguous with it. In line with current guidance, one further survey is required to be completed in November 2017, in order to substantiate the conclusion that Dormice are not present within the Application Site or associated boundary habitat. The results of the final survey will be submitted to the Local Planning Authority (LPA) as soon as they are available. Any relevant mitigation has been put forward within this assessment on a precautionary basis, such that should Dormice be recorded during the final survey, the authority has all the necessary information available to it in informing the likely residual impact of the scheme on Dormice."

As stated within the Ecological Assessment a further survey was undertaken on  $8^{\rm th}$  November 2017. This survey followed the same methodology of the previous surveys undertaken at the Application Site.

7092. Sayers Common

January 2018

#### Results

The survey undertaken on 8<sup>th</sup> November 2017 involved checking all tubes within the survey area and did not record any Dormouse. On this basis, no evidence for the presence of Dormice was recorded during surveys undertaken between September 2017 and November 2017. It can now be confirmed from the fully completed survey work that Dormice are not present either within the Application Site, or in connected habitat.

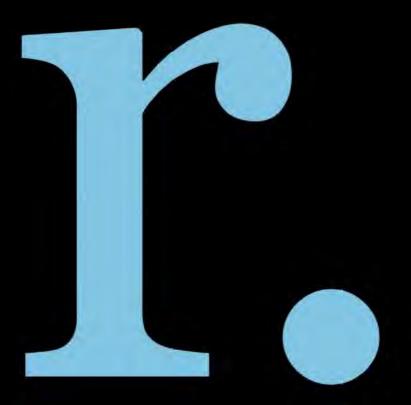
#### Conclusion

In establishing the absence of Dormouse from the Application Site and connected habitat, it can be confirmed that no specific mitigation for this species is required and that the Local Authority have all the required information upon which to determine the application in ecological terms.

# reside.

## The Old Brickworks, Reeds Lane Sayers Common

Flood Risk Assessment & Outline Surface Water Drainage Strategy





## **Reside Developments Ltd**

## The Old Brickworks, Sayers Common

Flood Risk Assessment & Outline Surface Water Drainage Strategy

881259-R1(03)







i

## **RSK GENERAL NOTES**

Project No.: 881259-R1(03)-FRA

Site: The Old Brickworks, Sayers Common

Title: Flood Risk Assessment & Outline Surface Water Drainage Strategy

Client: Reside Developments Ltd

Date: January 2018

Office: Wigan Status: Final

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Where any data supplied by the client or from other sources have been used, it has been assumed that the information is correct. No responsibility can be accepted by RSK for inaccuracies in the data supplied by any other party. The conclusions and recommendations in this report are based on the assumption that all relevant information has been supplied by those bodies from whom it was requested.

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Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work.

This work has been undertaken in accordance with the quality management system of RSK LDE Ltd.

Reside Developments Ltd
The Old Brickworks, Sayers Common
Flood Risk Assessment & Outline Drainage Strategy
881259-R1(03)-FRA



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## 1 INTRODUCTION

RSK Land and Development Engineering Ltd (RSK) was commissioned to carry out a Flood Risk Assessment (FRA) for Reside Developments Ltd (the 'client'). The assessment is in support of the outline planning submission for the land at The Old Brickworks, Reed Lane, Sayers Common (the 'site').

The assessment has been prepared in accordance with the National Planning Policy Framework (NPPF)<sup>1</sup> and its accompanying Planning Practice Guidance<sup>2</sup>, the Interim Code of Practice for Sustainable Drainage<sup>3</sup>, BS 8533-2011 Assessing and Managing Flood Risk in Development Code of Practice<sup>4</sup> and the Non-statutory technical standards for sustainable drainage systems<sup>5</sup>, with site-specific advice from the Environment Agency (EA), the Lead Local Flood Authority (LLFA), the Local Planning Authority (LPA), the architect and the client.

The NPPF sets out the criteria for development and flood risk by stating that inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk, but where development is necessary, making it safe without increasing flood risk elsewhere.

The key definitions within the PPG are:

- "Flood risk" is a combination of the probability and the potential consequences of flooding from all sources including from rivers and the sea, directly from rainfall on the ground surface and rising groundwater, overwhelmed sewers and drainage systems, and from reservoirs, canals and lakes and other artificial sources.
- "Areas at risk of flooding" means areas at risk from all sources of flooding. For fluvial (river) and sea flooding, this is principally land within Flood Zones 2 and 3. It can also include an area within Flood Zone 1 which the Environment Agency has notified the local planning authority as having critical drainage problems.

For this site, the key aspects that require the assessment are:

- The Environment Agency's indicative flood zone map shows that the site is located within Flood Zone 1 (**Figure 1.1**);
- The site area is approximately 2.01Ha therefore surface water drainage must be considered, and sustainable drainage systems (SuDS) should be considered, where possible; and

The comments given in this report and opinions expressed are subject to RSK Group Service Constraints provided in **Appendix A**.

<sup>&</sup>lt;sup>1</sup> Communities and Local Government, 'National Planning Policy Framework', 2012

<sup>&</sup>lt;sup>2</sup> Communities and Local Government, 'Planning Practice Guidance - Flood Risk and Coastal Change, ID 7', March 2014 <a href="http://planningguidance.planninggortal.gov.uk/blog/guidance/flood-risk-and-coastal-change/">http://planningguidance.planninggortal.gov.uk/blog/guidance/flood-risk-and-coastal-change/</a>

<sup>&</sup>lt;sup>3</sup> DEFRA, 'Interim Code of Practice for Sustainable Drainage Systems' National SUDS Working Group, July 2004

<sup>&</sup>lt;sup>4</sup> BSI, 'BS 8533-2011 Assessing and managing flood risk in development Code of practice', 2011

DEFRA, 'Sustainable Drainage Systems - Non-statutory technical standards for sustainable drainage systems', March 2015





Figure 1.1: Environment Agency Flood Zone Map (accessed October 2017)



## 2 CONTEXT AND SCOPE OF WORK

A key element of project development is to prepare a FRA to establish the flood risk associated with the proposed development and to propose suitable mitigation, if required, to reduce the risk to a more acceptable level.

The scope of work relating to a FRA is based on the guidance provided in Section 10 of the NPPF and its accompanying Planning Practice Guidance.

A site-specific FRA must demonstrate that the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall. The scope of this assessment therefore comprises the following elements:

- To review architect plans, planning information and other studies to determine existing site conditions;
- To obtain information on the hydrology and hydrological regime in and around the site;
- To obtain the views of the Environment Agency including scope, location and impacts;
- To obtain the views of the Lead Local Flood Authority including scope, location and impacts;
- To determine the extent of new flooding provision and the influence on the site;
- To assess the impact on the site from climate change effects and anticipated increases in rainfall over a 100 year period for residential uses;
- To review site surface water drainage based on the proposed layout and, if necessary, to determine the extent of infrastructure required; and
- To prepare a report including calculations and summaries of the source information and elements reviewed.

Reliance has been placed on factual and anecdotal data obtained from the sources identified. RSK cannot be held responsible for the scope of work, or any omissions, misrepresentation, errors or inaccuracies with the supplied information. New information, revised practices or changes in legislation may necessitate the reinterpretation of the report, in whole or in part.



## 3 SITE DESCRIPTION

#### 3.1 Location

Site Name: The Old Brickworks, Sayers Common

Site Address: The Old Brickworks,

Reeds Lane.

Sayers Common,

West Sussex.

BN6 9LS.

Site National Grid Reference: 526455 E, 118220 N

The existing site is located on Reeds Lane, set behind several private residential properties from which access to the site can be found. The site measures approximately 2.01Ha in total consists of an existing residential property in the south and a large area of roughly vegetated land. The site is located on the western extent of Sayers Common, a village, approximately 14km north of Brighton.

Table 3.1, below, provides a description of the immediate surroundings of the site.

Table 3.1: Site setting

Direction	Characteristic			
North	Beyond the north west boundary of the site is vegetated with dense plant growth, this area is named Furze Field according to Ordnance Survey data. There is a ditch on site on the most northern boundary adjacent to the most northern pond. The pond is connected to the watercourse in the flowing east to west via a series of ditches.			
East	The south eastern boundary of the site is formed by a 5m high hedge with mature oaks and willow trees. The boundary is described as having a drainage ditch that is silted and in poor condition; the ditch is fed from highway drainage of Reeds Lane. The north eastern boundary falls towards the pond that exists on the boundary.			
South	The southern boundary line is against Kings Business Centre and includes the Lyndon residential property to provide site access from Reeds Lane. Mature trees form a boundary between the business park and the site. The land generally falls from the southern boundary towards the north.			
West	A large Greenfield site is adjacent to the western boundary. The site partially falls towards the north western boundary.			

Figure 3.1 shows a Site Location.



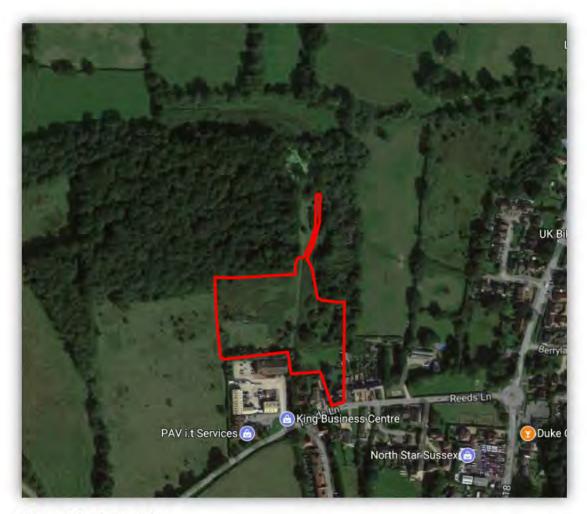


Figure 3.1: Site location

## 3.2 Land use and topography

A topographic survey has been provided for the site by Sunshine Survey Ltd (**Appendix B**). Generally the site falls from south to north.

The highest elevation on site is located at approximately 17.30m above ordnance datum (mAOD) at the southern boundary of the site by the business park. The area of high elevation extends northwards through the centre of the site. The land falls to either side of this, in a north east direction and in a north west direction.

The land that falls north west reaches a low point at the north west boundary at approximately 15.80mAOD. There are small, shallow ditches identified along this boundary with invert levels of 15.60mAOD conveying flow north.

Land that falls north east reaches the pond where there is a steep embankment from 15.50mAOD to the pond water level of 14.98mAOD.

A ditch was identified on the eastern boundary which conveys surface runoff from Reeds Lane and the Lyndon property, northwards past the eastern pond. The southern extent of this ditch is thought to be on the boundary, whilst the remaining length of the ditch is on the adjacent site. Field notes can be found in **Appendix C**.



A footpath crosses the centre of the site from south to north. A footpath also runs generally parallel to the southern boundary.

The approximate land use of the site is as follows:

Table 3.2: Existing site land uses

Land use	Area (m²)	Percentage	
Impermeable	175	<1	
Permeable	19918	>99	
Total	20093	100	

Much of the impermeable area is made from paving and sheds, as rain water will drain to the surrounding ground from these areas the whole site can be considered as Greenfield.

### 3.3 Hydrology

The nearest designated Main River watercourse to the site is located approximately 2.4km to the North and is a tributary of the River Adur which flows from the east to the west. This is the ultimate destination of the ordinary watercourse located adjacent to the north of the site.

The nearest ordinary watercourse, which flows along the northern site boundary from east to west, is made from a series of ditches conveying surface water from the residential areas of Sayers Common. The ditches, to the east, conveys flow towards the north eastern boundary of the site; there is interaction between the ditches and the pond at the northern boundary on site as a ditch feeding into the pond and a ditch flowing westwards as an outfall. The pond on the eastern boundary is not thought to interact with this watercourse which is elevated above the eastern boundary.

Downstream of the outfall for the northern pond, the ditch conveys water in a westwards direction where the ditch widens into a channel over agricultural fields, towards the River Adur. Ponds and ditches described are identifiable in **Figure 1.1**.

## 3.4 Geology

Based on published geological records for the area (British Geological Survey online mapping), the site exhibits the following geology:

- Superficial Geology: According to BGS online mapping the site does not have superficial geology.
- Bedrock Geology: Weald Clay Formation Dark grey thinly-bedded mudstones (shales) and mudstones with subordinate siltstones, fine- to medium-grained sandstones, including calcareous sandstone (e.g. Horsham Stone Member), shelly limestones (the so called "Paludina Limestones") and clay ironstones.

There were no nearby borehole records within the area on the British Geological Survey library available for analysis.



### 3.5 Hydrogeology

Hydrogeological information was obtained from the Environment Agency's online mapping service. These maps indicate the site is not located within a Groundwater Source Protection Zone and is a significant distance from the nearest Zone. The site is neither underlain with Superficial or Bedrock Aquifers.

The close proximity of the site to various watercourses and pond may suggest that shallow Groundwater may be present beneath the site. Further evidence of shallow Groundwater is provided by the Flood Incident report from 1997 (Appendix D) which noted anecdotal evidence from the residents of Lyndon on Reeds Lane. It was noted that a well in the garden had a water surface level approximately 18 inches (457mm) below the ground surface even during dry weather. Other evidence included heavily saturated lawns during rainfall events and a pond that was spring fed, south of Reeds Lane. Saturated ground may be due to impermeable top soils causing surface water to pond, as such a site investigation into Groundwater levels is advised to establish Groundwater levels.



## 4 DEVELOPMENT PROPOSALS

The proposed development is for a residential end use. The development will contain a variety of dwellings, driveways, gardens, access highways, areas of public open space and associated soft landscaping (**Appendix E**); a doctors surgery with parking will also be included at the access road to the site. Of this development area an impermeable area has been calculated by finding the total area covered by roads, buildings and parking spaces proposed in the site layout. Therefore the approximate land uses of the proposed site are summarised in **Table 4.1** below.

Table 4.1: Proposed site land uses

Land use	Area (m²)	Percentage of Total Site (%)	
Impermeable	7146	35.6	
Permeable	12947	64.4	
Total Site Area	20093	100	



## 5 LEGISLATION AND POLICY CONTEXT

## 5.1 National policy

Table 5.1: National legislation and policy context

Legislation	Key provisions  The aims of planning policy on development and flood risk are to ensure that flood risk is taken into account at all stages in the planning process to avoid inappropriate development in areas at risk of flooding, and to direct development away from areas at highest risk.  Where new development is, exceptionally, necessary in such areas, policy aims to make it safe without increasing flood risk elsewhere and where possible, reducing flood risk overall.		
National Planning Policy Framework (2012)			
Planning Practice Guidance (2014)	The NPPF is supported by an online Planning Practice Guidance, which provide additional guidance on flood risk.		
Flood and Water Management Act 2010	The Flood and Water Management Act (FWMA) aims to implement the findings of the 2007 Pitt Review and co-ordinate control of drainage and flood issues.  There are a number of increased responsibilities within the Act that affect adoption of SuDS features and the role of the Environment Agency to expand on the mapping data they provide. The implementation of SuDS features has many beneficial impacts on the treatment of surface water during remediation works.		
Water Resources Act 1991	Section 24 – The Environment Agency is empowered under this Act to maintain and improve the quality of 'controlled' waters  Section 85 – It is an offence to cause or knowingly permit pollution of controlled waters  Section 88 – Discharge consents are required for discharges to controlled waters		
Water Framework Directive (2000)	The Water Framework Directive (WFD) requires all inland and coastal waters to reach 'good' chemical and biological status by 2015. Flood risk management is unlikely to have a significant impact on chemical water quality except where maintenance works disturb sediment (such as de-silting) or where pollutants are mobilised from contaminated land by floodwaters.  The main impact of the WFD on flood risk management, both now and in the future, relates to the ecological quality of water bodies. Channel works, such as straightening and deepening, or flood risk management schemes that modify geomorphological processes can change river morphology. The WFD aims to protect conservation sites identified by the EC Habitats Directive and Birds Directive that have water-related features, by designating them as 'protected sites'.		



## 5.2 Local policy

Local policies ensures that flood risk is taken into account at all stages in the planning process to avoid inappropriate development in areas at risk of flooding and making development safe without increasing flood risk elsewhere and where possible, reducing flood risk.

Table 5.2: Local policy context

LDF document	Key provisions and policies		
	DP41: Flood Risk and Drainage		
	Proposals for development will need to follow a sequential risk-based approach to ensure development is safe across its lifetime and not increase the risk of flooding elsewhere. The District Council's Strategic Flood Risk Assessment (SFRA) should be used to identify areas at present and future flood risk from a range of sources including fluvial (rivers and streams), surface water (pluvial), groundwater, infrastructure and reservoirs.		
Mid Sussex District Plan 2014 – 2031 August 2016 – Submission Version	SuDS should be implemented in all new developments of 10 dwellings or more. They should be appropriately used to avoid any increase flood risk and protect ground water quality. SuDS should be sensitively designed to enhance the landscape.		
	The preferred hierarchy of managing surface water drainage from any development is:		
	1. Infiltration		
	2. Attenuation and discharge to watercourses		
	Discharge to surface water only sewers		



## 6 SOURCES OF INFORMATION

#### 6.1 Environment Agency consultation

#### 6.1.1 Flood zone maps

The Environment Agency Flood Zone mapping study for England and Wales is available on their website at https://flood-map-for-planning.service.gov.uk/

The current displayed map is reproduced as **Figure 1.1** and shows the site to lie within Flood Zone 1 showing the site with low risk of fluvial or tidal sources.

Recently, the Environment Agency released an additional form of mapping 'Risk of Flooding from Rivers and Sea', which is available at:

https://flood-warning-information.service.gov.uk/long-term-flood-risk/

This map has been reproduced as **Figure 7.1** and shows the Environment Agency's assessment of the likelihood of flooding from rivers and the sea at any location and is based on the presence and effect of all flood defences, predicted flood levels, and ground levels.

The relevant guidance note from the Environment Agency is available online through the following link: <a href="https://www.gov.uk/planning-applications-assessing-flood-risk">https://www.gov.uk/planning-applications-assessing-flood-risk</a>

#### 6.1.2 Site specific consultation

The Environment Agency was formally consulted as part of this assessment, with request for flood related information (including flood levels) included in the consultation. Their full response to both the pre-planning enquiry and the flood data request can be found in **Appendix F**.

The information request confirms the following points:

- The site is located within Flood Zone 1:
- No modelled levels are available for the site, and;
- There is no historic flood mapping for the area.

#### 6.2 Mid Sussex District Council

Mid Sussex District Council was contacted as part of RSK's initial enquiry. Information was also provided to RSK from the client following a pre application meeting between the client and Mid Sussex District Council (**Appendix G**).

Notes from the council conclude the following:

- The SuDS hierarchy must be followed for the disposal of surface water.
- People and property on site should be protected from flood risk, equally the development should not exacerbate flood risk to others beyond the site boundary



- A sustainable approach to drainage design must be considered to manage surface water at the source and the surface, this includes considering the ability to remove pollutants and improving water quality.
- Discharge to the watercourse should be restricted to Greenfield rates or Qbar run-off (dependent upon which is better). Any excess run-off will need to be attenuated for the 1 in 100 year storm event plus 40% climate change.
- Following phone conversation with the council it was concluded that discharge
  to the pond on the eastern boundary is unlikely to be appropriate. This is due to
  an outfall unlikely to exist for the pond, furthermore constructing an outfall into
  ditches east of the boundary may exacerbate current surface water flooding
  issues east of the site.

### 6.3 West Sussex County Council

West Sussex County Council has provided a response to RSK's initial contact. They advised flood and drainage enquiries should be directed to Mid Sussex District Council.

#### 6.4 Internal Drainage Board

There are no known Internal Drainage Boards within the study area.

#### 6.5 Canal & River Trust

There are no known Canal & River Trust maintained assets within the study area.



## 6.6 Relevant studies

Table 6.1: Relevant studies

Study	Comments		
SFRA: Mid Sussex District Council June 2015	The principle aim of the SFRA was to map all forms of flood risk in order to provide an evidence base to locate new development. It also aims to provide appropriate policies for the management of flood risk, and identify the level of detail required for site-specific FRAs. The SFRA contains information and maps detailing flood sources and risks.  West Sussex council identified Sayers Common as a 'wet spot', meaning it was identified as having a majority of properties at risk from surface water flooding. Sayers Common, however, was identified as being in an area of low potential for Groundwater flooding, whilst the majority of West Sussex is within an area of medium level potential for Groundwater flooding.  Several historic records of flooding exist for in and around Sayers Common predominately due to poor surface water drainage systems. Is it identified that because of a predominately clay geology in the area that infiltration based SuDS will be minimal and that attenuation based SuDS will often be the most appropriate SuDS feature.		
PFRA: West Sussex County Council May 2011	Preliminary Flood Risk Assessments are produced by Lead Local Flood Authorities (LLFAs) in England and Wales. A Preliminary Flood Risk Assessment (PFRA) is the first part of the planning cycle for flood risk management as set out in the Flood Risk Regulations (2009), which implement the requirements of the European (EU) Floods Directive (2007). The EU Floods Directive aims to provide a consistent approach to managing flooding across Europe.  The PFRA considers local sources of flooding that the LLFA is responsible for: ordinary watercourses, surface water, groundwater and sewers where flooding is wholly or partially caused by rainwater or other precipitation entering or affecting the system. Information is gathered from existing sources on past floods and flood models to identify Flood Risk Areas.  Key projections for the South East River Basin District, close to Sayers Common, concluded the following:  • Winter precipitation increases of 18% are expected by 2018;  • Peak river flows in a typical catchment is likely to increase between 11 and 24%.		
CFMP: River Adur Catchment Flood Management Plan December 2009	Catchment Flood Management Plans (CFMP) give an overview of the flood risk from inland sources across each river catchment and recommend ways of managing those risks now and over the next 50-100 years. The Environment Agency is responsible for producing CFMPs.  The site falls within the 'Adur South Downs (East)' sub-catchment and the policy applicable to this site is Policy Option 6 which states The Environment Agency "will take action with others to store water or manage run-off in locations that provide overall flood risk		



Study	Comments
	reduction or environmental benefit.".
	There is an intended focus here on sustainable design of the urban environment, in particularly focusing on redevelopments rather than existing developments.
	The CFMP provides the following key proposed actions:
	Ensure recommendations from SFRAs and LDFs create potential to reduce flood risk through.
	Adopt strategic approach explore the use of agri-environmental and woodland schemes to help fund land use management to increase water retention in the catchment.
	Encourage farmers to adopt better land use management in the catchment to reduce flood risk.

#### 6.7 Drainage

#### 6.7.1 Public sewer

Sewer records were not obtained for the purpose of this report. Known details of the sewer from the flood incident report (1997) (**Appendix D**) are:

- Foul network: A system flows from the west towards the east along Reeds Lane.
   The foul sewers flooded in the 1990's as a result of surface water entering the system.
- Surface water network: Surface water runoff is piped under an outbuilding next door
  to the Lydon residential property northwards; the outfall for this pipe is on the site
  boundary at the rear of the private gardens of the properties. A ditch conveys the
  flow northwards but this ditch is poorly maintained with some runoff described as
  falling west onto the site.

#### 6.7.2 Private drainage

No details of the existing on-site drainage were provided. It is thought that surface water runoff from the Lyndon residential property is directed onto the land behind the property. Field notes (**Appendix C**) show that there is a pipe outlet into a short swale which discharges into the eastern pond. It is not known where the source of the pipe is. One possible source may be that the pipe serves as private drainage for surface water runoff from the Kings Business Centre development. The topographic survey shows a 100mm diameter pipe outfall from this site in the direction of the pond, however the full length of the pipe was not identified. It is advised these two pipes are investigated further.



## 7 SOURCES OF FLOOD RISK

#### 7.1 Criteria

In accordance with the NPPF and advice from the Environment Agency, a prediction of the flood sources and levels is required along with the effects of climate change from the present for the design life of the development (in this case assumed to be 100 years). To consider these effects of climate change, standard industry guidance recommends consideration of a 20% increase in rainfall intensity (with a recommendation for 40% by the Council) and 25% increase in peak river flows over this timeframe for a 'More Vulnerable' development in Flood Zone 1 (Central category).

The flood risk elements that need to be considered for any site are defined in BS 8533 as the "Forms of Flooding" and are listed as:

- Flooding from Rivers (fluvial flood risk);
- Flooding from the Sea (tidal flood risk);
- Flooding from the Land;
- · Flooding from Groundwater;
- Flooding from Sewers (sewer and drain exceedance, pumping station failure etc); and
- Flooding from Reservoirs, Canals and other Artificial Structures.

The following section reviews each of these in respect of the subject site.

## 7.2 Flooding from rivers (fluvial flood risk)

#### 7.2.1 Main River

The latest Environment Agency published flood zone map (**Figure 1.1**) shows that the site lies within Flood Zone 1, representing a 1 in 100 year or greater probability of flooding from fluvial sources or a 1 in 200 year probability of flood from tidal sources. It also shows that the site is located outside the influence of a Main River.

#### 7.2.2 Ordinary Watercourse

The latest 'Risk of Flooding from Rivers and Sea' flood map (**Figure 7.1**) indicates that the site is considered to be at 'very low' risk of fluvial flooding. It should be considered that the ditch that serves the highway drainage from Reeds Lane along the eastern boundary poses some risk to the south east of the site. The ditch should be investigated further to assess the risk to the site.



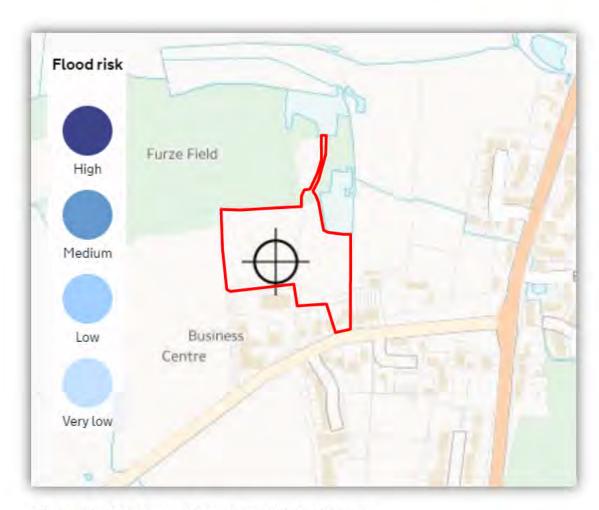


Figure 7.1: Environment Agency fluvial flood risk map

#### 7.2.3 Climate change

Fluvial flooding is likely to increase as a result of climate change. A greater intensity and frequency of precipitation is likely to raise river levels and increase the likelihood of a river overtopping its banks.

## 7.3 Flooding from the sea (tidal flood risk)

The site is not considered to be at risk from tidal flooding due to its inland location.

## 7.4 Flooding from the land (overland pluvial flood risk)

If intense rain is unable to soak into the ground or be carried through manmade drainage systems, for a variety of reasons, it can run off over the surface causing localised floods before reaching a river or other watercourse.

Generally, where there is impermeable surfacing or where the ground infiltration capacity is exceeded, surface water runoff will occur. Excess surface water flows from



the site are believed to drain naturally to the local water features, either by overland flow or through infiltration.

The Environment Agency's surface water flood map (Figure 7.2) shows that the majority of the site is considered at very low risk from this source; however there are localised areas which are at risk:

- The north east and north of the site, at the eastern and northern ponds, are at high risk of pluvial flooding; however this does not extend far beyond the extent of the pond. This is likely due to the steep embankment on the site boundary. These risk areas do not extend into the developable area.
- There are low risk areas along the boundary with Furze Field; this will be due to the area at the boundary being of low elevation and surface water flowing to this low point.
- Within the site boundary there are areas of low and medium risk along the eastern boundary. This follows the path of the ditch that was identified as providing surface water drainage for Reeds Lane.



Figure 7.2: Environment Agency surface water flood risk map

#### 7.4.1 Climate change

Surface water flooding is likely to increase as a result of climate change in a similar ratio to fluvial flooding. Increased intensity and frequency of precipitation is likely to lead to reduced infiltration and increased overland flow.

## 7.5 Flooding from groundwater

Groundwater flooding tends to occur after much longer periods of sustained high rainfall. Higher rainfall means more water will infiltrate into the ground and cause the water table to rise above normal levels. Groundwater tends to flow from areas where



the ground level is high, to areas where the ground level is low. In low-lying areas the water table is usually at shallower depths anyway, but during very wet periods, with all the additional groundwater flowing towards these areas, the water table can rise up to the surface causing groundwater flooding.

A nearby borehole log located to the east of the proposed site indicates Groundwater was recorded at a depth of 4.00mbgl. However as discussed in **Section 3.5** there is anecdotal evidence of Groundwater at approximately 450mm below the ground surface. Close proximity to surface water features would also suggest Groundwater levels are high.

It is considered likely that perched Groundwater may be encountered during the groundworks phase, and therefore could present a risk to the site at the construction stage. During the operational phase, the absence of basement features within the proposals minimises the potential hazards posed by groundwater flooding.

So long as the existing drainage regime is maintained then resultant Groundwater flood risk is considered to be **low**. Further investigation should be undertaken to identify and observe the depth of Groundwater.

#### 7.5.1 Climate change

Climate change could increase the risk of groundwater flooding as a result of increased precipitation filtering into the groundwater body. If winter rainfall becomes more frequent and heavier, groundwater levels may increase. Higher winter recharge may however be balanced by lower recharge during the predicted hotter and drier summers. This is less likely to cause a significant change to flood risk than from other sources, since groundwater flow is not as confined. It is probable that any locally perched aquifers may be more affected, but these are likely to be isolated. The change in flood risk is likely to be low.

#### 7.6 Flooding from sewers

Flooding from artificial drainage systems occurs when flow entering a system, such as an urban storm water drainage system, exceeds its conveyance capacity, the system becomes blocked or it cannot discharge due to a high water level in the receiving watercourse. A sewer flood is often caused by surface water drains discharging into the combined sewer systems; sewer capacity is exceeded in large rainfall events causing the backing up of floodwaters within properties or discharging through manholes.

Most adopted surface water drainage networks are designed to the criteria set out in Sewers for Adoption<sup>6</sup>. One of the design parameters is that sewer systems be designed such that no flooding of any part of the site occurs in a 1 in 30 year rainfall event. By definition a 1 in 100 year event would exceed the capacity of the surrounding sewer network as well as any proposed drainage.

When exceeded, the surcharged pipe work will lead to flooding from backed up manholes and gully connections. This will lead to flooding within the surrounding area. Development has the potential to cause an increase in impermeable area, an associated increase in surface water runoff rates and volumes, and a consequent

WRC, 'Sewers for Adoption' 7th Edition, 2012 Reside Developments Ltd The Old Brickworks, Sayers Common Flood Risk Assessment & Outline Drainage Strategy 881259-R1(03)-FRA



potential increase in downstream flood risk due to overloading of sewers, watercourses, culverts and other drainage infrastructure.

The flood incident report from 1997 concluded surface water runoff from Reeds Lane is known to enter the foul sewer system, reducing capacity and causing surcharging further along the network in Sayers Common. The available capacities of these sewers are not currently known.

As not to exacerbate the sewer system with surface water runoff from the proposed development the SuDS strategy will take into consideration that surface runoff cannot be conveyed towards Reeds Lane. This ensures that any additional surface water and overland flows are managed correctly, to minimise flood risk to the site and the surrounding area. The proposed surface water network on the site should be designed to ensure exceedance of the network has been considered.

#### 7.6.1 Climate change

The impact of climate change is likely to be negative regarding flooding from sewers. Increased rainfall and more frequent flooding put existing sewer and drainage systems under additional pressure resulting in the potential for more frequent surcharging and potential flooding. This would increase the frequency of local sewer flooding but not significant in terms of the proposed development.

## 7.7 Other sources of flooding

#### 7.7.1 Reservoirs

Flood events can occur from a sudden release of large volumes of water from reservoirs, canals and artificial structures.

The Environment Agency reservoir flood map (reproduced as **Figure 7.4**) shows the largest area that might be flooded if a reservoir were to fail and release the water it holds. Since this is a prediction of a worst-case scenario, it is unlikely that any actual flood would be this large.



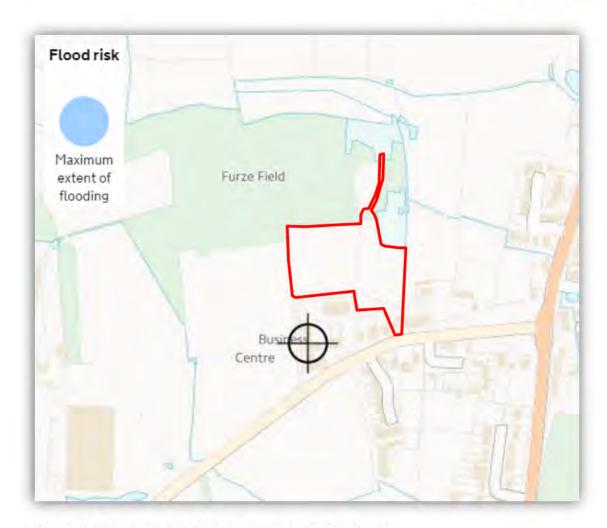


Figure 7.4: Environment Agency reservoir flood risk map

Reservoir flooding is also extremely unlikely. There has been no loss of life in the UK from reservoir flooding since 1925. Since then reservoir safety legislation has been introduced to ensure reservoirs are maintained. According to the Environment Agency Reservoir flood maps the site is not at risk of flooding from reservoirs.

The resultant flood risk is considered to be low.

#### 7.7.2 Climate change

Reservoirs can be managed over time, controlling inflow/outflow of water and therefore there is the capacity to control the effects of climate change. Increased rainfall has the potential to increase base flow, but this should be minimal. It is unlikely that there will be a substantial change to the risk of flooding for this site.

#### **7.7.3** Canals

There are no Canal & River Trust owned canals or assets within the study area.



## 7.8 Flood risk resulting from the development

In theory any development can increase flood risk downstream, if it is not designed properly. This potential is much increased where the site is on Greenfield land, as development tends to increase impermeable surfaces, resulting in increased runoff from the site.

The proposed development will use the best practice guidance to ensure that flood risk is not increased as a result of the development. This will require the provision of a suitable surface water management plan to ensure that the surface water generated from the site does not exceed the pre-development rates; this is investigated further in Section 9 of this report.



## 8 PLANNING CONTEXT

## 8.1 Application of planning policy

Section 10 of the NPPF includes measures specifically dealing with development planning and flood risk using a sequential characterisation of risk based on planning zones and the Environment Agency Flood Map. The main study requirement is to identify the flood zones and vulnerability classification relevant to the proposed development, based on an assessment of current and future conditions.

## 8.2 Land use vulnerability

Planning Practice Guidance includes a list of appropriate land uses in each flood zone dependent on vulnerability to flooding. In applying the Sequential Test, reference is made to **Table 8.1** below, reproduced from **Table 3** of Planning Practice Guidance.

Table 8.1: Flood risk vulnerability and flood zone 'compatibility'

Flood Ris Vulnerab Classifica	ility	Essential Infrastructure	Water Compatible	Highly Vulnerable	More Vulnerable	Less Vulnerable
Flood	Zone 1	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate
Zone	Zone 2	Appropriate	Appropriate	Exception Test Required	Appropriate	Appropriate
	Zone 3a	Exception Test Required	Appropriate	Should not be permitted	Exception Test Required	Appropriate
	Zone 3b functional floodplain	Exception Test Required	Appropriate	Should not be permitted	Should not be permitted	Should not be permitted

With reference to **Table 2** of the Planning Practice Guidance, the proposed development, based on its residential end use and 'Non residential uses for health services', is classed as 'More Vulnerable'. This classification of development is appropriate for areas within Flood Zone 1 and therefore appropriate for the subject site.

## 8.3 Sequential Test

The Sequential Test is required to assess flood risk and the Planning Practice Guidance recommends that the test be applied at all stages of the planning process to direct new development to areas with the lowest probability of flooding (Flood Zone 1).

According to the NPPF, if there is no reasonably available site in Flood Zone 1, the flood vulnerability of the proposed development (see Planning Practice Guidance Table



2) can be taken into account in locating development in Flood Zone 2 and then Flood Zone 3. Within each Flood Zone new development should be directed to sites at the lowest probability of flooding from all sources.

The development proposal is for a 'More Vulnerable' residential use to be developed on the site. With reference to **Table 8.1** above, this development would be appropriate for areas within Flood Zone 1, subject to the implementation of an appropriate surface water drainage strategy. Therefore the proposed development passes the Sequential Test and does not require the Exception Test to be satisfied.



# 9 SURFACE WATER DRAINAGE ASSESSMENT

#### 9.1 Scope

As development will be located in Flood Zone 1 and it is greater than 1ha in size, the Environment Agency and the Lead Local Flood Authority requires such development to focus on the management of surface water run-off. This section discusses the potential quantitative effects of the development on both the risk of surface water flooding on-site and elsewhere within the catchment, as well as the type of potential SuDS features that could be incorporated as part of the framework development plan.

The NPPF states that SuDS should be considered wherever practical. The use of SuDS is also encouraged by regional and local policy (see Section 5). In accordance with local and national guidance, the surface water drainage strategy should seek to implement a SuDS hierarchy that aspires to achieve reductions in surface water runoff rates to Greenfield rates (Preferred Standard).

In addition, Building Regulations Part H<sup>7</sup> requires that the first choice of surface water disposal should be to discharge to an adequate soakaway or infiltration system, where practicable. If this is not reasonably practicable then discharge should be to a watercourse, the least favourable option being to a sewer (surface water before combined). Infiltration techniques should therefore be applied wherever they are appropriate.

## 9.2 Pre-development situation

The existing site area is 2.01Ha and is considered 100% Greenfield. The Greenfield surface runoff rate has been calculated from the total proposed developable area, found to be 1.374Ha. The pro-rata IoH 124 (ICP SuDS) method<sup>8</sup> has been used using WinDes software to estimate the Greenfield surface water runoff for the total developable area on site.

Table 9.1: ICP SuDS surface water runoff (Greenfield, total developable area)

Return period	Peak flow (I/s)
QBar	7.1
1 in 1 year	6.0
1 in 30 year	16.0
1 in 100 year	22.5

<sup>&</sup>lt;sup>7</sup> HM Government (2010 with 2013 amendments), 'The Building Regulations 2010: Approved Document H - Drainage and Waste Disposal (2002 Edition incorporating 2010 amendments)'

<sup>&</sup>lt;sup>8</sup> Institute of Hydrology (IoH), 'Flood Estimation for small catchments - Report 124', 1994



#### 9.3 Limiting discharge for design

The Greenfield discharge rates from the proposed developable area have been calculated and the results have been provided within **Table 9.1** and **Appendix H**. In order to not exacerbate the risk of flooding to both the development and others downstream of the site a complex control mechanism should be utilised to limit flows to the QBar as outlined within **Table 9.1** above at 7.1l/s.

This should be reflected within the detailed design of the site and should be agreed by the Lead Local Flood Authority.

#### 9.4 Post-development situation

The proposed development is for a residential end use. As explained within Section 4 of this assessment, the current framework development plan shows a total developable area of 1.374Ha and a figure of approximately 0.715Ha of impermeable area of this developable area has been calculated from the proposed development plans. Increases in impermeable area will result in an increase in surface water runoff across the site. It will therefore be necessary to manage surface water on-site in order to limit the discharge of surface water off-site to an agreed rate (as above), to provide sufficient on-site attenuation up to the 1 in 100 year climate change rainfall event and to provide improvements to water quality through appropriate source treatment.

Additionally, 0.040Ha of road surface from Reeds Lane will be incorporated into the SuDS strategy. This acts to address surface water issues currently existing on Reeds Lane and may help towards resolving capacity issues with the highway sewers along Reeds Lane. The total impermeable area draining to the attenuation basin is therefore 0.755Ha.

#### 9.4.1 Off site discharge options

#### 9.4.1.1 Infiltration

Infiltration should be considered as the primary option to discharge surface water from the developed site. The effectiveness of infiltration is completely dependent on the physical conditions at the site. Potential obstacles include:

- Local variations in permeability preventing infiltration It is understood from the local geology that the site is situated on an area predominantly underlain by Clay or Mudstone, which are not considered suitable for the use of soakaways due to its low permeability.
- Shallow Groundwater table For infiltration drainage devices, Building Regulation approved document H2 states that these "should not be built in ground where the water table reaches the bottom of the device at any time of the year". From accounts of saturated lawns and a well at the Lydon residential property then it is thought Groundwater will be shallow.
- Source Protection Zones As discussed above, the site is not located within a Groundwater Source Protection Zone.



From the information available regarding the study area's underlying clay and mudstone based geology, infiltration is not considered a viable option as part of the drainage strategy.

#### 9.4.1.2 Discharge to watercourse

Discharging surface water directly to a local watercourse is considered feasible as there is a ditch located within the most northern boundary connecting to the northern pond. The site drains naturally to the pond on the eastern boundary; however there is no confirmed outfall for this pond. There is also a ditch located on the south eastern boundary of the site; however, this is elevated above the proposed site and therefore does not provide a feasible discharge location.

#### 9.4.1.3 Discharge to surface water sewer

From the current drainage situation it is assumed then that there is no surface water sewer available for connection or the existing sewer does not have the capacity to drain the existing runoff. Additionally the sewer would is unlikely to be deep enough to drain the northern extent of the development. If there is a surface water sewer then connecting to the sewer would not benefit the village as per the council's requirement for the development.

#### 9.4.2 Storage estimates

To determine the volume of attenuation storage that would be required on the site, the WinDes ' 4-Stage Design Guide' tool has been used. The WinDes '4-Stage Design Guide' tool allows for an attenuation figure to be calculated based upon pond dimensions, rainfall values and permitted discharge rates. These volumes can be later revised at detail design stage by the introduction of specific flow control methods.

Calculations have been run using discharge rate in accordance with **Table 9.1**, above and a proposed impermeable area of 0.755Ha which includes the 0.040Ha of offsite road surface. No allowance is included in the calculations for infiltration and therefore the results illustrate a worst-case scenario.

The maximum storage required on-site to accommodate the 1 in 100 year plus 40% climate change rainfall event when limited to the QBar (7.1l/s) is approximately **474m**<sup>3</sup>. Calculations can be found in **Appendix I**.

This volume is provided to demonstrate the feasibility of a proposed drainage strategy for the development; however, the final attenuation volume will be determined during subsequent detailed design work and should be agreed by the Lead Local Flood Authority.

#### 9.4.3 Proposed drainage strategy

It is considered likely that infiltration techniques will not be suitable on-site due to the less permeable clay based soils, underlying geology and assumed Groundwater conditions. Soakaways or other infiltration based SuDS will not be incorporated into the drainage design as a result. Following on-site ground investigations, the site-specific ground conditions and infiltration rates, should be confirmed, if possible. This will confirm whether infiltration based SuDS will be able to be incorporated into the design.

Therefore the proposed SuDS for the site includes a network of surface water drainage pipes under the road network that convey surface water runoff from the whole developable area to an open attenuation basin located north east of the proposed



development. Surface water runoff is attenuated in the basin prior to discharge at a controlled rate to ditch leading northwards to the existing pond. The SuDS measures are outlined in the Indicative Surface Water Strategy as attached in **Appendix J**.

An attenuation basin has been strategically located within the area of open space to the north east of the site, adjacent to the pond. The topography in this area is suitable for SuDS features as this is the lowest topographic location on-site besides the pond. However the land in the south western extent of the site will need to be raised by approximately 1.5m with a suitable downwards gradient provided towards the basin in the north east. The final level of land raising should be confirmed at detailed design.

An attenuation volume of 474m<sup>3</sup> is justified in **Section 9.4.2**, further considerations at detailed design should include producing a basin that is shallow enough to provide a sufficient fall from the invert level of the basin to the existing pond (discharge location). Indicative cover levels and invert levels are given in the Indicative Surface Water Strategy (**Appendix J**). The basin should also be designed with slopes of 1:4 to comply with safety and maintenance guidelines as highlighted in the SuDS Manual<sup>9</sup>. Additionally the basin should be lined with an impermeable membrane so as not to allow Groundwater to compromise the capacity of the basin.

Permeable paving will be incorporated within private roads, shared surfaces and drive ways that are part of the development. These can be used to collect and store runoff from the houses and surrounding hardstanding areas before joining the on-site surface water network that flows into and basin and pond. Permeable paving reduces the volume of suspended sediment and hydrocarbon pollution associated with residential developments. Adopted roads will not be constructed using permeable paving due to ownership and future maintenance issues, where responsibility will most likely lie with the highway authority.

Water butts can reduce surface water runoff from the development; whilst these have not been calculations, they will be included in the final development. Green roofs are not part of proposal.

Other considerations include investigating the pipe outlet and swale at the eastern pond. The source of the pipe should be found and the flow should be incorporated into the surface water strategy, ideally the connection to the eastern pond should be maintained. The poorly maintained ditch behind the Lydon residential property on the eastern boundary should be repaired where possible within the site boundary to ensure there is no runoff from the ditch onto the site.

The dimensions, volumes and location of the SuDS features will need to be revised as the development framework plan develops and during the detailed planning stage. Indicative dimensions are provided as part of this report to provide an indication of the surface area that would be required for attenuation. Detailed design of individual features is not part of the scope of this report. Preliminary design criteria have been based upon guidance given in the CIRIA publication The SuDS Manual and the information received to date.



## 10 FLOOD MITIGATION MEASURES

#### 10.1 Overview

The site is currently proposed to be a residential end use development. As a result, is considered to be More Vulnerable. However, as the site is at low risk from all sources of flooding, it is not proposed that additional mitigation measures should be incorporated into the design. There are elements of best practice which should be considered at an early stage as outlined below.

#### 10.2 Overland flood flow

Existing overland flood flow is predicted to flow to the north. As the Environment Agency's online mapping suggests there is a risk, albeit low, of surface water flow paths on Furze Field outside of the site boundary. Water is conveyed northwards to the pond and should not affect the proposed development.

#### 10.3 Finished floor levels

As this site will not be affected by fluvial flooding there is no need to incorporate any freeboard levels into the finished floor levels of the design. Low lying areas that could lead to ponding of surface flows will be avoided by careful design of finished levels.

As a result it is recommended that the proposed site levels should be set at or above the existing ground levels from a flood risk aspect.

Where site levels are proposed to be elevated, in order to engineer a fall across the site for drainage purposes, all falls should be away from the properties whilst still tying in to the proposed highways.

## 10.4 Safe access/egress

As the site is lies outside of the 1 in 1000 year climate change flood extent, safe access and egress will be available up to this storm event. For extreme events above this, it is considered appropriate that site users should be able to safely escape to an area away from the watercourse. In addition, the proposed buildings will be set above the existing ground level and will likely contain an internal access to the first floor.



## 11 CONCLUSIONS AND RECOMMENDATIONS

This Flood Risk Assessment complies with the NPPF and Planning Practice Guidance and demonstrates that flood risk from all sources has been considered in the proposed development. It is also consistent with the Local Planning Authority requirements with regard to flood risk.

The proposed development site lies in an area designated by the Environment Agency as Flood Zone 1, and is outlined to have a chance of flooding of less than 1 in 1,000 (<0.1%) in any year.

NPPF sets out a Sequential Test, which states that preference should be given to development located within Flood Zone 1. This flood risk assessment demonstrates that the requirements of the Sequential Test have been met, with the location of the site within Flood Zone 1 means that any form of classification of development is considered to be acceptable.

This flood risk assessment has concluded that:

- There are no historic records of flooding within the site boundary, but there is historic surface water flooding along Reeds Lane;
- The location at which the proposed development is located within Flood Zone 1, and as such is at a very low risk of flooding from fluvial sources. The ditches and pond at the most northern area of the site do not pose a fluvial flood risk.
- The site is far enough inland not to be at risk of any tidal flooding event;
- Flood risk from surface water is considered very low across the majority of the site. There is a high risk of pluvial flooding at the most northern area of the site, but this is not near to the proposed developable area.
- Flood risk from Groundwater is considered to be low as there is no historic record
  of Groundwater emergence and flooding in the area. However based upon above
  ground observations, it is recommended that during site investigations the ground
  conditions and Groundwater depths are investigated;
- There are no on-site sewers; however an outlet can be found at the eastern pond suggesting water is conveyed across the site from an unknown source. This source will need to be investigated and the will need to be incorporated in the SuDS strategy once found.
- · The site is not at risk from reservoir flooding;
- There are no Canal & River Trust assets within the study area and therefore the site is not at risk from this source.

As safe pedestrian and vehicular access, to and from the development, will be achievable under all conditions, a formal evacuation plan is not required.

Following the SuDS Hierarchy infiltration based drainage should first be assessed; however, based on BGS mapping and known ground conditions the underlying ground conditions will not likely support the use of infiltration. This should be confirmed on-site; however, an alternative has been sought as a result of these assumptions. Due to the



presence of the watercourse via a pond located on the northern site boundary, this is the proposed discharge location. As the fall from the site to the watercourse is relatively shallow, there will be a requirement to raise site levels in order to provide sufficient gravity falls from the proposed development into the attenuation basin and onwards into the watercourse. This should be confirmed at detailed design stage.

The proposed development will increase the impermeable surfacing on-site which will result in an increase of surface water runoff. As the whole site is considered to be Greenfield in terms of drainage, the proposed developable area should be limited to the pre-development Greenfield rate. As a result, the risk of flooding downstream will not be exacerbated. The resulting additional attenuation requirements has been demonstrated to be able to be stored on site prior to discharge into the watercourse on the north boundary. Attenuation is also provided to accommodate additional runoff from Reeds Lane that will be incorporated into the proposed onsite drainage strategy.

Overall, taking into account the above points, the development of the site should not be precluded on flood risk grounds as the development will not be at risk from existing sources (provided flow paths and sufficient attenuation is provided) will not result in an increase in flooding downstream.



## APPENDIX A SERVICE CONSTRAINTS

### **RSK Group service constraints**

- 1. This report and the Drainage design carried out in connection with the report (together the "Services") were compiled and carried out by RSK LDE Ltd (RSK) for Reside Developments Ltd. (the "client") in accordance with the terms of a contract between RSK and the "client. The Services were performed by RSK with the skill and care ordinarily exercised by a reasonable Civil Engineer at the time the Services were performed. Further, and in particular, the Services were performed by RSK taking into account the limits of the scope of works required by the client, the time scale involved and the resources, including financial and manpower resources, agreed between RSK and the client.
- 2. Other than that expressly contained in paragraph 1 above, RSK provides no other representation or warranty whether express or implied, in relation to the Services.
- 3. Unless otherwise agreed the Services were performed by RSK exclusively for the purposes of the client. RSK is not aware of any interest of or reliance by any party other than the client in or on the Services. Unless expressly provided in writing, RSK does not authorise, consent or condone any party other than the client relying upon the Services. Should this report or any part of this report, or otherwise details of the Services or any part of the Services be made known to any such party, and such party relies thereon that party does so wholly at its own and sole risk and RSK disclaims any liability to such parties. Any such party would be well advised to seek independent advice from a competent environmental consultant and/or lawyer.
- 4. It is RSK's understanding that this report is to be used for the purpose described in the introduction to the report. That purpose was a significant factor in determining the scope and level of the Services. Should the purpose for which the report is used, or the proposed use of the site change, this report may no longer be valid and any further use of or reliance upon the report in those circumstances by the client without RSK's review and advice shall be at the client's sole and own risk. Should RSK be requested to review the report after the date hereof, RSK shall be entitled to additional payment at the then existing rates or such other terms as agreed between RSK and the client.
- 5. The passage of time may result in changes in site conditions, regulatory or other legal provisions, technology or economic conditions which could render the report inaccurate or unreliable. The information and conclusions contained in this report should not be relied upon in the future without the written advice of RSK. In the absence of such written advice of RSK, reliance on the report in the future shall be at the client's own and sole risk. Should RSK be requested to review the report in the future, RSK shall be entitled to additional payment at the then existing rate or such other terms as may be agreed between RSK and the client.
- 6. The observations and conclusions described in this report are based solely upon the Services, which were provided pursuant to the agreement between the client and RSK. RSK has not performed any observations, investigations, studies or testing not specifically set out or required by the contract between the client and RSK. RSK is not liable for the existence of any condition,



the discovery of which would require performance of services not otherwise contained in the Services. For the avoidance of doubt, unless otherwise expressly referred to in the introduction to this report, RSK did not seek to evaluate the presence on or off the site of asbestos, electromagnetic fields, lead paint, heavy metals, radon gas or other radioactive or hazardous materials.

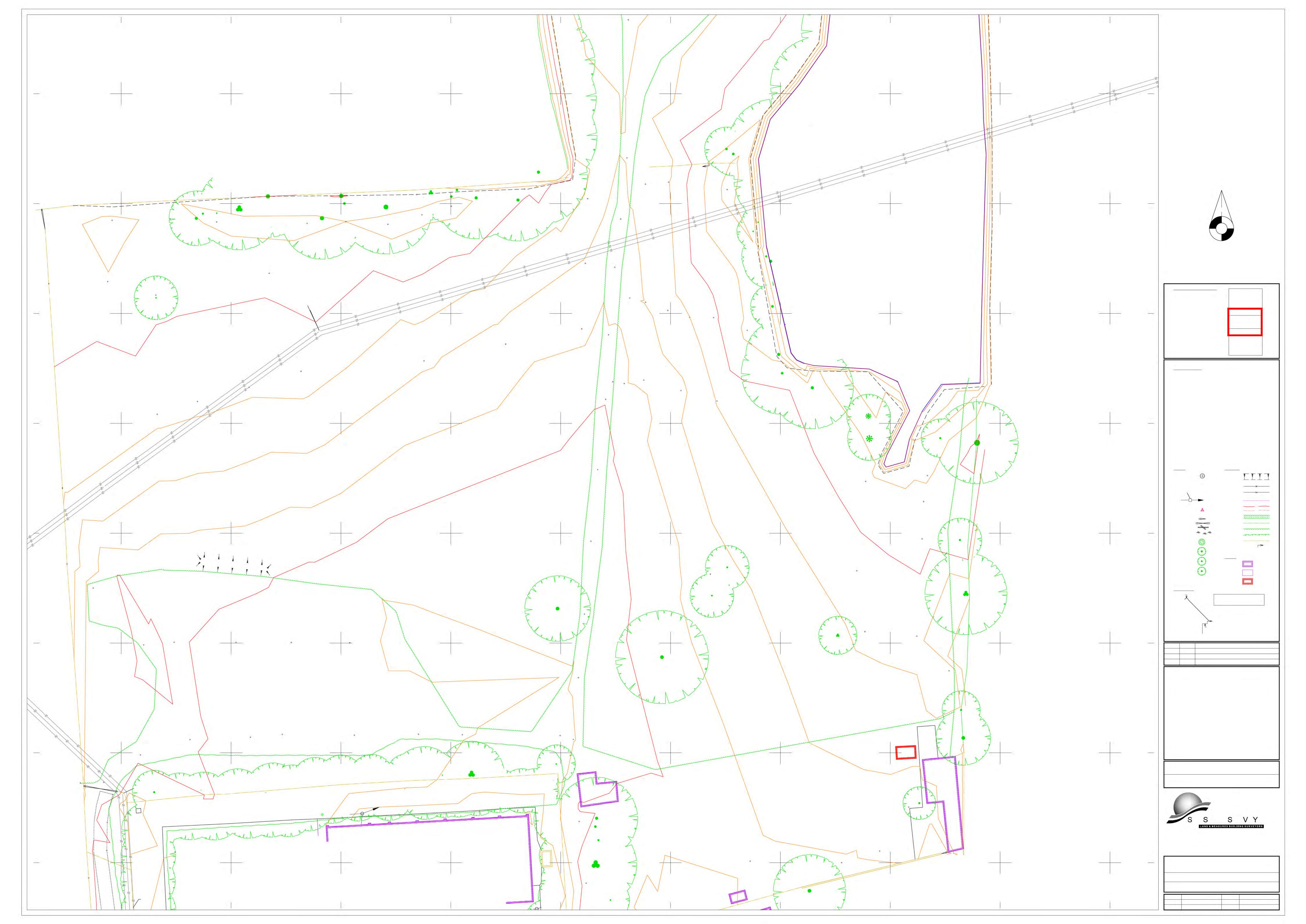
- 7. The Services are based upon RSK's observations of existing physical conditions at the site gained from a walk-over survey of the site together with RSK's interpretation of information including documentation, obtained from third parties and from the client on the history and usage of the site. The Services are also based on information and/or analysis provided by independent testing and information services or laboratories upon which RSK was reasonably entitled to rely. The Services clearly are limited by the accuracy of the information, including documentation, reviewed by RSK and the observations possible at the time of the walk-over survey. Further RSK was not authorised and did not attempt to independently verify the accuracy or completeness of information, documentation or materials received from the client or third parties, including laboratories and information services, during the performance of the Services. RSK is not liable for any inaccurate information or conclusions, the discovery of which inaccuracies required the doing of any act including the gathering of any information which was not reasonably available to RSK and including the doing of any independent investigation of the information provided to RSK save as otherwise provided in the terms of the contract between the client and RSK.
- 8. The phase II or intrusive environmental site investigation aspects of the Services is a limited sampling of the site at pre-determined borehole and soil vapour locations based on the operational configuration of the site. The conclusions given in this report are based on information gathered at the specific test locations and can only be extrapolated to an undefined limited area around those locations. The extent of the limited area depends on the soil and groundwater conditions, together with the position of any current structures and underground facilities and natural and other activities on site. In addition chemical analysis was carried out for a limited number of parameters [as stipulated in the contract between the client and RSK] [based on an understanding of the available operational and historical information,] and it should not be inferred that other chemical species are not present.
- 9. Any site drawing(s) provided in this report is (are) not meant to be an accurate base plan, but is (are) used to present the general relative locations of features on, and surrounding, the site.



# APPENDIX B TOPOGRAPHIC SURVEY

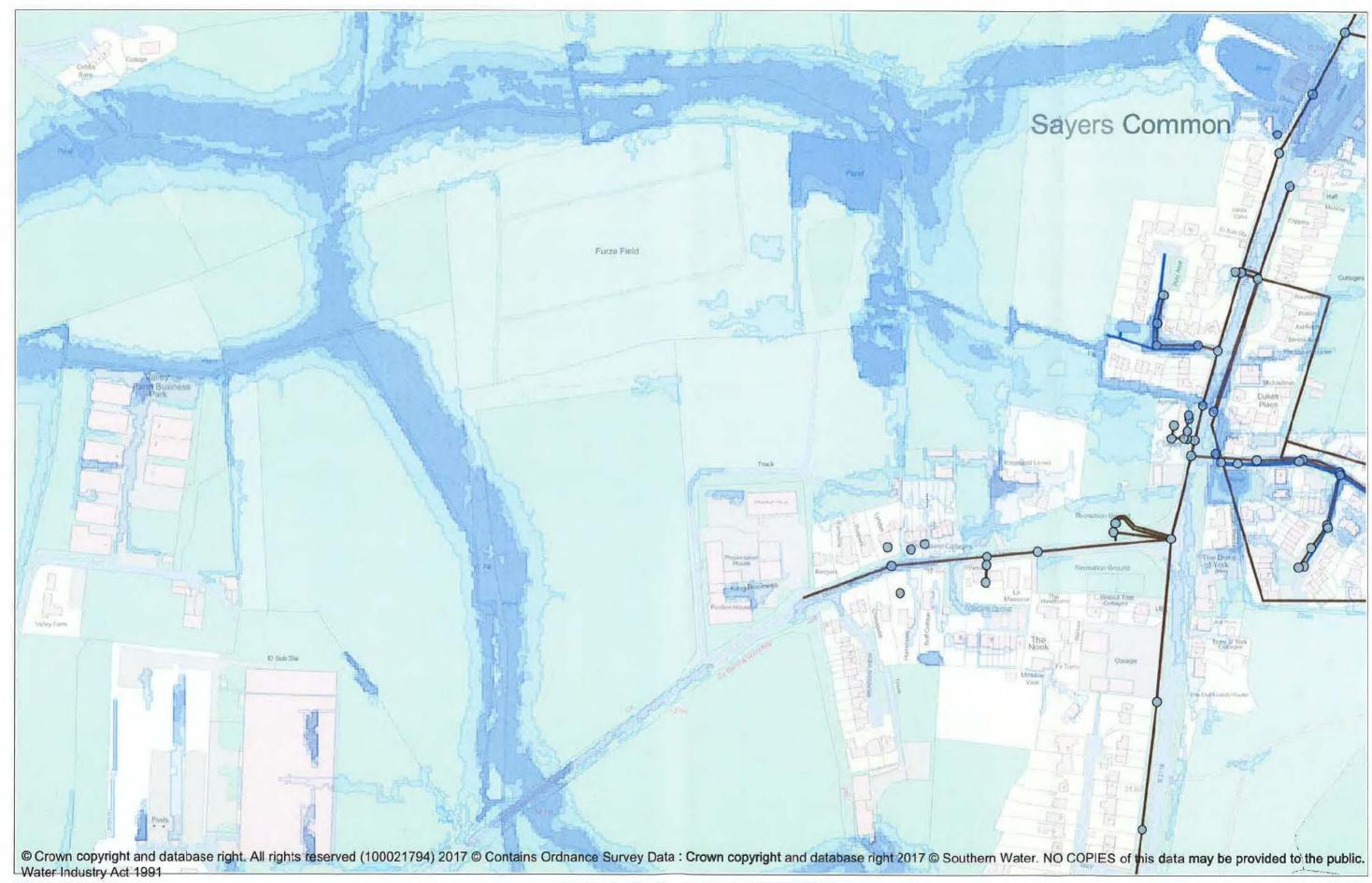


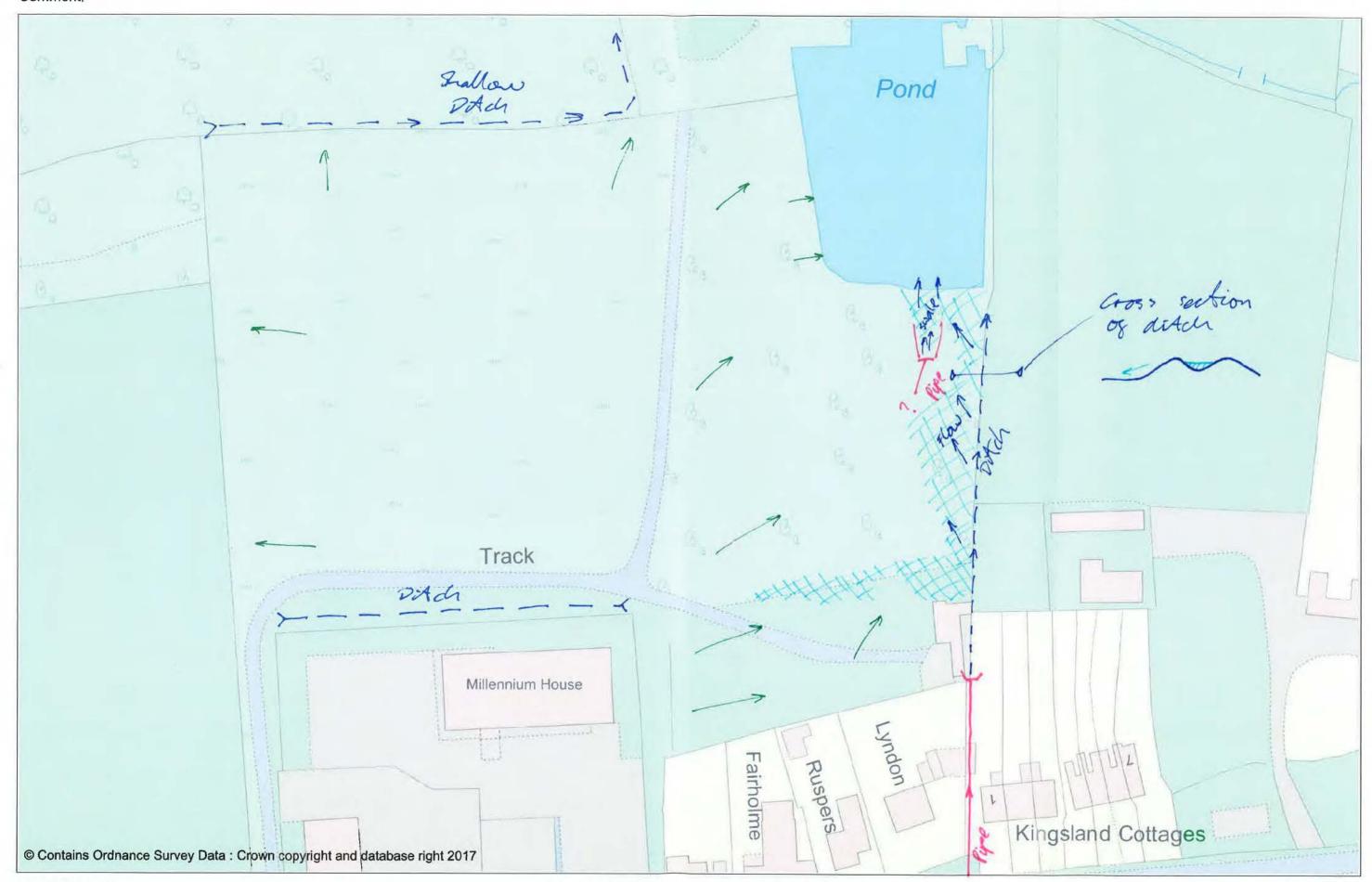






### APPENDIX C FIELD NOTES







# APPENDIX D SOUTHERN WATER INCIDENT REPORT

-5 FEB 1998

SOUTHERN WATER SERVICES LTD., SUSSEX DIVISION NAMED DEPT.

### SITE INSPECTIONS AT SAYERS COMMON DURING HEAVY RAINFALL ON 26th & 27th JUNE, 1997.

### 1. INTRODUCTION

- 1.1 There has been a longstanding history of sewage flooding at Kingsland Cottages, Sayers Common.
- 1.2 Very heavy rainfall occurred between Sunday 22nd June and Friday 27th June, 1997. This resulted in further complaints of flooding from No. 4 Kingsland Cottages on 22nd and 26th June, 1997.
- 1.3 An overall inspection of the catchment for surface water flooding was carried out by Sewerage & Distribution Technical Services between 6.30pm and 7pm on 26th June, 1997. Co-incidentally, the resident of No 4 Kingsland Cottages, reported sewage flooding at his home at 6.50pm on that date. From this it is assumed that the surface flooding conditions observed at the time were those which caused the sewage flooding.
- 1.4 A second inspection was carried out between 4.30pm and 5.30pm on 27th June, 1997. There had been comparatively little rainfall during the afternoon. Flows had abated somewhat but were still evident. A number of residents were also

### 2. RESULTS OF FIRST INSPECTION ON 26/6/97

- 2.1 The whole catchment was inspected for surface water flooding and only the following was noted.
- 2.2 A substantial quantity of surface water was seen running northwards along the London Road towards its junction with Reeds Lane. Approximately 50% of this was drained by a gulley, to the east of the road junction, in the entrance to the pub car park. However, the remainder turned into Reeds Lane and flooded the recreation ground to the Southwest of the road
- 2.3 In Reeds Lane, all road gulleys, G3, G4 & G5, fronting Kingsland Cottages were blocked and a small quantity of runoff was seen entering the front garden of No.3, Kingsland Cottages. The quantity was insufficient to cause flooding around the buildings, however.
- 2.4 On the south side of Reeds Lane, there was a very large flow of water in the channel from the east. The source appeared to be fields, on either side of the road, to the west of the Environment Agency Depot. Surface water was also running into the road from the E.A. Depot. All of this flow entered road Gulley G2, which is connected to a land drainage culvert draining southwards to the east of No. 1 Kingsland Cottages. This land drainage culvert was flowing satisfactorily at half garden of property B, was also draining satisfactorily.
- 2.5 On the south side of the road, the front gardens of the two properties to the east of the E.A. Depot, properties A & B,

were severely flooded with surface water. IC6 which is on the foul system was under water. 3. RESULTS OF SECOND INSPECTION This inspection concentrated on Reeds Lane, in the vicinity of Kingsland Cottages. A large quantity of surface water was flowing out of the gulley G1 and running eastward, along the southern channel, to G2, which was draining satisfactorily. In the front garden of property A, immediately to the East of the E.A. depot, a pond has been filled and replaced by a 3.3 pipeline G1-LD2-LD1. This pipe was blocked downstream of LD2, possibly by the roots of a willow tree. The private foul drain serving this property is reported, also, to have also blocked with roots which were excavated out recently. Manhole LD2 on the blocked culvert was full and overflowing. A large part of the front lawn was flooded to a depth of approximately 6 inches. IC8 was above the level of this flooding, at the time, but is clearly at risk. In the next property eastwards, property B, there was very substantial flooding adjacent to the western boundary, in the drive and on the from lawn. IC6 was above the level of flooding on this occasion but flattening of the grass indicated that substantial flows had run off of the highway, into the garden, over the top of this cover. A steady flow of surface water was running northwards from the 3.6 rear of property B along its western boundary and collecting in the flooded area. Residents report that a ditch once ran along this boundary but has now been filled. The source of this runoff was a very heavily saturated lawn to the rear of The resident of property A reports that, during wet weather, there is substantial surface water runoff into the garden, from the fields to the rear and also from the Environment Agency Yard to the East. The resident of Lyndon reports that a well once existed on his 3.8 property and that during dry weather, groundwater levels never fell below eighteen inches from the surface. He also reports that the pond opposite was spring fed and confirms substantial runoff from the fields to the south of Reeds Lane. Private ICs in the area were inspected. However, this was a single man inspection and no sewer manhole covers could be 3.10 IC1 showed a good flow of groundwater. 3.11 IC2 was dry. 3.12 IC3 showed a slight trickle of groundwater. 3.14 IC4 showed a small trickle of groundwater. 3.15 IC5 was dry. 3.16 1C6 showed a very large flow of groundwater from the drain to - 2 -

the south. IC7 was leaking groundwater through a crack in the

- 3.17 IC8 showed a very large flow of groundwater, most of which appeared to be entering via a pipeline, running across the saturated rear lawn, from a mobile home.
- 3.18 The resident of No. 1 Kingsland Cottages reports that Surface water has run off of the road through her property in the past, but not in the last 18 months. The resident of Lyndon reports a similar problem, in the past, and has installed a drainage system in his drive to convey this runoff, under his garage, and into the rear garden. He confirms that road runoff has not been a problem in recent years.

John Challoner. 30/6/97.





### APPENDIX E PROPOSED DEVELOPMENT



Indicative Accommodation Schedule

Private Dwellings

18 Total

2 x 2 bed houses
2 x 2 bed bungalows
2 x 3 bed bungalows
8 x 3 bed houses

4 x 4 bed houses

Private Self Build Houses:

2 x 3 bed Houses

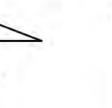
Affordable Dwellings:

4 x 2 bed houses 5 x 3 bed houses

9 Total

29 Grand Total Dwellings

Site for Doctor's Surgery (0.12 Acres) consisting of a two storey building of circa 1100 square feet, with 6 No. parking spaces.





	Job: Reeds Lane, Sayers (	Common.	
	Title:	i.	
ī	Scale:	Date:	
	1:500 @A1	Oct 2017	
	Drg No: 1636 / P / 10.02		R



# APPENDIX F ENVIRONMENT AGENCY CORRESPONDENCE

### Ryan Whitfield

From: SSD Enquiries [SSDEnquiries@environment-agency.gov.uk]

**Sent:** 18 October 2017 11:09

To: Kathryn Olive

Subject: 171008: SSD62360 - Flood Information Request - BN6 9LS

Dear Ms Olive,

Thank you for your request of 4 October 2017 to use Environment Agency Product 4 data for 17 Reeds Ln, Sayers Common, Hassocks, BN6 9LS.

The Environment Agency's records indicate that the above property is located in Flood Zone 1 (land assessed as having less than 0.1% (1 in 1,000) chance of flooding in any given year from rivers or the sea). Therefore the likelihood of flooding in this area is estimated as 'very low'.

The above property is approximately 1,300 metres away from Flood Zone 3.

We are therefore unable to provide data from our detailed fluvial or tidal models which is relevant to your site.

Please be aware that in February 2016 the Environment Agency updated its guidance on climate change allowances. The standard allowance of adding 20% to peak flows – as per previous guidance in the National Planning Policy Framework, may not be applicable for the purposes of informing development proposals. It is possible that our current modelling has under estimated flood risk when taking climate change into consideration. This does not however have an effect on Flood Zone 2 or 3. For further information please visit:

https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Further details about the Environment Agency information supplied can be found on the GOV.UK website:

https://www.gov.uk/browse/environment-countryside/flooding-extreme-weather

If you have requested this information to help inform a development proposal, then you should note the information on GOV.UK on the use of Environment Agency Information for Flood Risk Assessments

https://www.gov.uk/planning-applications-assessing-flood-risk https://www.gov.uk/government/publications/pre-planning-application-enquiry-form-preliminary-opinion

In regards to your queries on flooding history, we hold no record of previous flooding events affecting this site. We recommend that you contact the lead local flooding authority, West Sussex County Council or the local authority, Mid Sussex District Council for a more comprehensive flood history check.

For information about how surface water flooding is managed in the area please contact the Lead Local Flood Authority, West Sussex County Council.

If you have any queries or would like to discuss the content of this letter further please call us on 03708 506506 or reply to this email.

Yours sincerely

#### **Matthew Murphy**

**Customers and Engagement** 

Environment Agency | Chichester Office, Oving Road, Chichester, West Sussex, PO20 2AG

Matthew.Murphy@environment-agency.gov.uk

Working days: Monday to Friday



# Creating a better place for people and wildlife

From: KOlive@rsk.co.uk [mailto:KOlive@rsk.co.uk]

Sent: 04 October 2017 10:01

To: Enquiries, Unit <enquiries@environment-agency.gov.uk>

Subject: 171004/BA05 Flood Information Request - Sayers Common, Hassocks (881259)

Dear Sir/Madam,

Please could I order information on flooding and drainage for the following site in order to inform a Flood Risk Assessment:

17 Reeds Ln, Sayers Common, Hassocks BN6 9LS

Grid reference – 526432 E, 118224 N LOCATION PLAN ATTACHED

I would like all the flooding information you have including the following, if available:

- Confirmation of the site's Flood Zone designation, alternatively could you provide the flood flows and levels for a range of return periods including the 1 in 2, 10, 30, 100, 100+CC, 200, 1000,
- Information on the recently published climate change guidance for this area and how this may impact on the data available for the area,
- Information on surface water flood risk including flow pathways and depths,
- Information on historic flooding,
- Information on flood defences in the area, if any,
- Any data on existing surface water discharges to the surrounding watercourses,
- Any data on groundwater flooding,
- Any information on reservoir flooding; and,
- Any information on culverted watercourses or privates sewers which you know of which do not show up on the public sewer records.

Finally, please could you provide any recommendation on how the surface water is to be managed; for example, restrictions in discharge rates the requirements for SuDS, possible discharge locations and attenuation requirements?

We have a relatively quick turn around on this project and would therefore appreciate a quick response.

If you have any queries please don't hesitate to contact me.

Kind regards,

Kathryn

#### **Kathryn Olive**

Administrator
Land & Development Engineering

#### **RSK**

14 Beecham Court, Pemberton Business Park, Wigan, WN3 6PR, UK

Switchboard: +44 (0) 1942 493255 http://www.rsk.co.uk

RSK Land & Development Engineering Ltd is registered in England at Spring Lodge, 172 Chester Road, Helsby, Cheshire, WA6 0AR, UK

Registered number: 4723837

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# APPENDIX G MID SUSSEX COUNCIL MEETING COMMENTS

### MSDC PLANNING CONSULTATION RESPONSE - DRAINAGE

Application Number:

Pre-App

Planning Officer:

Joanne Fisher

Engineering Officer:

Scott Wakely

Date:

18/05/2017

Location:

Reeds Lane Sayers Common

Development Proposal:

36 dwelling

### Recommendation:

Advice

### Summary and overall assessment

This proposed development will need to fully consider how it will manage surface water runoff. Guidance is provided at the end of this consultation response for the various possibly methods. However, the hierarchy of surface water disposal will need to be followed and full consideration will need to be made towards the development catering for the 1 in 100 year storm event plus extra capacity for climate change.

As this is for multiple dwellings, we will need to see a maintenance and management plan that identifies how the various drainage systems will be managed for the lifetime of the development, who will undertake this work and how it will be funded.

The proposed development drainage will need to:

- Follow the hierarchy of surface water disposal.
- Protect people and property on the site from the risk of flooding
- Avoid creating and/or exacerbating flood risk to others beyond the boundary of the site.
- Match existing greenfield rates and follow natural drainage routes as far as possible.
- Calculate greenfield rates using IH124 or a similar approved method. SAAR and any other rainfall data used in run-off storage calculations should be based upon FEH rainfall values.
- Seek to reduce existing flood risk.
- Fully consider the likely impacts of climate change and changes to impermeable areas over the lifetime of the development.
- Consider a sustainable approach to drainage design considering managing surface water at source and surface.

- Consider the ability to remove pollutants and improve water quality.
- Consider opportunities for biodiversity enhancement.

#### Flood Risk

The proposed development is within flood zone 1 and is deemed as low fluvial flood risk.

The proposed development does have areas within the site that are identified as having possible pluvial flood risk. These are the eastern side of the site, part of which is the existing wetland/pond area.

There are not any historic records of flooding occurring on this exact site. This does not mean that flooding has never occurred here, instead, that flooding has just never been reported. There has been reported flooding in this area of Sayers Common and parts of Reeds Lane.

The public foul sewers of Reeds Lane surcharged and flooded properties as a result of surface water entering the system in the 1990's. Southern Water constructed capacity relief within the system to reduce the likelihood of this flooding occurring.

Parts of Reeds Lane are prone to surface water flooding during heavy rainfall, and there are records of flooding here.

There appears to be a shallow boundary ditch along the north and south boundary. There is a ditch along the eastern boundary, but this is in poor condition, with fallen trees and being heavily silted; and there is evidence that water has escaped the banks of the ditch and has flowed across the site.

The eastern ditch appears to be fed from a surface water drain serving part of Reeds Lane, though the actual outlet could not be found at the time of site visit due to vegetation.

There is a 6" outlet pipe in the site that discharges to a ground structure that looks like a swale, which in turn discharges to the wetland pond area. The origins of this pipe are unknown, but appear to be surface water.

### Flood Risk and Drainage Information for Planning Applications

The level of drainage information necessary for submission at each stage within the planning process will vary depending on the size of the development, flood risk, site constraints, proposed sustainable drainage system etc. The table below provides a guide and is taken from the <u>Practice Guidance for the English non-statutory SuDS Standards</u>

Pre-app	Outline	Full	Reserved	Discharge	Document submitted	
V	1	1			Flood Risk Assessment / Statement (checklist)	
1	1	1			Drainage Strategy / Statement & sketch layout plan (checklist)	
	1				Preliminary layout drawings	
	1				Preliminary "Outline" hydraulic calculations	
	1				Preliminary landscape proposals	
	1				Ground investigation report (for infiltration)	
	1	1			Evidence of third party agreement for discharge to their system (in principle / consent to discharge)	
		1		<b>V</b>	Maintenance program and on-going maintenance responsibilities	
		1	1		Detailed development layout	
		1	1	1	Detailed flood and drainage design drawings	
		1	1	1	Full Structural, hydraulic & ground investigations	
		1	1	1	Geotechnical factual and interpretive reports, including infiltration results	
		1	1	1	Detailing landscaping details	
		1	1	1	Discharge agreements (temporary and permanent)	
		1	1	1	Development Management & Construction Phasing Plan	

Additional information may be required under specific site conditions or development proposals

### Useful links:

Planning Practice Guidance - Flood Risk and Coastal Change

Flood Risk Assessment for Planning Applications

Sustainable drainage systems technical standards

Water. People. Places. - A guide for master planning sustainable drainage into developments

Climate change allowances - Detailed guidance - Environment Agency Guidance

Further guidance is available on the Susdrain website at http://www.susdrain.org/resources/

### Guidance for the level of information required is set out below:

### For a development located within Flood Zone 2, Flood Zone 3, which is greater than 1 hectare in area, or where a significant flood risk has been identified:

A Flood Risk Assessment (1) will need to be submitted that identifies what the flood risks are and how they will change in the future. Also whether the proposed development will create or exacerbate flood risk, and how it is intended to manage flood risk post development.

(1) This level of assessment will need to be carried out to our satisfaction by a suitably qualified person.

### For the use of SuDS (1) (2) (3):

Written Statement (HCWS 161) – Department for Communities and Local Government – sets out the expectation that sustainable drainage systems will be provided to new developments wherever this is appropriate.

Percolation tests, calculations, plans and details will need to be submitted to demonstrate that the development will be able to cater for the 1 in 100 year storm event plus climate change percentages, for some developments this will mean considering between 20 and 40% additional volume for climate change but scenarios should be calculated and the worst case taken as this will be precautionary <sup>(4)</sup>. A maintenance and management plan will also need to be submitted that shows how all SuDS infrastructure will be maintained so it will operate at its optimum for the lifetime of the development. This will need to identify who will undertake this work and how it will be funded. Also, measures and arrangements in place to ensure perpetuity and demonstrate the serviceability requirements, including scheduled maintenance, inspections, repairs and replacements, will need to be submitted. A clear timetable for the schedule of maintenance can help to demonstrate this.

<sup>(1)</sup> Suitable SuDS Guidance can be found using CIRIA Guidance Document C697 "SuDS Manual"

<sup>(2)</sup> Climate Change consideration should be calculated following Environment Agency Guidance

<sup>(3)</sup> Approved method of soakaway design include BRE - Digest 365 "Soakaway Design"

<sup>(4)</sup> Submitted SuDS designs will need to be undertaken by a suitably qualified person

### For the use of attenuation, swales and soakaways (1):

Percolation tests, calculations, plans and details will need to be submitted to demonstrate that the development will be able to cater for the 1 in 100 year storm event plus have 40% capacity for climate change<sup>(2)</sup>.

### For the use of Public Sewers (1):

Copies of the approval of the adoption of foul and surface water sewers and/or the connection to foul and surface water sewers from the sewerage undertaker, which agrees a rate of discharge, will need to be submitted.

### For the proposal of works to an Ordinary Watercourse:

If works (including temporary works) are undertaken within, under, over or up to an Ordinary Watercourse these works are likely to affect the flow in the watercourse and an Ordinary Watercourse Consent (OWC) may need to be applied for. OWC applications can be discussed and made with Mid Sussex District Council, Scott Wakely, 01444 477 005. There is guidance and a form available <a href="https://example.com/here/be/le/bases/bases/">here</a>

### For the use of watercourse to discharge surface water (1):

Calculations, plans and details will need to be submitted that demonstrate that discharge from the proposed development will be restricted to Greenfield run-off rate or QBar run-off rate, whichever provides the better rate of discharge<sup>(2)</sup>. This will need to be for up to the 1 in 100 year storm event plus 40% capacity for climate change.

Institute of Hydrology - Report 124 - "Flood Estimation for Small Catchments"

Centre for Ecology & Hydrology 1999 - "Flood Estimation Handbook" - (FEH)

WinDes Software - Generated FEH Output

(For Highway) DMBR Standards HA106/04 - "Drainage of Runoff from Natural Catchments"

### For the presence of an Ordinary Watercourse running through or adjacent to the site:

Consultation will need to be made with Mid Sussex District Council if there is a watercourse running through or adjacent to the proposed development. It is common practice to require the development to leave a strip of land, at least 5 to 8 metres wide, in order to provide access for future maintenance.

### For the presence of a Public Sewer running under or adjacent to the proposed development:

Consultation will need to be made with the sewerage undertaker if there is a Public Sewer running under or adjacent to the proposed development. Building any structure over or within close proximity to such sewers will require prior permission from the sewerage undertaker <sup>(1)</sup>. Evidence of approvals to build over or within close proximity to such sewers will need to be submitted.

<sup>(1)</sup> Approved method of soakaway design include BRE – Digest 365 "Soakaway Design"

<sup>(2)</sup> Climate Change consideration should be calculated following Environment Agency Guidance

<sup>&</sup>lt;sup>(1)</sup>Any design and construction of sewers should follow the standards of the WRC guidance "Sewers for Adoption" and should be agreed with the appropriate sewerage authority.

<sup>(1)</sup> In accordance with The Land Drainage Act 1991.

<sup>(2)</sup> Approved methods to calculate this include:

<sup>(1)</sup>Southern Water and Thames Water provide suitable online guidance notes for the building over or near Public Sewers.

### For the presence of a Mid Sussex District Council (MSDC) owned culvert running under or adjacent to the site:

Consultation will need to be made with Mid Sussex District Council if there is a MSDC owned culvert running under or adjacent to the proposed development. Building any structure over or within close proximity to such culverts will require prior permission from Mid Sussex District Council. Normally it will be required that an "easement" strip of land, at least 5 to 8 metres wide, is left undeveloped to ensure that access can be made in the event of future maintenance and/or replacement. This matter can be discussed with Mid Sussex District Council, Scott Wakely, 01444 477 055.



# APPENDIX H GREENFIELD RUNOFF CALCULATIONS

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Date 16/10/2017 10:40	Designed By rwhitfield	
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#### ICP SUDS Mean Annual Flood

#### Input

Return Period (years) 1 Soil 0.450
Area (ha) 1.374 Urban 0.000
SAAR (mm) 800 Region Number Region 7

# Results 1/s QBAR Rural 7.1 QBAR Urban 7.1 Q1 year 6.0

Q1 year 6.0 Q30 years 16.0 Q100 years 22.5



# APPENDIX I ATTENUATION BASIN CALCULATIONS

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Elstree Computing Ltd	Source Control W.12.5	

### Summary of Results for 100 year Return Period (+40%)

Storm Event		Max Level (m)	Max Depth (m)	Max Control (1/s)	Max Volume (m³)	Status	
15	min	Summer	15.500	0.400	6.6	180.1	ОК
30	min	Summer	15.614	0.514	6.6	240.5	ОК
60	min	Summer	15.723	0.623	6.6	302.5	Flood Risk
120	min	Summer	15.818	0.718	6.6	359.8	Flood Risk
180	min	Summer	15.860	0.760	6.6	386.0	Flood Risk
240	min	Summer	15.880	0.780	6.7	398.9	Flood Risk
360	min	Summer	15.898	0.798	6.7	410.4	Flood Risk
480	min	Summer	15.898	0.798	6.7	410.3	Flood Risk
600	min	Summer	15.893	0.793	6.7	407.2	Flood Risk
720	min	Summer	15.887	0.787	6.7	403.1	Flood Risk
960	min	Summer	15.871	0.771	6.6	392.7	Flood Risk
1440	min	Summer	15.832	0.732	6.6	368.4	Flood Risk
2160	min	Summer	15.769	0.669	6.6	330.2	Flood Risk
2880	min	Summer	15.707	0.607	6.6	293.0	Flood Risk
4320	min	Summer	15.582	0.482	6.6	223.1	O K
5760	min	Summer	15.463	0.363	6.6	161.0	O K
7200	min	Summer	15.373	0.273	6.6	117.2	O K
8640	min	Summer	15.316	0.216	6.5	90.7	O K
10080	min	Summer	15.282	0.182	6.3	75.6	O K

	Stor Even		Rain (mm/hr)	Time-Peak (mins)
15	min	Summer	131.851	26
30	min	Summer	88.566	40
60	min	Summer	56.713	70
120	min	Summer	35.004	128
180	min	Summer	25.973	186
240	min	Summer	20.877	244
360	min	Summer	15.365	362
480	min	Summer	12.341	460
600	min	Summer	10.402	512
720	min	Summer	9.042	574
960	min	Summer	7.241	702
1440	min	Summer	5.284	976
2160	min	Summer	3.848	1388
2880	min	Summer	3.068	1792
4320	min	Summer	2.226	2560
5760	min	Summer	1.771	3280
7200	min	Summer	1.483	3896
8640	min	Summer	1.284	4576
10080	min	Summer	1.137	5240

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Elstree Computing Ltd	Source Control W.12.5	

### Summary of Results for 100 year Return Period (+40%)

	Storm Event	Max Level (m)	Max Depth (m)	Max Control (1/s)	Max Volume (m³)	Status
15	min Winter	15.543	0.443	6.6	202.4	ОК
30	min Winter	15.667	0.567	6.6	270.4	O K
60	min Winter	15.787	0.687	6.6	340.6	Flood Risk
120	min Winter	15.892	0.792	6.7	406.5	Flood Risk
180	min Winter	15.940	0.840	6.9	437.7	Flood Risk
240	min Winter	15.965	0.865	7.0	454.1	Flood Risk
360	min Winter	15.990	0.890	7.1	470.6	Flood Risk
480	min Winter	15.995	0.895	7.1	474.1	Flood Risk
600	min Winter	15.990	0.890	7.1	470.6	Flood Risk
720	min Winter	15.979	0.879	7.0	463.5	Flood Risk
960	min Winter	15.960	0.860	7.0	450.4	Flood Risk
1440	min Winter	15.908	0.808	6.8	416.5	Flood Risk
2160	min Winter	15.818	0.718	6.6	359.7	Flood Risk
2880	min Winter	15.724	0.624	6.6	303.4	Flood Risk
4320	min Winter	15.527	0.427	6.6	193.7	O K
5760	min Winter	15.357	0.257	6.6	109.6	O K
7200	min Winter	15.281	0.181	6.3	75.0	O K
8640	min Winter	15.251	0.151	5.6	61.8	O K
10080	min Winter	15.233	0.133	5.0	54.1	O K

Storm			Rain	Time-Peak
	Even	t	(mm/hr)	(mins)
15	min	Winter	131.851	26
30	min	Winter	88.566	40
60	min	Winter	56.713	68
120	min	Winter	35.004	126
180	min	Winter	25.973	182
240	min	Winter	20.877	240
360	min	Winter	15.365	354
480	min	Winter	12.341	464
600	min	Winter	10.402	568
720	min	Winter	9.042	654
960	min	Winter	7.241	748
1440	min	Winter	5.284	1056
2160	min	Winter	3.848	1504
2880	min	Winter	3.068	1936
4320	min	Winter	2.226	2724
5760	min	Winter	1.771	3288
7200	min	Winter	1.483	3832
8640	min	Winter	1.284	4504
10080	min	Winter	1.137	5240

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#### Model Details

Storage is Online Cover Level (m) 16.000

### Tank or Pond Structure

Invert Level (m) 15.100

Depth (m) Area (m²) Depth (m) Area (m²)

0.000 385.0 0.900 676.1

### Hydro-Brake® Outflow Control

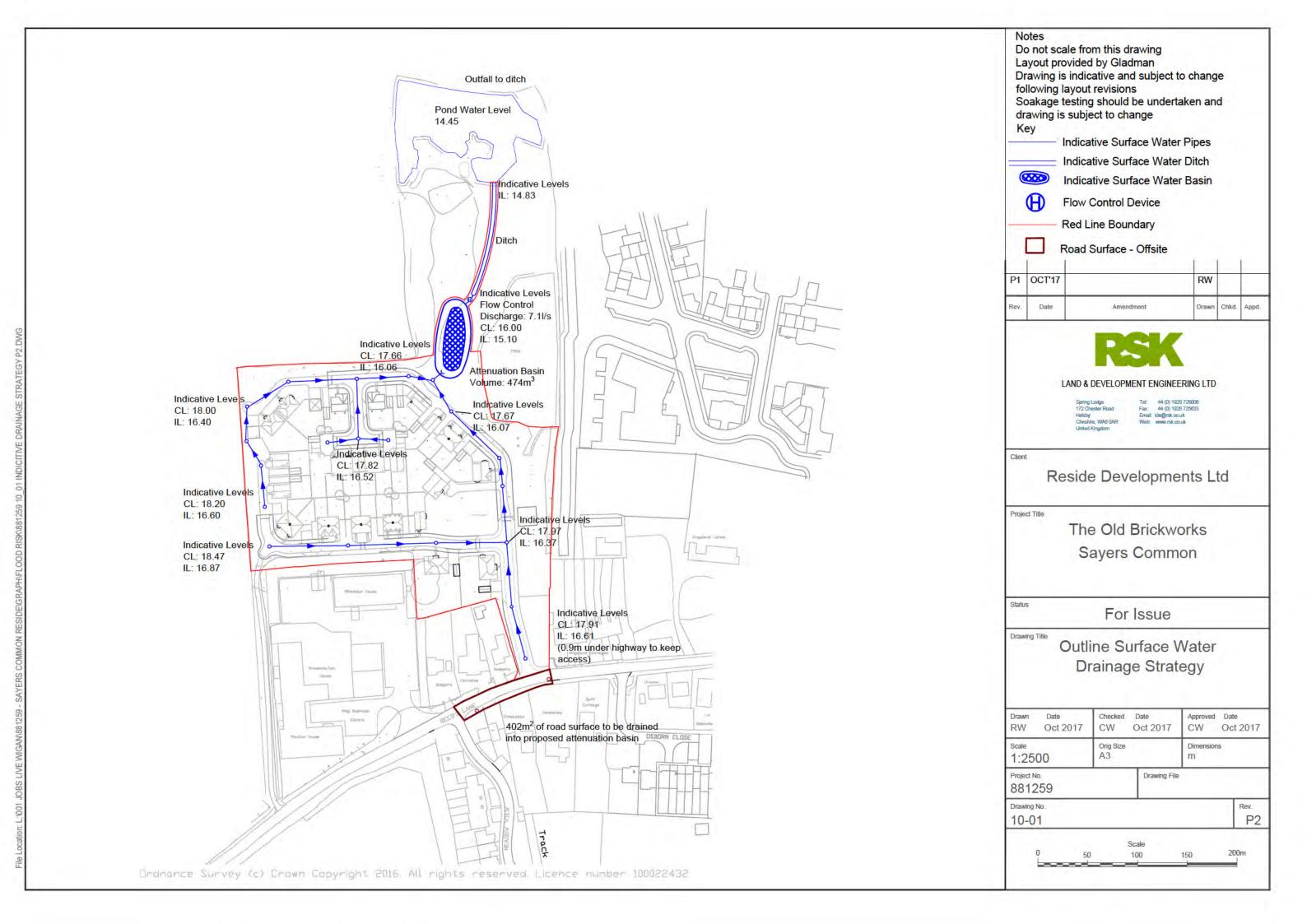
Design Head (m) 0.900 Diameter (mm) 114
Design Flow (1/s) 7.1 Invert Level (m) 15.100
Hydro-Brake® Type Md6 SW Only

Depth (m)	Flow $(1/s)$						
0.100	3.6	1.200	8.1	3.000	12.8	7.000	19.6
0.200	6.5	1.400	8.8	3.500	13.9	7.500	20.3
0.300	6.6	1.600	9.4	4.000	14.8	8.000	21.0
0.400	6.2	1.800	9.9	4.500	15.7	8.500	21.6
0.500	6.1	2.000	10.5	5.000	16.6	9.000	22.2
0.600	6.2	2.200	11.0	5.500	17.4	9.500	22.9
0.800	6.7	2.400	11.5	6.000	18.2		
1.000	7.4	2.600	12.0	6.500	18.9		

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### APPENDIX J OUTLINE SURFACE WATER DRAINAGE STRATEGY





## Report presented by



Reside Developments Ltd The Dutch House 132-134 High Street Dorking RH4 1BG

Telephone: 01306 877500

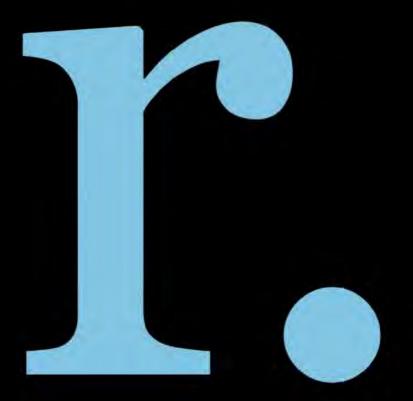
Email: amunton@residedevelopments.co.uk

residedevelopments.co.uk

# reside.

## The Old Brickworks, Reeds Lane Sayers Common

Phase 1 Desk Study & Site Reconnaissance Report



## Phase I Desk Study & Site Reconnaissance Report

at Reeds Lane, Sayers Common, West Sussex BN6 9LS

for Reside Developments Ltd

Report Reference: LP1490

Report Date: 23rd October 2017

#### Leap Environmental Ltd

The Atrium, Curtis Road, Dorking, Surrey, RH4 1XA tel +44 (0) 1306 646510

tax +44 (0) 1306 646511 www.leapenvironmental.com

South Coast Regional Office: Premier House, Victoria Road, Burgess Hill, West Sussex, RH15 9LR

Kent Regional Office: Spelmonden Old Oast, Spelmonden Farm, Goudhurst, Kent, TN17 1HE

Berkshire Regional Office: Wyvols Court, Swallowfield, Reading, RG7 1WY



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## **EXECUTIVE SUMMARY**

The site comprises of a disused brickworks, now grass and scrub land, which extends to about to 2.01Ha in an L shape, and is situated just off Reeds Lane, Sayers Common BN6 9LS. It is proposed to redevelop the site into a number of one and two storey buildings with private gardens and public open space. The proposed net developable area for the site is 1.11Ha.

The site has a history of use as a brickworks pre 1950's. The desk study has identified a number of potential sources of contamination associated with the site's former use, and sparing fly tipped waste.

The site is not affected by radon gas.

The site is mapped as being underlain by Weald Clay, with many identified infilled clay pits.

The site is not mapped by the Environment Agency in a flood risk zone.

Groundwater is not anticipated to be to be found on site due to the unproductive strata of the Wealden Beds.

Potential pollutant linkages involving residents and soil contaminants include direct ingestion of soil, ingestion of soil attached to plants as well as via plant uptake, inhalation of indoor and outdoor vapours; ingestion of water carried by plastic water pipes through contaminated ground; and, dermal contact / inhalation of fugitive soil and household dust have been identified. As well as with contaminants that may have migrated into the ponds located across the site that are also linked via ingestion or dermal contact.

The only low to moderate risk found was to residents, construction workers and neighbouring residents was via potential asbestos found in made ground within the site and its release into the environment during and after construction.

Deepened foundations should be a consideration due to shrinkable clay soils, mature trees and made ground across the site. Localised made ground associated with the sites previous use as a brickworks have resulted in infilled pits and raised mounds which will require excavation to natural soil.

There are a number of mature trees scattered along the site boundary and sparingly within that could result in heave.

The soils on site may be associated with pyritic ground conditions, and aggressive ground conditions with respect to concrete should be anticipated on site, particularly at depth.

It is considered that the information gathered in this report is sufficient for an outline planning permission.



Should the site be progressed for redevelopment it is recommended that a Phase II intrusive site investigation should be carried out to ascertain the presence and extent of made ground, the ground profile as well as to conduct in situ and laboratory geotechnical testing for foundation design purposes. Selected samples should also be tested for a range of contaminants, including heavy metals, petroleum hydrocarbons (PHC), polyaromatic hydrocarbons (PAH) and asbestos. Gas monitoring will be required if significant depths of made ground and/or hydrocarbon contamination is encountered.

As with any redevelopment site, there is always the risk of hitherto undetected contamination, and further investigations should be carried out prior to redevelopment.





## A INTRODUCTION

## I Authority

Leap Environmental Ltd (hereafter referred to as ) has been appointed by Reside Developments to undertake a Phase I Desk Study of a site referred to as Reeds Lane, Sayers Common. The instruction was given in an email dated 26th September 2017 and signed by Andrew Munton of Reside Holdings Ltd.

## 2 Objective

understands that the site area is 2.01Ha with a net developable area of 1.11Ha and it is proposed to redevelop the site with approximately 23No residential dwellings of both one and two storeys, as per the attached layout in Figure 1.

The proposed development is currently at a preplanning phase and has been assessed in accordance with BS EN 1997, as being a Geotechnical Category I structure.

The objectives of this report are to:

- Provide information on the geotechnical and environmental quality of the ground present on the site;
- Assess the potential health and other environmental risks posed by the site to the proposed development and to other specifically identified receptors; and
- Assess the potential for offsite contamination to adversely affect the proposed development.

## 3 Scope of Works

This report describes a two stage process whereby the site is investigated and risks are assessed. The terms geotechnical and geoenvironmental are referred to throughout the report.

Geoenvironmental refers principally to the chemical nature of the ground and the degree of soil, water and/or land gas contamination and the impact that contamination may have on current or future development and also on the wider environment.

Geotechnical refers to all other aspects of the ground conditions and the impact they may have on the physical construction of existing or future development, principally foundations, slope stability, drainage, pavement and road design and groundwater control.



The investigation comprises two phases of work.

## 3.1 Phase | Scope

This report presents the results of a desk study and site reconnaissance. It provides a review of previous site investigation and remediation validation reports, where they have been made available by the Client or where has been able to locate that information from third party sources. The following sources of information have also been reviewed:

- Envirocheck database report
- Envirocheck Historical map Search
- British Geological Survey (BGS) mapping
- British Geological Survey website (<u>www.bgs.ac.uk</u>) including historic BGS borehole data
- Unexploded WWII aerial delivered bomb (UXB) regional risk maps produced by Zetica
- Mid Sussex District Council Planning and Licensing and West Sussex County Council Planning and Licensing records checked on 13th October 2017 via an internet search

A site reconnaissance was carried out on 9th October 2017.

The desk study and site reconnaissance have been used to develop an initial conceptual site model, which forms the basis for the site investigation strategy. The initial site conceptual model is used to identify geotechnical and geoenvironmental hazards and the qualitative degree of risk associated with them. In terms of the geoenvironmental assessment the conceptual site model is used to identify potential sources of contamination, potential receptors and pathways by which the two may be connected. These are known as possible pollutant linkages and it is these pollutant linkages that are key to contaminated land risk assessment.

The Phase I investigation is also referred to as a Preliminary Investigation.

## 4 Limitations

BS 10175:2011 Investigation of Potentially Contaminated Sites - Code of Practice.



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This report has been prepared by Leap Environmental Ltd on the basis of information received from a variety of sources which Leap Environmental Ltd believes to be accurate. Nevertheless, Leap Environmental Ltd cannot and does not guarantee the authenticity or reliability of the information it has obtained from others.

Leap Environmental Ltd has used all reasonable skill, care and diligence in the design and execution of this report, taking into account the manpower and resources devoted to it in agreement with the Client. Although every reasonable effort has been made to obtain all relevant information, all potential contamination, environmental constraints or liabilities associated with the site may not necessarily have been revealed.

The conclusions reached in this report are necessarily restricted to those which can be determined from the information consulted and may be subject to amendment in the light of additional information becoming available. These conclusions may not be appropriate for alternative schemes.

This report is confidential to the Client, and Leap Environmental Ltd accepts no responsibility whatsoever to third parties to whom this report, or any part thereof, is made known, unless formally agreed by Leap Environmental Ltd beforehand. Any such party relies upon the report at their own risk.

Full details of the limitations are provided in Appendix A.



## B PHASE I - DESK STUDY

## 5 Environmental Setting

## 5.1 Site Location and Description

The site is a field and is located to the rear of the Kings Business Centre at Reeds Lane, Sayers Common, West Sussex BN6 9LS.

The approximate National Grid Reference of the site is TQ 263182. The site lies at an estimated elevation of 16.5m Above Ordnance Datum (mAOD) and covers an area of 2.01Ha.

#### J. I. I General Description and Boundaries.

The current site layout is shown in Figure 1, Appendix B. A walkover survey was carried out on 9<sup>th</sup> October 2017 and photographs are included within Appendix E. The site is L shaped and comprises a disused brick field, with areas of grass and scrub land, and several ponds.

The site is access via a grassed track that runs along the western boundary of the Kings Business Centre, and leads to the roughly square shaped western area of the site. The smaller western area comprises a large field, the southern half of which is grassed, whilst the northern half comprises scrub land, overgrown with weeds and brambles. In general, this area of the site is relatively flat, although there was some evidence to suggest the scrub land may be slightly lower lying, however due to the dense vegetation cover it was not possible to confirm this. There were several small overgrown mounds in this area of the site. The largest was situated in the centre and appeared to comprise logs and vegetation waste. Smaller overgrown mounds were located in the south east corner and included building materials such as slates, bricks and wood. A small metal above ground fuel tank with external metal bund was located in the south west corner of this area, adjacent to the southern boundary with the business centre, and a small electricity sub-station was noted within the business centre adjacent to the boundary. A very shallow dry ditch is located along the southern boundary, and scattered waste including bottles, tyres and pipe were noted in the vicinity. Mature trees including oak and silver birch line the ditch and a derelict caravan, trailer and two vans are located in this area.

The western area is bounded by the Kings Business Centre to the south, open fields to the west and mature woodland to the north.

The larger eastern area of the site is rectangular in shape, extending to the north and south beyond the western area of the site. A shipping container, corrugated metal shed and wooden shed are located adjacent to the north east corner of the business centre. They were in a poor state of repair, and contained office furniture and scrap wood, although it is noted the metal shed was locked. To the south of the sheds along the site boundary were noted further piles of building materials including corrugated sheeting, plastic containers, and the rusted under chassis of a trailer. The southern section of the eastern area comprises grass land and



is bounded by the rear gardens of residential properties fronting onto Reed Lane. This area appears to be in use, possibly by the adjacent residents. A collection of sheds containing tools and gardening equipment are located in the south east corner, along with patio areas with garden furniture, water butts, composters, a greenhouse and planters currently being used to grow vegetables. A small wooden shed is also located along the southern boundary.

To the north of the grassed area the site changes to overgrown scrub land, with a grassed track leading north along the western side of the scrub area. A small corrugated metal shed is located to the west of this track, and rushes and reeds were also noted in this area. Scattered trees are located across the scrub land, and two smaller ponds and a large pond are located along the eastern boundary, surrounded by mature trees. A pile of tyres and a small metal shed was noted in this area, Generally the site is relatively flat here, although ground levels reduce in the vicinity of the ponds and the scrub land again appeared to be slightly lower lying than the grassed land in the south.

To the north of the scrub and ponds the site then becomes grassed with numerous overgrown clusters of trees through the centre of the site and mature trees along the site boundaries. Clusters of reeds and rushes were noted in this area. A dry ditch runs along the western site boundary, adjacent to the woodland off site, and leads to the large pond in the north of the site. A second ditch may run along the eastern boundary, however it was not possible to confirm this as the boundary was heavily overgrown. The central area of the site is generally relatively flat.

At the north end ground levels drop down by about 1.5m to the banks of a large irregular shaped pond, surrounded by mature trees. Mature woodland bounds this area of the site to the north, east and west.

There is evidence of small bonfire areas across the eastern half of the site.

Overhead electricity lines supported by wooden pylons traverse the northern half of the western site area and continue across the centre of the eastern area in an east to west orientation.

Scattered mature trees dominate the north and central part of the eastern site area, including numerous mature oaks, ash and silver birch.

In general, with the exception of the pond areas, the site and the surrounding topography were noted to be relatively flat.

Overall the site is bounded by Furze Field wood to the northwest and open fields to the north and northeast, further tree lined fields lie to the east beyond which are a series of residential houses and roads of Sayers Common. In the south the site is bounded by the Kings Business Centre development, residential properties and Reeds lane beyond. To the west of the site is open grassed field.



The Kings Business Centre includes several office and warehouse buildings. Current users were noted to be P@v IT services, North Star (a used car dealership), and ACS Group. Other than the car dealership and the small electricity sub-station, no obvious signs of potential contaminative uses such as tanks, chemical stores etc were noted, however a full walkover survey of the Business Centre was beyond the scope of works.

## 5.2 Geology

The geology of the site has been ascertained by reference to the 1:50,000 British Geological Survey sheet 318/333, solid and drift edition, the BGS website (<a href="www.bgs.ac.uk">www.bgs.ac.uk</a>) and the Envirocheck report. The site is mapped as being underlain by Weald Clay Formation, there are no superficial deposits mapped on the subject area, however the Weald Clay is shown to have some sandstone layers present to the north. There are River Terrace Deposits marked 500m to both the east and west of the site.

#### 5.2.1 Drift

There are no superficial deposits mapped on the site.

#### 5.2.2 Weald Clay

The Weald Clay are Lower Cretaceous deposits. They comprise of mostly shales and mudstones known as the Weald Clay with subordinate beds of siltstones, sandstones, shelly limestones and clay ironstones. When fresh the beds are normally dark grey but weather to yellow and brown. Conspicuous bands of red clay also occur usually in close association with sandstone beds.

#### 5.2.3 BGS Boreholes

The online BGS Geoindex (<a href="http://www.bgs.ac.uk/geoindex/">http://www.bgs.ac.uk/geoindex/</a>) has been reviewed for detailed local geological and hydrogeological information. No Boreholes have been identified within 500m of the site.

## 5.3 Hydrogeology

#### Table I - Hidrogeology data

Superficial Deposit	None		
Bedrock	Weald	Clay	Unproductive Strata
Source Protection Zone	N/A		
Licensed Abstractions	None		



The hydrogeology of the site has been ascertained from the Envirocheck data report. The source of the data is reported to be the Environment Agency groundwater vulnerability mapping.

The underlying Wealden Beds is classed as unproductive strata, however, as shown by the BGS website, there may be some sandstone on site due to the nature of the local geology, which is classed as a Secondary A Aquifer.

The Envirocheck lists no active abstraction licences within 1000m of the subject site.

## 5.4 Hydrology

There are surface water features within the site and adjoining the site boundary comprising a series of ponds. These ponds are potentially man made due to the previous land use as a brick field.

The closest surface water feature for which the Environment Agency have surface water quality data is Herrings stream, which is located 859m north of the site and has a river quality grade of C (average).

The Envirocheck report indicates that there are two discharge consents within 250m of the site, the nearest is 62m to the south and is for the discharge of final treated effluent into a River Adur tributary from a domestic property. The other consent is located 194m to the southwest, again for discharge of final treated effluent into freshwater rivers from a domestic source.

## 5.5 Flooding

According to the Environment Agency, the site is not located within a flood zone.

## 5.6 Designated Environmentally Sensitive Sites

A review of designated environmentally sensitive sites presented within the Envirocheck report has been carried out. The dataset makes reference to a number of sensitive sites including the following:

- Sites of Special Scientific Interest (SSSI);
- Records of National Nature Reserves (NNR);
- Areas of Special Conservation (SAC);
- Records of Special Protection Areas (SPA);
- · Records of Ramsar Sites;
- Records of Local Nature Reserves;
- Ancient Woodland Records.



Three have been recorded within 1000m of the site. The nearest site is Sayers Common Wood and is located 265m to the southeast of the site. It is listed as an Ancient of Semi-Natural Woodland, as are the other two that are reported in the Envirocheck; Laundry Wood and Coombe Wood are 333m west and 478m southeast respectively.

## 5.7 Ground Workings

The Envirocheck report states that there were previously ground workings on the site, Sayers Common Brickworks. This was thought to have ceased production between 1952 and 1956.

## 5.8 Mining, Extraction and Natural Cavities

The Envirocheck report indicates the site is not situated within an area affected by coal mining.

## 6 Site Usage

#### 6.1 Current Land Use

The current site layout is shown in Figure 1, Appendix B.

The site is currently not in use.

There are no active contemporary trade directory entries on site reported in the Envirocheck database search.

#### 6.2 Evidence of Onsite Contamination

A walkover survey was carried out on 9th October 2017.

The following features were identified as possible sources of contamination:

- Several mounds in the southeast corner, including bricks, slates, wood and vegetation waste,
- Small metal above ground fuel tank in the southwest corner,
- Scattered fly tipped waste in the southern boundary ditch,
- Bonfire locations in the eastern half of the site.

The ponds are most likely some of the disused pits from the old brickworks, that were not infilled with material.

#### 6.2.1 Chemical Storage

There is one above ground fuel storage tank located on site. It has an external metal bund and is located in the southwest corner of the site.



#### 6.3 Neighbouring Land Use

The following features were identified as possible sources of contamination:

- Small electricity substation at the southern boundary adjacent to the Kings Business Centre,
- Shipping container, with furniture and scrap wood, and piles of corrugated sheets, plastic containers and rusted chassis at the northeast corner of the kings Business Centre.

The Envirocheck report details no fuel stations within 250m of the subject site.

## 6.4 Site History

The contaminative and development history of the site has been ascertained with reference to the Ordnance Survey historical maps

In summary the site was formerly a brick works, but has been derelict open space since 1974.

#### 6.4.1 Historical Map Evidence

The historical Ordnance Survey maps provided spanned the period from 1874 to present day at scales of 1:10,000, 1:2,500. The maps are included in full in Appendix C.

Table 2: Summary of Historical Map Evidence

Year	On site	Surrounding area
1874-1899 1: 2,500 1: 10,000	The west of the site is open field and looks to be separated from the east of the site. The east is shown as a brick field with two clay pits in its northwest and western areas, a kiln is located in the southeast corner. There are unnamed structures on site. The northern area of the site shows another old clay pit, that extends along the west perimeter with Furze Field; the rest of the northern area is open field. The majority of the site is lined intermittently with trees.	The surrounding areas look to be open field, with the exception of the northwest area of Furze Field which extends 274m west. 300m east of the subject area lies a road running north-south, along this road the settlement of Sayers Common can be found; Shown with allotment gardens to the east, in the north a school and a smithy in the south are all approximately 300-350m from the site. Two buildings labelled Kingsland Cottages are directly south of the site; Sayers Common Wood is located 350 southeast, and the village common 200m south. A drinking well is situated 800m southwest.



1910-1912 1: 2,500 1: 10,000	The brick works is now labelled as a Brick and Tile Works and trees are no longer shown to be lining the site.	The village common to the south is no longer shown, the land is now a field with Reeds Lane running through it.
1937-1952 1: 2,500 1: 10,000	Previous clay pits are no longer present and are now mapped as areas of Osier and Reed growth, however a new pit is shown in the previously unused western side of the site.	There has been further expansion of Sayers Common village on road adjacent to the east of the subject area.
1956-1963 1: 2,500 (: 10,000	The brickworks are no longer on site, the former buildings are now found as ruins and the old pit areas are Osiers and Reeds with ponds. There are tracks that cross the site between these ruins. Where the current access track is located on the western boundary is, now has what looks to be a farm building.	Further expansion of village, and the well to the southwest is no longer marked on the map.
1974-1977 1: 2,500 1: 10,000	Ruins of old brickworks have disappeared from maps, and the reed growth areas have retreated to the north of the site. The pond previously mapped on the west of the site is no longer shown suggesting that it may have been backfilled. There is now a track running north south up form Reeds Lane towards the main body of the site, in this area there is now a sizable structure named as a depot.	There has been development mainly in the village to the east of the site, however directly south of the site there are now named buildings. I 200m to the west of the site a lies Valley Farm, a series of I2 structures and I00m to the southwest Whiteoaks Farm with 3 buildings.
1982-1994	No changes noted.	Whiteoaks Farm has expanded to 12 buildings.



1: 2,500		
12 10,000		
1996-2000	The water bodies on site, previously mapped as ponds	now the Kings Business Centre, and
1: 10,000	have developed to a bigger size, approx. 4000m <sup>2</sup>	further development of the village. Whiteoaks Farm structures have expanded,

## 6.5 Unexploded Ordnance (UXO)

The risks from unexploded ordnance have been assessed in accordance with CIRIA guidance<sup>2</sup>. A non-UXO specialist preliminary screening assessment has been carried out. The risks have been assessed by considering firstly the likelihood of military activities on, or in the vicinity of the site as determined from the desk study and historical review. Secondly the risk of UXO has been assessed by reference to the unexploded WWII aerial delivered bomb (UXB) regional risk maps produced by Zetica.

The Zetica risk maps indicate a low risk. Hence the overall risk of UXO is rated as low.

## 6.6 Waste Planning and Landfill Records

#### 6.6.1 Recorded Landfill Sites

The Environment Agency website and Envirocheck contain details on areas of historic and active landfilling in the vicinity of the site.

The site is reported as a Local Authority Recorded Landfill site by West Sussex County Council. It is presumed this is infilling from the old clay pits due to the site's past use as a brick works; although there are no details from the Envirocheck on the type of waste or when this infilling took place. Based on the historic maps described above it is assumed that pits on eth western part of the site were backfilled sometime between 1952 and 1974, pre landfill licensing.

There are no other areas of historic or active landfill listed within 500m of the subject site. According to the Envirocheck report, landfill records have been provided by Mid Sussex District Council and West Sussex County Council.

A search has been made with the local authority. If any further information is supplied the desk study will be updated and re-issued as part of the site investigation works.

<sup>&</sup>lt;sup>2</sup> CIRIA C681 2009. Unexploded ordnance (UXO) - A guide for the construction industry



## 6.7 Radon

According to the Envirocheck database search, the site is not within a radon affected area (less than 1% of homes are above the action level for radon). Therefore, no special protective measures are required in the construction of buildings on this site, in respect of radon gas.



## C PRELIMINARY CONCEPTUAL SITE MODEL

#### 7 Environmental Risk Assessment

## 7.1 Conceptual Site Model (CSM)

A risk based approach is used to assess contaminated or potentially contaminated land within the UK. For a potential risk to exist, there must be a pollutant linkage in place, i.e. there must be a source of contamination, a potential receptor, and a pathway linking the two.

In order to quantify the magnitude of the risk, it is necessary to first calculate the potential exposure of the receptor as a result of all the individual active pollutant linkages affecting that receptor. Secondly it is necessary to ascertain "what is an acceptable exposure level for each of the identified receptors and contaminants?".

The purpose of the Conceptual Site Model, in this instance, is to identify all of the potential pollutant linkages by considering, in turn, the potential sources, receptors and pathways.

#### 7.2 Sources

#### 7.2.1 Onsite Sources

Based on a review of the available site information, the following contaminants of concern are proposed:

Table 3: Onsite sources of contamination

Source	Contaminants of Concern
Historic Brickworks Buildings	Heavy metals, petroleum hydrocarbons (PHC).
Historic Brickworks - backfill	Heavy metals, polycyclic aromatic hydrocarbons (PAH), petroleum hydrocarbons (PHC), ground gases/vapours, leachates, phenols, sulphates, acids and alkalis, (low/high soil pH), SVOC, VOC
Made ground mounds	Heavy metals, polycyclic aromatic hydrocarbons (PAH), petroleum hydrocarbons (PHC), ground gases/vapours, leachates, phenols, sulphates, acids and alkalis, (low/high soil pH), SVOC, VOC
Fuel tank	Heavy metals, polycyclic aromatic hydrocarbons (PAH), petroleum hydrocarbons (PHC).



Vehicle storage	Heavy metals, polycyclic aromatic hydrocarbons (PAH), petroleum hydrocarbons (PHC).			
Bonfire sites	polycyclic aromatic hydrocarbons (PAH). Heavy metals			

The previous use of land was for a brickworks, its associated pits across the site are of primary concern as the infill of these areas is as of yet unknown; interrogation of both the West Sussex County Council and Mid Sussex District Council planning records has not yielded any information on the infill and so the worst possible scenario of contaminants is assumed. Likewise, the made ground mounds are also of unknown material, therefore of unknown contaminants.

The fuel tank located in the southeast corner of the western area appeared to be intact. Given that the underlying geology of Weald Clay is of low permeability, it is likely that any contamination associated with anything other than a major spill would be localised.

Due to the derelict state of the vehicles stored onsite, it is assumed that they may have leaked petroleum hydrocarbons into the ground but again due to the flat nature of the site and the low permeability of the Weald Clay, it is most likely they would be contained to the vehicle setting.

PAH may be present in the bonfire locations on the eastern side of the site but is likely to be limited to the shallow surface layers.

Due to the nature of the clay geology of the site, migration of any contaminants leached into the soils will be limited.

#### 7.2.2 Offsite Sources

The desk study has highlighted the following potential off-site sources of contamination:

Table 4: Offsite sources of contamination

Source	Distance from Site (m)	Contaminants of Concern		
Electricity Substation	10	Heavy metals, polycyclic aromatic hydrocarbons (PAH), total petroleum hydrocarbons (TPH), polychlorinated biphenyls (PCB), Asbestos Containing Materials (ACM)		



Due to the underlying geology of the site it is unlikely that contaminants will have migrated into the site area.

## 7.3 Receptors

Potential receptors are those which may be impacted by any of the contaminants of concern identified above, and include the following:-

- Future residents
- Construction workers
- Surface Water various ponds across the site
- · Material construction of buildings and infrastructure
- Neighbouring properties

## 7.4 Pathways and Potential Pollutant Linkages

The development will potentially include private gardens and public open space. All potential pollutant linkages involving resident humans and soil contaminants will be active i.e. direct ingestion of soil, ingestion of soil attached to plants as well as via plant uptake, inhalation of indoor and outdoor vapour and of dust tracked back into the house and finally ingestion of water carried by plastic water pipes through contaminated ground.

Construction workers during the development phase are potentially at risk as a result from all of the above pathways identified, except for those involving edible plants, surface water runoff and ingestion of water carried through pipes. However, risks to construction workers are usually readily mitigated by the use of appropriate PPE where anticipated levels of contamination are low.

Future residents can be exposed to all of the above pathways except for surface water runoff of potential contaminants and groundwater ingestion and contact.

There is a potential risk for users of adjacent sites to be impacted by inhalation of ground gases and vapours outdoor and within confined spaces and inhalation of impacted airborne soil particles/dust.

## 7.5 Qualitative Risk Assessment of Pollutant Linkages

Risk levels within the preliminary CSM are determined on a qualitative basis following review of the available desk-based information. The significance of particular pollutant linkages is dependant both upon the severity and likelihood of the risk.



The potential pollutant linkages are summarised in the table appended in Appendix D and given a qualitative risk classification in accordance with current guidance. The details of the risk assessment methodology are presented in Appendix D.

Inhalation of asbestos fibres from fugitive soil dust was rated as a medium high risk. The likelihood is low but due to the severe consequences which are possible for inhaling a small quantity of asbestos, this is still a moderate risk.

#### 7.6 Conclusions

Potential sources of contamination have been identified including possible made ground materials from backfilled pits on site along with the made ground stockpiles and the tank located on site.

Given the underlying geology the site has been assessed as a low to moderate risk with regards to human health and controlled waters and it is recommended that further intrusive investigation is carried out to assess these risks further should the site be progressed for development.

## 8 Geotechnical Risk Assessment

## 8.1 Geotechnical Risk Register

The preliminary geotechnical risk register for the proposed development is summarised in the table in Appendix D. Details of the risk assessment methodology are presented in Appendix D.

#### 8.2 Conclusions

The following geotechnical hazards have been identified as significant risks:

- Significant risks from the potential presence of made ground which might cause unstable excavations and require deepened foundations;
- Significant risk from the potential presence of swelling and shrinkage within clay soils
- · Significant risk from sulphate attack on concrete structures

On the basis of the initial review and preliminary risk assessment, the site is given a Geotechnical Classification of Geotechnical Category I in accordance with EN1997-I §2.1(14)-(21).



## 9 Recommendations for Intrusive Ground Investigation

It is considered that the information gathered in this report is sufficient for an outline planning permission.

Should the site be progressed for redevelopment, and based on the findings of the preliminary Conceptual Site Model, an intrusive investigation is recommended to ascertain ground conditions across the site and to assess whether conventional foundations are feasible.

On this basis, windowless sampler boreholes are proposed initially, to provide further information on ground conditions. In addition to this, disturbed sampling is also recommended for geotechnical and geo-environmental purposes.

A series of dynamic cone CBR tests are recommended to provide in situ CBR values for future development plans.

With regard to assessing the potential land contamination risks on-site, the following is also recommended as part of any future ground investigation works:

- Appropriate sampling and contamination testing of soils across the site in order to establish the baseline land quality conditions;
- Appropriate geotechnical testing of samples in order to establish the characteristics of the ground;
- · Monitoring of ground gas levels;
- An assessment of the soils to allow classification of their suitability for off-site disposal
  if required as part of the proposed developments.

Overall, it is considered that risks in respect of land contamination during development phase are 'low to moderate'.



## APPENDIX A - LIMITATIONS

Limitations



## LIMITATIONS

This report is confidential to the Client, and Leap Environmental Ltd accepts no responsibility whatsoever to third parties to whom this report, or any part thereof, is made known, unless formally agreed by Leap Environmental Ltd beforehand. Any such party relies upon the report at their own risk. Unless explicitly agreed otherwise in writing, this report has been prepared under LEAP's standard terms and conditions, as included in the quotation for this works.

This report has been prepared by Leap Environmental Ltd on the basis of information received from a variety of sources which Leap Environmental Ltd believes to be accurate. Nevertheless, Leap Environmental Ltd cannot and does not guarantee the authenticity or reliability of the information it has obtained from others.

Leap Environmental Ltd has used all reasonable skill, care and diligence in the design and execution of this report, taking into account the manpower and resources devoted to it in agreement with the Client. Although every reasonable effort has been made to obtain all relevant information, all potential contamination, environmental constraints or liabilities associated with the site may not necessarily have been revealed. LEAP cannot be held responsible for any disclosures or changes in regulation that are provided post production of this report, and will not automatically update the report.

The conclusions reached in this report are necessarily restricted to those which can be determined from the information consulted, and may be subject to amendment in the light of additional information becoming available. These conclusions may not be appropriate for alternative schemes.

The extent of the exploratory holes, laboratory testing and monitoring undertaken may have been restricted due to a number of factors including accessibility, the presence of buried or overhead services, current development and site usage, timescales or clients specification. The exploratory holes only assess a small proportion of the site area with respect to the site as a whole, and as such may only provide an overall assessment of ground conditions on site. The presence of hotspots of undisclosed contamination or exceptional and unforeseen ground conditions cannot be discounted.

Eurocode 7 gives guidance on the type of sampling, sample quality, number and spacing of intrusive investigations, and number of laboratory tests required. It is intended that the Geotechnical Information section of this report will fulfil the general requirements of the Ground Investigation Report as set out in section 6 of Eurocode73, although this is subject to the restrictions imposed on the investigation as listed above. For geotechnical design, Eurocode 7 requires the Geotechnical Design Report to address both the geotechnical and

<sup>&</sup>lt;sup>3</sup> BS EN 1997 Eurocode 7- Geotechnical Design - Part 1: General Rules (2004) and Part 2: Ground Investigation and Testing (2007)



-

structural aspects of the geotechnical design for both the limit and serviceability states. The Geotechnical Appraisal section of this report will not meet the requirements of a Geotechnical Design Report (GDR), and should therefore be used for preliminary guidance only.

The presence of asbestos may be noted during the site walkover survey, intrusive investigations and/or from the results of contamination testing. However, this report does not constitute an asbestos survey. On this basis, the presence of asbestos on site cannot be discounted and a full asbestos survey should be undertaken.



## APPENDIX B - FIGURES

Figures



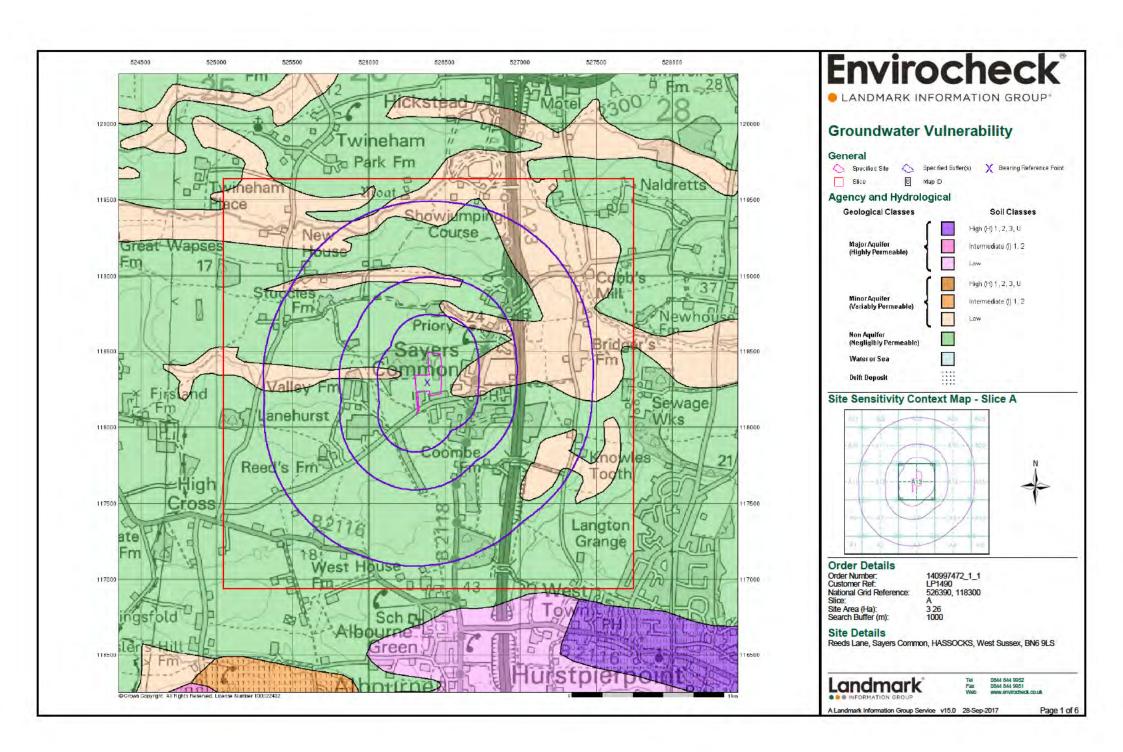


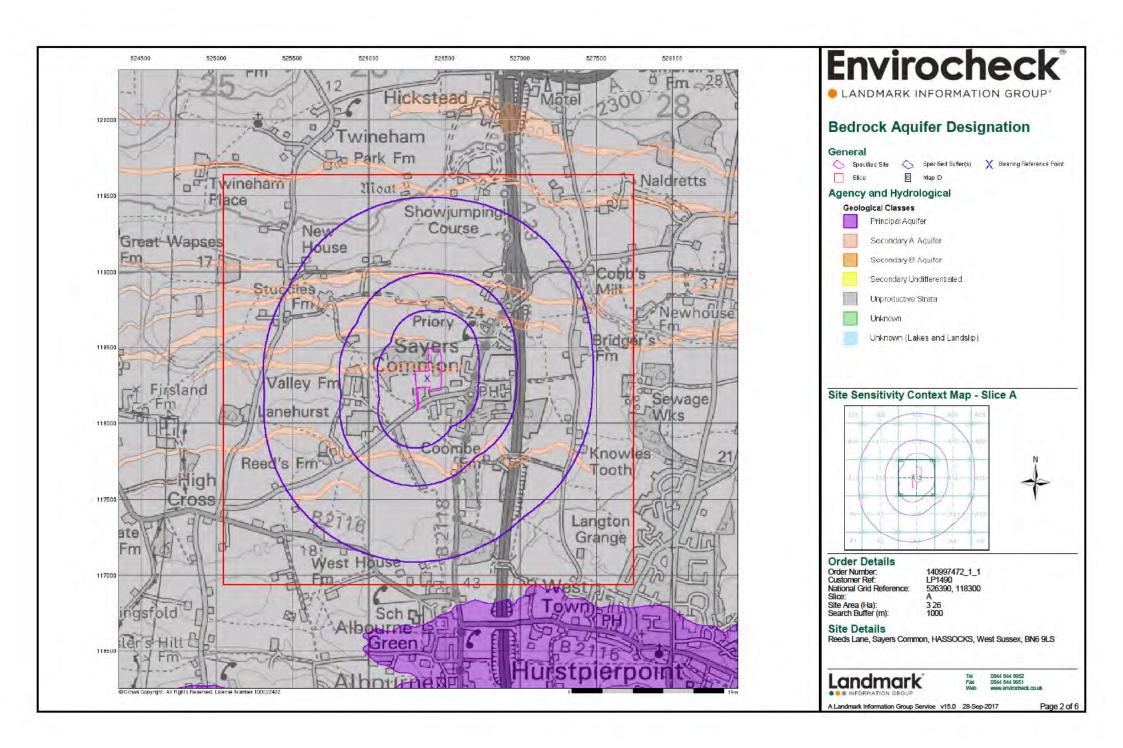
environmental	⊠ <u>}{</u> X X X	X	XXXXXXXXXXX		
	XXXXXXX X			XXXXX XIX	

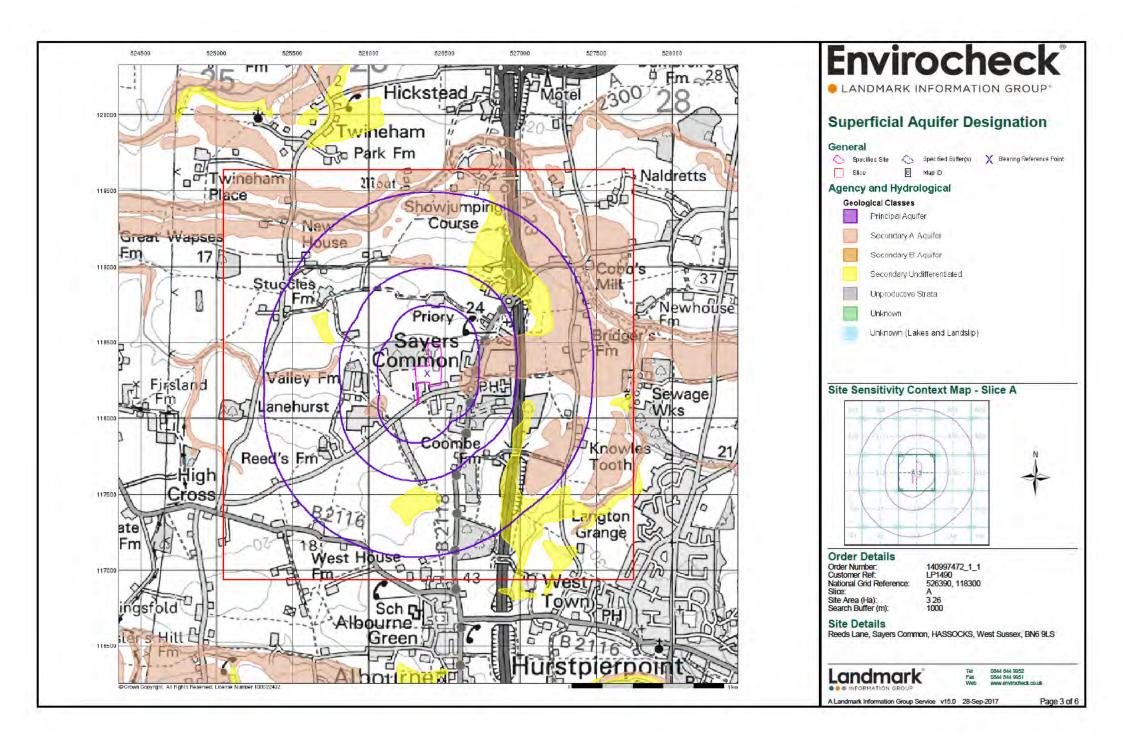
# APPENDIX C – HISTORIC MAPS AND ENVIRONMENTAL DATABASE SEARCHES

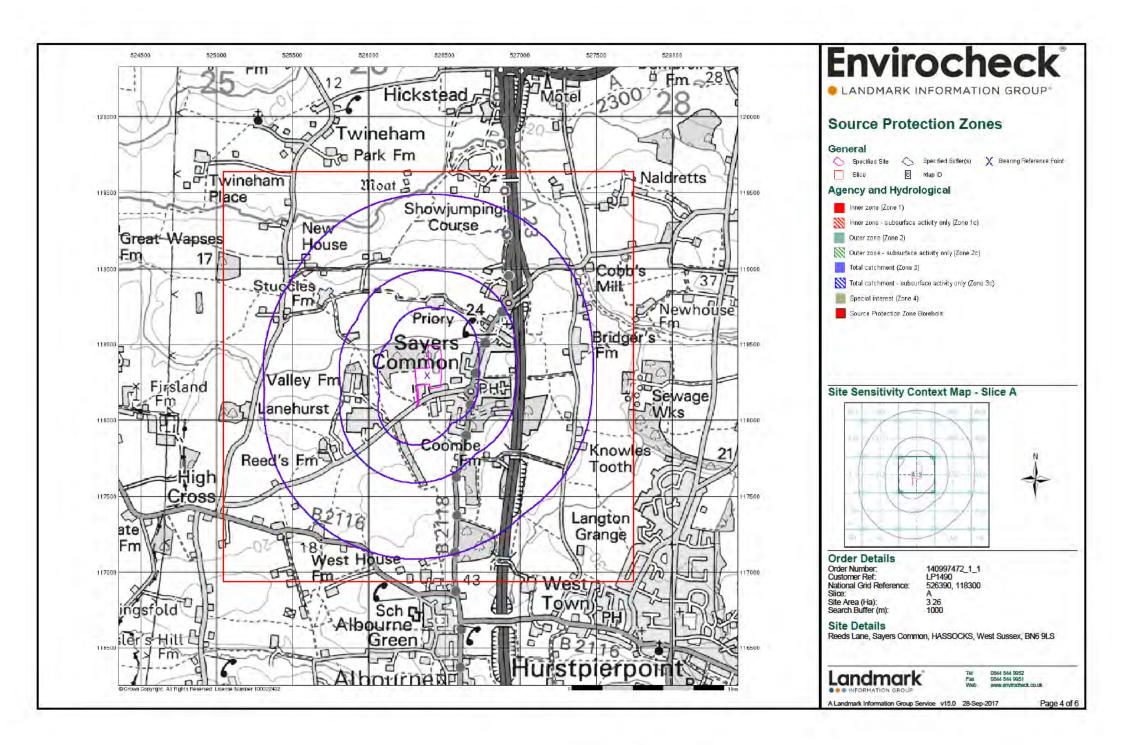
Historic Maps and Environmental Database Searches

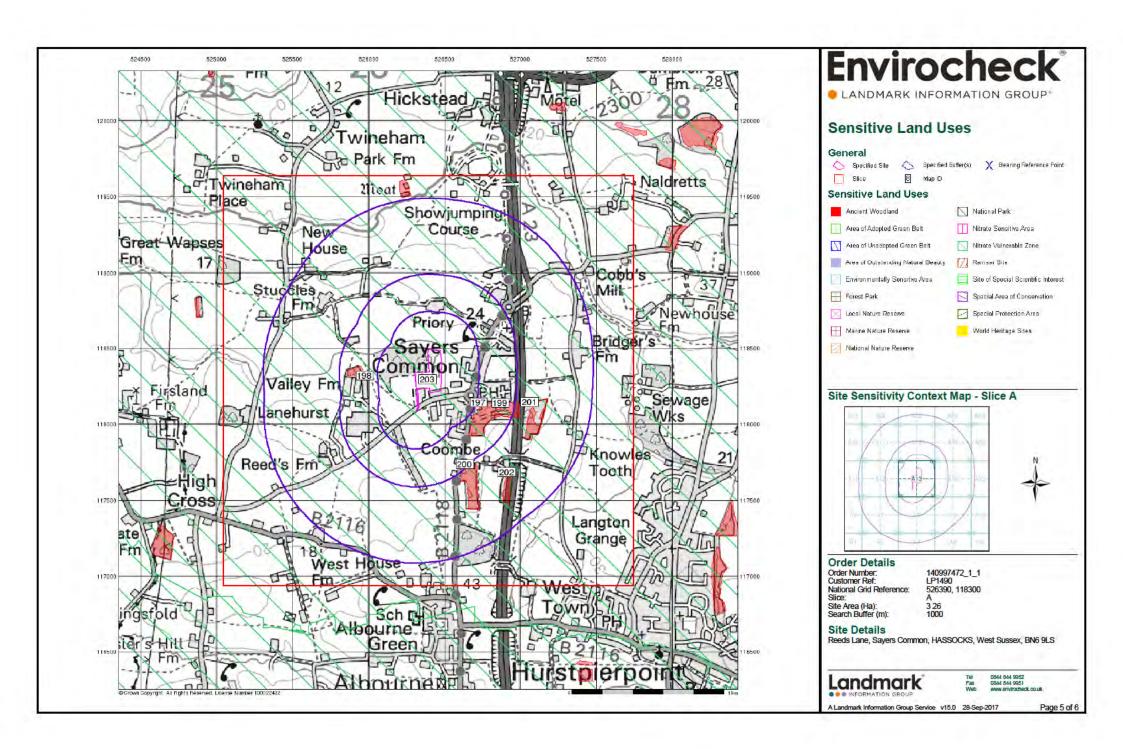


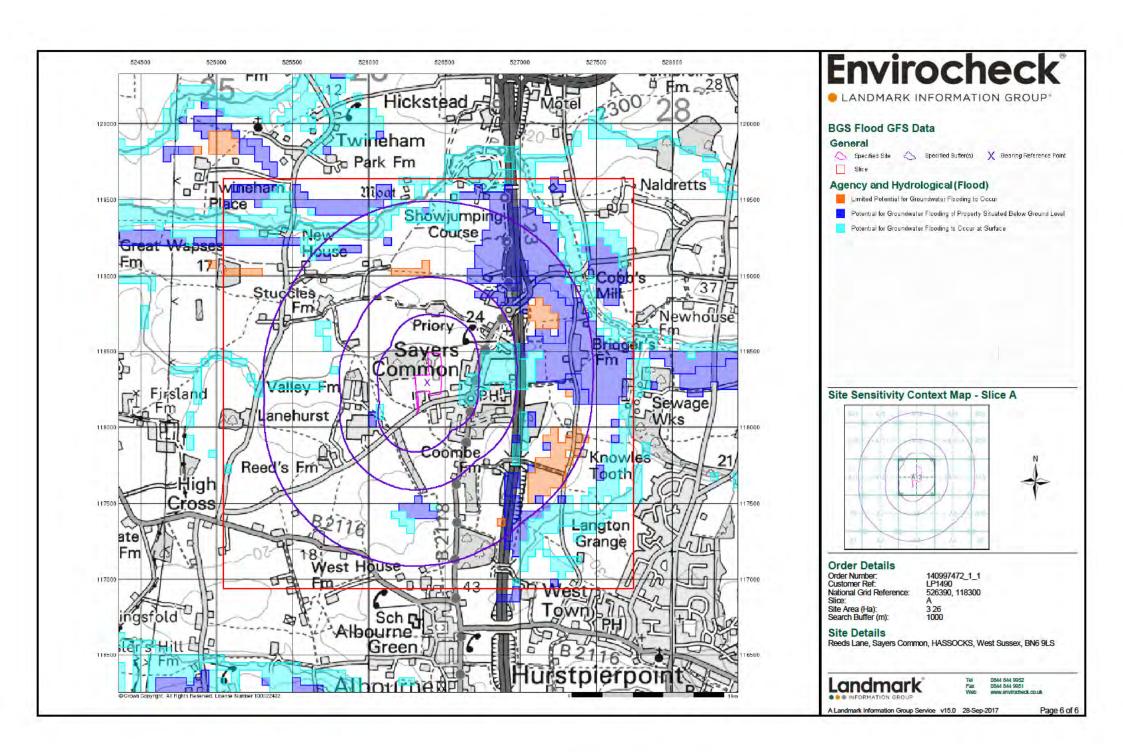














# **Envirocheck® Report:**

#### **Datasheet**

#### **Order Details:**

**Order Number:** 

140997472\_1\_1

**Customer Reference:** 

LP1490

**National Grid Reference:** 

526390, 118300

Slice:

Α

Site Area (Ha):

3.26

Search Buffer (m):

1000

#### **Site Details:**

Reeds Lane Sayers Common HASSOCKS West Sussex BN6 9LS

#### **Client Details:**

Mrs H Smith Leap Environmental Ltd The Atrium Business Centre Curtis Road Dorking Surrey RH4 1XA



Order Number: 140997472\_1\_1 Date: 28-Sep-2017 rpr\_ec\_datasheet v53.0 A Landmark Information Group Service





Report Section	Page Number
Summary	-
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Waste	25
Hazardous Substances	-
Geological	27
Industrial Land Use	28
Sensitive Land Use	31
Data Currency	32
Data Suppliers	37
Useful Contacts	38

#### Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination. For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client.

In the attached datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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Report Version v53.0



#### **Summary**

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1		Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 1	1	4	3	6
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls					
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 4	Yes			
Pollution Incidents to Controlled Waters					
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality	pg 4				1
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions	pg 5				(*5)
Water Industry Act Referrals					
Groundwater Vulnerability	pg 6	Yes	n/a	n/a	n/a
Drift Deposits			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 6	Yes	n/a	n/a	n/a
Superficial Aquifer Designations			n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 6	7	36	47	75





Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites	pg 25				2
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage	pg 25	2	n/a	n/a	n/a
Local Authority Recorded Landfill Sites	pg 25	1			2
Registered Landfill Sites	pg 26				1
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					
Geological					
BGS 1:625,000 Solid Geology	pg 27	Yes	n/a	n/a	n/a
BGS Recorded Mineral Sites	pg 27	1			
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain	pg 27	Yes	Yes	n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 27	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards				n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 27	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 27		Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 27	Yes		n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a



#### **Summary**

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Industrial Land Use					
Contemporary Trade Directory Entries	pg 28		8	20	2
Fuel Station Entries					
Gas Pipelines					
Underground Electrical Cables					
Sensitive Land Use					
Ancient Woodland	pg 31			4	2
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 31	1			
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater I Flooding Type:	Flooding Susceptibility Potential for Groundwater Flooding to Occur at Surface	A13NE (E)	124	1	526600 118296
	BGS Groundwater I Flooding Type:	Flooding Susceptibility Potential for Groundwater Flooding to Occur at Surface	A13SW (SW)	210	1	526100 118150
	BGS Groundwater I Flooding Type:	Flooding Susceptibility Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (SW)	260	1	526050 118100
	BGS Groundwater I Flooding Type:	Flooding Susceptibility Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SE (NE)	433	1	526700 118850
	BGS Groundwater I Flooding Type:	Flooding Susceptibility Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SE (N)	499	1	526650 118950
1	Discharge Consents Operator: Property Type: Location: Authority: Catchment Area: Reference: Permit Version: Effective Date: Issued Date: Revocation Date: Discharge Type: Discharge Environment: Receiving Water: Status: Positional Accuracy:	Tilbury Contracting Group Ltd. Undefined Or Other Reeds Lane, Sayers Common, Hassocks Sussex Environment Agency, Southern Region Not Supplied S02198 1 4th June 1973 4th June 1973 1st July 1991 Discharge Of Other Matter-Surface Water Freshwater Stream/River  Freshwater River Pre National Rivers Authority Legislation where issue date < 01/09/1989 Located by supplier to within 10m	A13SE (S)	0	2	526400 118240
2	Discharge Consents Operator: Property Type: Location:  Authority: Catchment Area: Reference: Permit Version: Effective Date: Issued Date: Revocation Date: Discharge Type: Discharge Environment: Receiving Water: Status: Positional Accuracy:	Meadow View(Sayers Common) Residents Co Ltd DOMESTIC PROPERTY (MULTIPLE) (INCL FARM HOUSES) Meadow View Residential Devpt, Reeds Lane, Sayers Common, Hassocks, Bn6 9jg Environment Agency, Southern Region Adur P12881 1 16th November 2006 16th November 2006 Not Supplied Sewage Discharges - Final/Treated Effluent - Not Water Company Freshwater Stream/River Unnamed Trib Of The R. Adur New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Located by supplier to within 10m	A13SE (S)	62	2	526440 118150
3	Discharge Consents Operator:		A13SW	194	2	526150
S	Property Type: Location: Authority: Catchment Area: Reference: Permit Version: Effective Date: Issued Date: Revocation Date: Discharge Type: Discharge Environment: Receiving Water: Status:	DOMESTIC PROPERTY (MULTIPLE) (INCL FARM HOUSES) Whiteoaks Farm Bungalows, Reeds Lane, Sayers Common, West Sussex Environment Agency, Southern Region Not Given P00785 1 16th February 1987 16th February 1987 Not Supplied Sewage Discharges - Final/Treated Effluent - Not Water Company Freshwater Stream/River  Freshwater River Pre National Rivers Authority Legislation where issue date < 01/09/1989 Located by supplier to within 100m	(SW)	197	-	117980



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	Discharge Consent Operator: Property Type: Location:  Authority: Catchment Area: Reference: Permit Version: Effective Date:	Stonegate Farmers Ltd Undefined Or Other Whiteoaks Farm, Reeds Lane, Sayers Common, Hassocks, West Sussex, Bn6 9jq Environment Agency, Southern Region Old-River Adur 60 P04468 1 14th September 1992	A13SW (SW)	237	2	526100 117980
	Issued Date: Revocation Date: Discharge Type: Discharge Environment: Receiving Water: Status: Positional Accuracy:	14th September 1992 11th August 2003 Sewage Discharges - Final/Treated Effluent - Not Water Company Freshwater Stream/River Freshwater Stream Or River Post National Rivers Authority Legislation where issue date > 31/08/1989 Located by supplier to within 100m				
3	Discharge Consent Operator: Property Type: Location:  Authority: Catchment Area: Reference: Permit Version: Effective Date: Issued Date: Revocation Date: Discharge Type: Discharge Environment: Receiving Water: Status: Positional Accuracy:	Stonegate Farmers Ltd Undefined Or Other Whiteoaks Farm, Reeds Lane, Sayers Common, Hassocks, West Sussex, Bn6 9jq Environment Agency, Southern Region Adur P04468 2 12th August 2003 14th September 1992 Not Supplied Sewage Discharges - Final/Treated Effluent - Not Water Company Freshwater Stream/River  Freshwater Stream Or River Post National Rivers Authority Legislation where issue date > 31/08/1989 Located by supplier to within 10m	A13SW (SW)	237	2	526100 117980
4	Discharge Consent Operator: Property Type: Location: Authority: Catchment Area: Reference: Permit Version: Effective Date: Issued Date: Revocation Date: Discharge Type: Discharge Type: Discharge Type: Status: Positional Accuracy:	The Occupier Undefined Or Other Whiteoaks Farm, Bolney West Sussex Environment Agency, Southern Region Not Given S01075 1 23rd January 1964 23rd January 1964 31st March 1997 Discharge Of Other Matter-Surface Water Freshwater Stream/River  Freshwater River Lapsed (under Environment Act 1995, Schedule 23) Located by supplier to within 100m	A12SE (W)	336	2	525980 118150
5	Discharge Consent Operator: Property Type: Location:  Authority: Catchment Area: Reference: Permit Version: Effective Date: Issued Date: Revocation Date: Discharge Type: Discharge Environment: Receiving Water: Status: Positional Accuracy:	Mandol Ltd DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Unit 8 Valley Farm, Sayers Common Unit 8 Valley Farm, Reeds Lane, Sayers Common, West Sussex, Bn6 9jq Environment Agency, Southern Region Adur P12163 1 16th August 2004 16th August 2004 Not Supplied Sewage Discharges - Final/Treated Effluent - Not Water Company Freshwater Stream/River Unnamed Trib. River Adur New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Located by supplier to within 10m	A12NE (W)	347	2	525960 118310



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	Discharge Consent Operator: Property Type: Location: Authority: Catchment Area: Reference: Permit Version: Effective Date: Issued Date: Revocation Date: Discharge Type: Discharge Environment: Receiving Water: Status: Positional Accuracy:	Avtrade Leasing Limited MAKING OF COMPUTERS/ELECTRONICS/OPTICAL PRODUCTS White Oaks Farm Reeds Lane, Sayers Common, ., West Sussex, Bn6 9jq Environment Agency, Southern Region Adur Eprxb3699nm 1 4th October 2013 4th October 2013 Not Supplied Sewage Discharges - Final/Treated Effluent - Not Water Company Freshwater Stream/River  Pond To Trib Of River Adur New issued under EPR 2010 Located by supplier to within 10m	A7NE (SW)	360	2	525996 117913
7	Discharge Consent Operator: Property Type: Location:  Authority: Catchment Area: Reference: Permit Version: Effective Date: Issued Date: Revocation Date: Discharge Type: Discharge Environment: Receiving Water: Status: Positional Accuracy:	The Director (Transport) Undefined Or Other A23 Trunk Road Improvements, Hickstead, Sayers Common,, Hurstpierpoint & Newtimer Environment Agency, Southern Region Not Given P02201 1 26th October 1992 26th October 1992 31st March 1997 Discharge Of Other Matter-Surface Water Freshwater Stream/River  Freshwater River Lapsed (under Environment Act 1995, Schedule 23) Located by supplier to within 100m	A14NW (E)	513	2	526990 118330
7	Discharge Consent Operator: Property Type: Location:  Authority: Catchment Area: Reference: Permit Version: Effective Date: Issued Date: Revocation Date: Discharge Type: Discharge Environment: Receiving Water: Status: Positional Accuracy:	The Director (Transport) Not Given Hurstpierpoint & Newtimber, A23 Trunk Road Improvements, Sayers Common, HICKSTEAD, Environment Agency, Southern Region Not Given P.2201/S/89 Not Supplied Not Supplied 26th October 1992 Not Supplied Discharge Of Other Matter-Surface Water Freshwater Stream/River  Not Supplied Not Supplied Located by supplier to within 100m	A14NW (E)	513	2	526990 118325
8	Discharge Consent Operator: Property Type: Location: Authority: Catchment Area: Reference: Permit Version: Effective Date: Issued Date: Revocation Date: Discharge Type: Discharge Environment: Receiving Water: Status: Positional Accuracy:	V.M.Blake Undefined Or Other Coombe Farm, London Road, Sayers Common West Sussex Environment Agency, Southern Region Not Given P02668 1 5th December 1989 5th December 1989 Not Supplied Non Water Company (Private) Sewage Freshwater Stream/River  Freshwater River Post National Rivers Authority Legislation where issue date > 31/08/1989 Located by supplier to within 100m	A9NW (SE)	657	2	526930 117750

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Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
9	Discharge Consent Operator:	s Mr R.Davies	A7NE	682	2	525730
	Property Type: Location: Authority: Catchment Area: Reference: Permit Version: Effective Date: Issued Date: Revocation Date: Discharge Type: Discharge Environment: Receiving Water: Status: Positional Accuracy:	Undefined Or Other Reeds Farm, Albourne, Hassocks, West Sussex Environment Agency, Southern Region Not Supplied D01416 1 17th February 1963 17th February 1963 10th December 1992 Unknown Freshwater Stream/River  Freshwater River Pre National Rivers Authority Legislation where issue date < 01/09/1989 Located by supplier to within 10m	(SW)			117730
	Discharge Consent	s				
10	Operator: Property Type: Location:  Authority: Catchment Area: Reference: Permit Version: Effective Date: Issued Date: Revocation Date: Discharge Type: Discharge Type: Discharge Type: This of the Accuracy: Positional Accuracy:	Trudy Williams DOMESTIC PROPERTY (MULTIPLE) (INCL FARM HOUSES) York Cottage & Coombe Hill Cottage, London Road, Sayers Common, West Sussex, Bn6 9hy Environment Agency, Southern Region Adur Estuary & Freshwater Tributaries Npswqd010795 1 23rd March 2010 23rd March 2010 Not Supplied Sewage Discharges - Final/Treated Effluent - Not Water Company Freshwater Stream/River  Ditch Trib Of River Adur New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Located by supplier to within 10m	A8SE (S)	733	2	526655 117443
	Discharge Consent	s				
11	Operator: Property Type: Location: Authority: Catchment Area: Reference: Permit Version: Effective Date: Issued Date: Revocation Date: Discharge Type: Discharge Environment: Receiving Water: Status: Positional Accuracy:	Mr & Mrs R.Williamson DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Knowles Tooth Cottage, Langton Lane, Hurstpierpoint West Sussex Environment Agency, Southern Region Not Given P02336 1 16th June 1989 16th June 1989 Not Supplied Sewage Discharges - Final/Treated Effluent - Not Water Company Into Land Into Land Pre National Rivers Authority Legislation where issue date < 01/09/1989 Located by supplier to within 100m	A9NE (E)	981	2	527400 117900
	Nearest Surface Wa	ater Feature				
			A13NE (NE)	0	-	526480 118379
	River Quality		A 4 = 5 1 =	050	6	F00011
	Name: GQA Grade: Reach: Estimated Distance (km): Flow Rate: Flow Type: Year:	Herrings Strm River Quality C Tidal R. Adur Conf - Hurstpierpoint Stw 7.1 Flow less than 0.31 cumecs River 2000	A17NE (N)	859	2	526041 119277



Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions					
	Operator: Licence Number: Permit Version: Location: Authority: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details: Authorised Start: Authorised Start: Authorised End: Permit Start Date: Permit End Date: Positional Accuracy:	Hickstead Limited 10/41/322202 102 Herrings Stream At Hicksted Place Environment Agency, Southern Region General Agriculture: Spray Irrigation - Direct Water may be abstracted from a river or stream reach, or a row of wellpoints Surface Not Supplied Not Supplied Land & Buildings Shown On Map 01 April 30 September 23rd January 2014 Not Supplied Located by supplier to within 10m	A23NE (N)	1236	2	526530 119720
	,	Mr N Benson 10/41/322202 101 Herrings Stream At Hicksted Place Environment Agency, Southern Region General Agriculture: Spray Irrigation - Direct Water may be abstracted from a river or stream reach, or a row of wellpoints Surface Not Supplied Not Supplied Land & Buildings Shown On Map 01 April 30 September 16th June 2009 Not Supplied Located by supplier to within 10m	A23NE (N)	1236	2	526530 119720
	Water Abstractions Operator: Licence Number: Permit Version: Location: Authority: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details: Authorised Start: Authorised Start: Authorised End: Permit Start Date: Permit End Date: Positional Accuracy:	Mr D H D Bunn 10/41/322202 100 Herrings Stream At Hicksted Place Environment Agency, Southern Region General Agriculture: Spray Irrigation - Direct Water may be abstracted from a river or stream reach, or a row of wellpoints Surface 818 51363 Land & Buildings Shown On Map 01 April 30 September 8th June 2009 Not Supplied Located by supplier to within 100m	A23NE (N)	1236	2	526530 119720
	Water Abstractions Operator: Licence Number: Permit Version: Location: Authority: Abstraction Type: Source: Daily Rate (m3): Yearly Rate (m3): Details: Authorised Start: Authorised Start: Authorised End: Permit Start Date: Permit End Date: Positional Accuracy:	D H Bunn Esq 322202 Not Supplied All England Show Jumping Course, HICKSTEAD Environment Agency, Southern Region Spray Irrigation Not Supplied Surface 818 51363 Herrings Stream Trib Adur Not Supplied Located by supplier to within 100m	A24NW (N)	1416	2	526910 119830



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions  Operator: Mr K C Underwood Licence Number: 10/41/322303 Permit Version: 100 Location: Firsland Farm Borehole Authority: Environment Agency, Southern Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land And Buildings At Firsland Farm, Albourne Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 27th August 1987 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(W)	1950	2	524360 118130
	Groundwater Vulnerability Soil Classification: Not classified Map Sheet: Sheet 46 East Sussex Scale: 1:100,000	A13NW (SE)	0	2	526386 118296
	Drift Deposits None				
	Bedrock Aquifer Designations Aquifer Designation: Unproductive Strata	A13NW (SE)	0	1	526386 118296
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13NW (N)	0	1	526371 118352
	Superficial Aquifer Designations  No Data Available				
	Extreme Flooding from Rivers or Sea without Defences None				
	Flooding from Rivers or Sea without Defences None				
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
12	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 23.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NE (NE)	0	3	526479 118355
13	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 58.1  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NE (NE)	0	3	526480 118379
14	OS Water Network Lines  Watercourse Form: Lake Watercourse Length: 84.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NE (N)	0	3	526436 118463

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Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
15	OS Water Network Lines  Watercourse Form: Lake Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NE (NE)	0	3	526459 118345
16	OS Water Network Lines  Watercourse Form: Lake Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 2	A13NE (NE)	0	3	526461 118470
17	OS Water Network Lines  Watercourse Form: Lake Watercourse Length: 17.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NE (NE)	0	3	526473 118458
18	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 80.2  Watercourse Level: On ground surface Permanent: True  Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NE (NE)	0	3	526480 118379
19	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 166.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NW (N)	1	3	526392 118493
20	OS Water Network Lines  Watercourse Form: Lake Watercourse Length: 46.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NE (NE)	5	3	526490 118463
21	OS Water Network Lines  Watercourse Form: Lake Watercourse Length: 6.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NE (N)	7	3	526459 118493
22	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 233.0  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NE (N)	11	3	526451 118497
23	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 229.0  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NE (NE)	45	3	526483 118528



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Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
24	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 5.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NE (E)	56	3	526533 118354
25	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 192.5 Watercourse Level: On ground surface True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NE (E)	61	3	526538 118353
26	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 5.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NW (N)	82	3	526336 118553
27	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 110.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NW (N)	86	3	526330 118553
28	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 2.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NE (NE)	103	3	526560 118529
29	OS Water Network Lines  Watercourse Form: Inland river  Watercourse Length: 94.0  Watercourse Level: On ground surface  Permanent: True  Watercourse Name: Not Supplied  Catchment Name: Adur and Teville  Primacy: 1	A13NE (NE)	105	3	526562 118529
30	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 164.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13SW (SW)	140	3	526173 118138
31	OS Water Network Lines  Watercourse Form: Lake Watercourse Length: 15.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13SW (SW)	145	3	526171 118143
32	OS Water Network Lines  Watercourse Form: Inland river  Watercourse Length: 194.5  Watercourse Level: On ground surface  Permanent: True  Watercourse Name: Not Supplied  Catchment Name: Adur and Teville  Primacy: 1	A13SW (SW)	145	3	526196 117995



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
33	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 7.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13SW (SW)	148	3	526193 117997
34	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 3.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NW (NW)	153	3	526239 118496
35	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 7.8  Watercourse Level: On ground surface Permanent: True  Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NW (NW)	154	3	526238 118499
36	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 172.7  Watercourse Level: On ground surface Permanent: True  Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NW (NW)	155	3	526237 118507
37	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 25.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NW (NW)	155	3	526237 118507
38	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 215.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13SW (SW)	157	3	526158 118195
39	OS Water Network Lines  Watercourse Form: Inland river  Watercourse Length: 4.0  Watercourse Level: On ground surface Permanent: True  Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NW (NW)	165	3	526231 118532
40	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 3.1  Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NW (NW)	167	3	526230 118536
41	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 67.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13SE (S)	168	3	526431 117954



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
42	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 141.0  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8NW (S)	168	3	526368 117932
43	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13SE (S)	175	3	526438 117971
44	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13SE (S)	182	3	526434 117955
45	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NE (NE)	197	3	526654 118546
46	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 1.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NE (NE)	197	3	526654 118546
47	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 20.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NE (E)	218	3	526694 118291
48	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 334.4  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13SE (E)	227	3	526704 118244
49	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 10.5  Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13SE (E)	230	3	526704 118246
50	OS Water Network Lines  Watercourse Form: Lake Watercourse Length: 22.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NE (NE)	232	3	526689 118550



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Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
51	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 79.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NE (NE)	232	3	526689 118550
52	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 26.0 Watercourse Level: On ground surface True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13SE (E)	232	3	526707 118256
53	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NW (W)	234	3	526072 118334
54	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 90.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NW (W)	236	3	526070 118337
55	OS Water Network Lines  Watercourse Form: Lake Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8NE (S)	263	3	526522 117930
56	OS Water Network Lines  Watercourse Form: Inland river  Watercourse Length: 274.3  Watercourse Level: On ground surface Permanent: True  Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A18SE (NE)	276	3	526595 118730
57	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 49.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NW (NW)	277	3	526071 118485
58	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 23.5  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NW (NW)	277	3	526071 118485
59	OS Water Network Lines  Watercourse Form: Inland river  Watercourse Length: 178.2  Watercourse Level: On ground surface  Permanent: True  Watercourse Name: Not Supplied  Catchment Name: Adur and Teville  Primacy: 1	A18SE (NE)	279	3	526621 118717



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
60	OS Water Network Lines  Watercourse Form: Lake Watercourse Length: 12.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14NW (NE)	284	3	526753 118501
61	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 113.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8NE (S)	285	3	526542 117919
62	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 8.4  Watercourse Level: On ground surface Permanent: True  Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14NW (NE)	289	3	526756 118513
63	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 5.8  Watercourse Level: Underground Permanent: True  Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12NE (NW)	290	3	526050 118475
64	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 160.7  Watercourse Level: On ground surface Permanent: True  Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12NE (NW)	296	3	526044 118476
65	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 7.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NW (NW)	302	3	526075 118534
66	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 2.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8NE (S)	304	3	526441 117816
67	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 93.7  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8NE (S)	306	3	526443 117814
68	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 289.5  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A13NW (NW)	306	3	526076 118541



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
69	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12NE (W)	319	3	525987 118324
70	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12NE (W)	324	3	525983 118322
71	OS Water Network Lines  Watercourse Form: Lake Watercourse Length: 10.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12NE (W)	333	3	525974 118320
72	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 110.7  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12NE (W)	342	3	525965 118315
73	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 150.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A18SW (N)	345	3	526366 118836
74	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 4.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A18SW (N)	345	3	526371 118837
75	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A18SW (N)	345	3	526374 118837
76	OS Water Network Lines  Watercourse Form: Lake Watercourse Length: 40.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A18SW (N)	366	3	526205 118808
77	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A18SW (N)	371	3	526196 118807



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
78	OS Water Network Lines  Watercourse Form: Lake Watercourse Length: 7.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A18SW (N)	373	3	526191 118807
79	OS Water Network Lines  Watercourse Form: Inland river  Watercourse Level: On ground surface Permanent: True  Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A18SW (N)	376	3	526179 118802
80	OS Water Network Lines  Watercourse Form: Lake Watercourse Length: 6.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A18SW (N)	376	3	526179 118802
81	OS Water Network Lines  Watercourse Form: Lake Watercourse Length: 14.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A18SW (N)	376	3	526184 118806
82	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8NE (SE)	393	3	526630 117856
83	OS Water Network Lines  Watercourse Form: Inland river  Watercourse Length: 2.9  Watercourse Level: Underground True  Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8NE (S)	397	3	526496 117739
84	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 145.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8NE (S)	400	3	526497 117737
85	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 152.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A9NW (SE)	417	3	526766 117924
86	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Primacy: 1	A12NE (W)	436	3	525898 118493



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
87	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 19.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12NE (W)	440	3	525893 118490
88	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 28.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12NE (W)	449	3	525856 118346
89	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 4.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12NE (W)	450	3	525857 118354
90	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: 57.6  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12NE (W)	452	3	525854 118351
91	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 154.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12NE (W)	452	3	525854 118325
92	OS Water Network Lines  Watercourse Form: Lake Watercourse Length: 25.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12NE (W)	454	3	525875 118482
93	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 35.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8NE (SE)	455	3	526642 117777
94	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 3.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A18SW (NW)	458	3	526066 118815
95	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 173.4  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12NE (W)	477	3	525854 118493



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
96	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 167.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14NW (NE)	481	3	526934 118598
97	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 5.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8NE (SE)	483	3	526645 117743
98	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8NE (SE)	486	3	526644 117738
99	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 35.2 Watercourse Level: On ground surface True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14NW (E)	487	3	526957 118515
100	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 5.9 Watercourse Level: Underground True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12SE (W)	490	3	525827 118174
101	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 263.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12SE (W)	491	3	525826 118168
102	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 4.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12NE (W)	507	3	525799 118332
103	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 80.8  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12NE (W)	511	3	525795 118330
104	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 382.6 Watercourse Level: On ground surface True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14NW (E)	518	3	527004 118321

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Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
105	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14NW (E)	519	3	526987 118526
106	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14NW (E)	519	3	526987 118526
107	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 57.8  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14NW (NE)	530	3	526986 118589
108	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14SW (E)	534	3	527001 118139
109	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8SE (S)	541	3	526530 117596
110	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8SE (S)	546	3	526532 117591
111	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 83.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A19SW (NE)	546	3	526921 118789
112	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 466.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12NE (W)	557	3	525750 118368
113	OS Water Network Lines  Watercourse Form: Lake Watercourse Length: 47.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A17SE (NW)	565	3	525937 118827



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
114	OS Water Network Lines  Watercourse Form: Lake Watercourse Length: 3.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8NE (SE)	569	3	526661 117642
115	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14NW (E)	579	3	527048 118526
116	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 458.2  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14SW (E)	582	3	527060 118290
117	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14NW (E)	587	3	527055 118526
118	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14NW (E)	587	3	527055 118526
119	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14SW (E)	590	3	527057 118134
120	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 7.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14SW (E)	590	3	527058 118141
121	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 311.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14SW (E)	593	3	527053 118097
122	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 12.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14SW (E)	593	3	527053 118097



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
123	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 309.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A14SE (E)	610	3	527078 118147
124	OS Water Network Lines  Watercourse Form: Lake Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A19NW (NE)	614	3	526798 119003
125	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 26.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A19SW (NE)	618	3	526947 118874
126	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 20.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A7NW (SW)	653	3	525686 117896
127	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 35.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A7NE (SW)	660	3	525757 117729
128	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 82.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A7NW (SW)	665	3	525682 117871
129	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 2.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A9NW (SE)	680	3	526968 117755
130	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 262.2  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A9NW (SE)	682	3	526967 117752
131	OS Water Network Lines  Watercourse Form: Inland river  Watercourse Length: 2.6  Watercourse Level: On ground surface  Permanent: True  Watercourse Name: Not Supplied  Catchment Name: Adur and Teville  Primacy: 1	A9NW (SE)	682	3	526967 117752



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
132	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A7NE (SW)	694	3	525734 117702
133	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 113.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A7NW (SW)	696	3	525641 117898
134	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 272.8  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A9NW (SE)	710	3	527008 117754
135	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 409.7  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A9NW (SE)	722	3	526937 117669
136	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8SW (S)	724	3	526209 117373
137	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 15.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8SW (S)	734	3	526086 117391
138	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 4.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8SW (S)	735	3	526083 117390
139	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 142.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8SW (S)	738	3	526079 117389
140	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 3.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8SW (S)	744	3	526090 117379



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
141	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8SW (S)	747	3	526090 117375
142	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 17.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A7NW (SW)	752	3	525623 117783
143	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 6.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8SW (S)	757	3	526099 117363
144	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 129.4  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8SW (S)	759	3	526092 117363
145	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 93.0  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A9NE (SE)	762	3	527077 117758
146	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A7NW (SW)	763	3	525621 117761
147	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 108.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A18NE (N)	765	3	526650 119229
148	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 28.4  Watercourse Level: On ground surface True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A18NE (N)	767	3	526648 119231
149	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 219.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A18NE (N)	781	3	526631 119249



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
150	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 53.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A18NE (N)	784	3	526728 119225
151	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: 407.2 Watercourse Level: On ground surface True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A7SE (SW)	795	3	525745 117531
152	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A19NW (NE)	798	3	526781 119219
153	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A7SE (SW)	819	3	525949 117355
154	OS Water Network Lines  Watercourse Form: Inland river  Watercourse Length: 261.3  Watercourse Level: On ground surface True  Watercourse Name: Not Supplied  Catchment Name: Adur and Teville  Primacy: 1	A7SE (SW)	820	3	525947 117355
155	OS Water Network Lines  Watercourse Form: Lake Watercourse Length: 12.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A7NW (SW)	822	3	525617 117646
156	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 132.2  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A23SW (N)	824	3	526320 119313
157	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 27.3  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A23SW (N)	825	3	526289 119311
158	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 2.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A23SW (N)	825	3	526292 119312



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
159	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 5.0  Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A23SE (N)	835	3	526427 119326
160	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A23SW (N)	842	3	526266 119325
161	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A23SW (N)	845	3	526263 119327
162	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: 9.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A7SE (SW)	847	3	525752 117452
163	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A7SE (SW)	851	3	525743 117455
164	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 255.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A7SE (SW)	852	3	525741 117455
165	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 587.6  Watercourse Level: On ground surface Permanent: True Watercourse Name: Herrings Stream Catchment Name: Adur and Teville Primacy: 1	A17NE (N)	864	3	526031 119278
166	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 195.0  Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A8SE (S)	867	3	526729 117332
167	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 5.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A3NW (S)	878	3	526108 117235



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
168	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A3NW (S)	883	3	526109 117229
169	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A23SW (N)	889	3	526203 119361
170	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 221.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A12NW (W)	941	3	525387 118543
171	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A7NW (SW)	952	3	525476 117630
172	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 3.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A7NW (SW)	957	3	525466 117639
173	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 31.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A7SW (SW)	957	3	525478 117616
174	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 202.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A7NW (SW)	959	3	525463 117641
175	OS Water Network Lines  Watercourse Form: Inland river Watercourse Length: 875.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Herrings Stream Catchment Name: Adur and Teville Primacy: 1	A23SW (N)	969	3	526148 119430
176	OS Water Network Lines  Watercourse Form: Inland river Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Adur and Teville Primacy: 1	A11SE (W)	990	3	525319 118273





Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
177	Historical Landfill S Licence Holder: Location: Name: Operator Location: Boundary Accuracy: Provider Reference: First Input Date: Last Input Date: Specified Waste Type: EA Waste Ref: Regis Ref: WRC Ref: BGS Ref: Other Ref:	Not Supplied Hickstead, Sussex Opposite Hickstead Showground Not Supplied As Supplied	A19SW (NE)	704	2	526999 118947
178	Historical Landfill S Licence Holder: Location: Name: Operator Location: Boundary Accuracy: Provider Reference: First Input Date: Last Input Date: Specified Waste Type: EA Waste Ref: Regis Ref: WRC Ref: BGS Ref: Other Ref:	Excavations Limited Hurstpierpoint, Sussex Tott Farm Not Supplied As Supplied	A8SE (SE)	716	2	526722 117504
	Local Authority Lan Name:  Local Authority Lan Name:	Mid Sussex District Council - Has supplied landfill data		0	4 5	526386 118296 526386 118296
179	Location: Reference: Authority: Last Reported Status: Types of Waste: Date of Closure:	Ex Brickworks, Reeds Lane, Sayers Common Not Supplied West Sussex County Council, Environment & Development Unknown  Not Supplied Not Supplied Located by supplier to within 100m Not Applicable	A13NE (E)	0	5	526400 118300
180	Location: Reference: Authority: Last Reported Status: Types of Waste: Date of Closure:	Corded Landfill Sites Opposite Hickstead Showground, Hickstead 27/317 Mid Sussex District Council, Environmental Services Section Closed  Inert Not Supplied Located by supplier to within 100m Not Applicable	A19NW (NE)	814	4	527000 119101
181	Location: Reference: Authority: Last Reported Status: Types of Waste: Date of Closure:	Corded Landfill Sites  Commbe Farm Land At, Sayers Common, Hurstpierpoint HP/83/90  West Sussex County Council, Environment & Development Unknown  Not Supplied  Not Supplied  Located by supplier to within 100m  Not Applicable	A9SW (SE)	847	5	526800 117400





Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Registered Landfill	Sites				
182	Licence Holder: Licence Reference: Site Location: Licence Easting: Licence Northing: Operator Location: Authority: Site Category: Max Input Rate: Waste Source Restrictions: Status: Dated: Preceded By Licence: Superseded By Licence: Positional Accuracy: Boundary Accuracy: Authorised Waste		A9SW (SE)	916	2	526850 117350





Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid	<del></del>				
	Description:	Wealden Group	A13NW (SE)	0	1	526386 118296
183	BGS Recorded Mine Site Name: Location: Source: Reference: Type:	Sayers Common Brickworks , Sayers Common, Hassocks, West Sussex British Geological Survey, National Geoscience Information Service 19499 Opencast	A13NE (NE)	0	1	526420 118325
	Periodic Type: Geology: Commodity:	Ceased Not Supplied Not Supplied Cretaceous Weald Clay Formation Common Clay and Shale Located by supplier to within 10m				
	Coal Mining Affected					
	Non Coal Mining Are	not be affected by coal mining				
	Risk: Source:	Highly Unlikely British Geological Survey, National Geoscience Information Service	A13NW (SE)	0	1	526386 118296
	Non Coal Mining Are Risk: Source:	eas of Great Britain Highly Unlikely British Geological Survey, National Geoscience Information Service	A13NW (N)	0	1	526371 118352
	Non Coal Mining Are Risk: Source:	eas of Great Britain Highly Unlikely British Geological Survey, National Geoscience Information Service	A13NW (N)	57	1	526360 118540
	Potential for Collaps Hazard Potential: Source:	sible Ground Stability Hazards Very Low British Geological Survey, National Geoscience Information Service	A13NW (SE)	0	1	526386 118296
	Potential for Compre Hazard Potential: Source:	essible Ground Stability Hazards  No Hazard  British Geological Survey, National Geoscience Information Service	A13NW (SE)	0	1	526386 118296
	Potential for Ground Hazard Potential: Source:	I Dissolution Stability Hazards No Hazard British Geological Survey, National Geoscience Information Service	A13NW (SE)	0	1	526386 118296
	Potential for Landsli Hazard Potential: Source:	ide Ground Stability Hazards  Very Low  British Geological Survey, National Geoscience Information Service	A13NW (SE)	0	1	526386 118296
	Potential for Runnin Hazard Potential: Source:	g Sand Ground Stability Hazards No Hazard British Geological Survey, National Geoscience Information Service	A13NW (SE)	0	1	526386 118296
	Potential for Runnin Hazard Potential: Source:	g Sand Ground Stability Hazards Very Low British Geological Survey, National Geoscience Information Service	A13SE (E)	126	1	526603 118251
	Potential for Runnin Hazard Potential: Source:	g Sand Ground Stability Hazards Very Low British Geological Survey, National Geoscience Information Service	A13SW (SW)	189	1	526116 118136
	Potential for Shrinki Hazard Potential: Source:	ng or Swelling Clay Ground Stability Hazards Low British Geological Survey, National Geoscience Information Service	A13NW (SE)	0	1	526386 118296
	Potential for Shrinki Hazard Potential: Source:	ng or Swelling Clay Ground Stability Hazards No Hazard British Geological Survey, National Geoscience Information Service	A13NW (N)	0	1	526371 118352
	Potential for Shrinki Hazard Potential: Source:	ng or Swelling Clay Ground Stability Hazards No Hazard British Geological Survey, National Geoscience Information Service	A13NW (N)	57	1	526360 118540
	Radon Potential - Ra Affected Area: Source:	,	A13NW (SE)	0	1	526386 118296
	Radon Potential - Ra	adon Protection Measures  No radon protective measures are necessary in the construction of new dwellings or extensions  British Geological Survey, National Geoscience Information Service	A13NW (SE)	0	1	526386 118296



#### **Industrial Land Use**

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Contemporary Trad	le Directory Entries				
184	Name: Location:	North Star Sussex Unit 3, King Business Centre, Reeds Lane, Sayers Common, Hassocks, BN6 9LS	A13SW (S)	10	-	526335 118168
	Classification: Status: Positional Accuracy:	Car Dealers - Used Active Automatically positioned to the address				
	Contemporary Trad	le Directory Entries				
184	Name: Location: Classification:	World Logistics Uk Ltd King Business Centre, Reeds Lane, Sayers Common, Hassocks, West Sussex, BN6 9LS	A13SW (S)	22	-	526347 118166
	Status:	Freight Forwarders Inactive Automatically positioned to the address				
	Contemporary Trad	le Directory Entries				
184	Name: Location:	Cargame King Business Centre,Reeds La, Sayers Common, Hassocks, West Sussex, BN6 9LS	A13SW (S)	38	-	526364 118154
	Classification: <b>Status:</b> Positional Accuracy:	Car Dealers - Used Inactive Manually positioned within the geographical locality				
	Contemporary Trad	le Directory Entries				
184	Name: Location:	I-Deal Trading King Business Centre, Reeds Lane, Sayers Common, Hassocks, West Sussex, BN6 9LS	A13SW (S)	40	-	526365 118165
	Classification: Status: Positional Accuracy:	Car Dealers - Used Inactive Automatically positioned to the address				
	Contemporary Trad					
184	Name: Location:	Club Cars King Business Centre,Reeds La, Sayers Common, Hassocks, West Sussex, BN6 9LS	A13SW (S)	50	-	526376 118150
	Classification: Status: Positional Accuracy:	Car Dealers - Used Inactive Manually positioned within the geographical locality				
	Contemporary Trad	le Directory Entries				
185	Name: Location: Classification: <b>Status:</b> Positional Accuracy:	North Star Sussex Ltd London Road, Sayers Common, Hassocks, West Sussex, BN6 9HZ Car Dealers Inactive Automatically positioned to the address	A13SE (SE)	180	-	526618 118115
	Contemporary Trad					
185	Name: Location: Classification: Status:	North Star Sussex London Road, Sayers Common, Hassocks, West Sussex, BN6 9HZ Commercial Vehicle Dealers Inactive Automatically positioned to the address	A13SE (SE)	180	-	526618 118115
	Contemporary Trad					
185	Name: Location: Classification: Status:	Old Forge Garage London Road, Sayers Common, Hassocks, West Sussex, BN6 9HZ Mot Testing Centres Active	A13SE (SE)	208	-	526654 118120
	Positional Accuracy:	Automatically positioned to the address				
	Contemporary Trad	•				
186	Name: Location:	The Air Compressor Shop Spindleberries, London Road, Sayers Common, Hassocks, West Sussex, BN6 9HX	A14NW (E)	258	-	526734 118321
	Classification: Status: Positional Accuracy:	Air Compressors Inactive Automatically positioned to the address				
	Contemporary Trad	le Directory Entries				
186	Name: Location:	R A Palmer Michaelmas, London Road, Sayers Common, Hassocks, West Sussex, BN6 9HX	A14NW (E)	259	-	526735 118312
	Classification: Status: Positional Accuracy:	Lawnmowers & Garden Machinery - Sales & Service Inactive Automatically positioned to the address				

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#### **Industrial Land Use**

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
186	Contemporary Trad Name: Location:	Glaciation Air Conditioning Systems Ltd Downside, London Road, Sayers Common, Hassocks, West Sussex, BN6 9HX	A14NW (E)	263	-	526739 118294
	Classification: Status: Positional Accuracy:	Air Conditioning & Refrigeration Contractors Inactive Automatically positioned to the address				
187	Contemporary Trad Name: Location: Classification: Status: Positional Accuracy:	e Directory Entries Sussex Vehicle Services 17, Furzeland Way, Sayers Common, Hassocks, BN6 9JB Garage Services Active Automatically positioned to the address	A13SE (SE)	260	-	526588 117988
188	Contemporary Trad Name: Location: Classification: Status: Positional Accuracy:	e Directory Entries  House Proud Finish 12, The Chestnuts, Sayers Common, Hassocks, West Sussex, BN6 9XJ Cleaning Services - Domestic Active Automatically positioned to the address	A14SW (E)	275	-	526740 118157
189	Contemporary Trad Name: Location: Classification: Status: Positional Accuracy:	e Directory Entries  Valley Fabrications  4A,Valley Farm,Reeds La, Sayers Common, Hassocks, West Sussex, BN6 9JQ Sheet Metal Work Inactive Manually positioned to the address or location	A12SE (W)	384	-	525928 118238
189	Contemporary Trad Name: Location: Classification: Status: Positional Accuracy:	e Directory Entries  Manborne Custom Furniture 6-8 Valley Farm, Reeds Lane, Sayers Common, Hassocks, BN6 9JQ Furniture Manufacturers - Home & Office Active Automatically positioned to the address	A12NE (W)	418	-	525890 118298
189	Contemporary Trad Name: Location: Classification: Status: Positional Accuracy:	e Directory Entries Pj'S Powder Coating Ltd Valley Farm, Reeds Lane, Sayers Common, Hassocks, West Sussex, BN6 9JQ Powder Coatings Active Automatically positioned to the address	A12SE (W)	423	-	525887 118279
189	Contemporary Trad Name: Location: Classification: Status:		A12SE (W)	423	-	525887 118279
189	Contemporary Trad Name: Location: Classification: Status: Positional Accuracy:	e Directory Entries Geoff Styring 4d, Valley Farm, Reeds Lane, Sayers Common, Hassocks, West Sussex, BN6 9JQ Fire Escapes & Evacuation Equipment Inactive Automatically positioned to the address	A12SE (W)	428	-	525883 118255
190	Contemporary Trad Name: Location: Classification: Status: Positional Accuracy:	e Directory Entries  A G Recovery Oaklands, London Road, Sayers Common, Hassocks, West Sussex, BN6 9HY Car Breakdown & Recovery Services Inactive Automatically positioned to the address	A14SW (SE)	399	-	526852 118098
191	Contemporary Trad Name: Location: Classification: Status: Positional Accuracy:	e Directory Entries Vince Mann Trucking Unit 4c, Valley Farm, Reeds Lane, Sayers Common, Hassocks, West Sussex BN6 9JQ Road Haulage Services Inactive Automatically positioned in the proximity of the address	A12SE (W)	422	-	525895 118172

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#### **Industrial Land Use**

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
191	Contemporary Trad Name: Location: Classification: Status: Positional Accuracy:	e Directory Entries  Leeny Jones Furniture Ltd  Unit 2,Valley Farm Business Park,Reeds La, Sayers Common, Hassocks, West Sussex, BN6 9JQ  Furniture - Reproduction  Inactive  Manually positioned to the address or location	A12SE (W)	437	-	525877 118210
191	Contemporary Trad Name: Location: Classification: Status: Positional Accuracy:	e Directory Entries Leeny Furniture Ltd 2, Valley Farm, Reeds Lane, Sayers Common, Hassocks, West Sussex, BN6 9JQ Furniture Manufacturers - Home & Office Inactive Automatically positioned to the address	A12SE (W)	437	-	525877 118211
192	Contemporary Trad Name: Location: Classification: Status: Positional Accuracy:	e Directory Entries Mid Sussex Minors Laundry Cottage, Twineham Lane, Sayers Common, Hassocks, West Sussex BN6 9JF Classic Car Specialists Inactive Automatically positioned to the address	A12NE (NW)	446	-	525919 118561
193	Contemporary Trad Name: Location: Classification: Status: Positional Accuracy:	e Directory Entries G G Arnold 1, Valley Farm, Reeds Lane, Sayers Common, Hassocks, West Sussex, BN6 9JQ Cabinet Makers Inactive Automatically positioned in the proximity of the address	A12SE (SW)	465	-	525849 118029
194	Contemporary Trad Name: Location: Classification: Status: Positional Accuracy:	e Directory Entries  Meronrise Ltd  Valley Farm, Reeds Lane, Sayers Common, Hassocks, West Sussex, BN6  9JQ  Furniture - Repairing & Restoring  Inactive  Automatically positioned to the address	A12SE (W)	471	-	525842 118143
194	Contemporary Trad Name: Location: Classification: Status: Positional Accuracy:	e Directory Entries  J C Polishing  Valley Farm, Reeds Lane, Sayers Common, Hassocks, West Sussex, BN6 9JQ  Metal Finishing Services Inactive  Automatically positioned to the address	A12SE (W)	471	-	525842 118143
194	Contemporary Trad Name: Location: Classification: Status:	71	A12SE (W)	471	-	525842 118143
195	Contemporary Trad Name: Location: Classification: Status: Positional Accuracy:	e Directory Entries Click Cars London rd, Sayers Common, Hassocks, West Sussex, BN6 9HS Car Dealers - Used Active Manually positioned to the road within the address or location	A19SW (NE)	480	-	526893 118706
196	Contemporary Trad Name: Location: Classification: Status: Positional Accuracy:	e Directory Entries Friday Ad Print London Road, Sayers Common, Hassocks, West Sussex, BN6 9HS Printers Inactive Automatically positioned to the address	A19SW (NE)	559	-	526892 118849
196	Contemporary Trad Name: Location: Classification: Status: Positional Accuracy:	e Directory Entries  Uck Field Press London Rd, Sayers Common, Hassocks, West Sussex, BN6 9HS Printers Inactive Manually positioned within the geographical locality	A19SW (NE)	559	-	526892 118849

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## **Sensitive Land Use**

Map ID		Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Ancient Woodla	nd				
197	Name: Reference: Area(m²): Type:	Sayers Common Woodw 1479571 27977.74 Ancient and Semi-Natural Woodland	A13SE (SE)	265	6	526726 118143
	Ancient Woodla	ind				
198	Name: Reference: Area(m²): Type:	Laundry Wood 1479465 5675.22 Ancient and Semi-Natural Woodland	A12NE (W)	333	6	525974 118320
	Ancient Woodla	ind				
199	Name: Reference: Area(m²): Type:	Sayers Common Wood 1479569 7508.22 Ancient and Semi-Natural Woodland	A14SW (E)	405	6	526870 118142
	Ancient Woodla	nd				
200	Name: Reference: Area(m²): Type:	Coombe Wood 1479354 23704.19 Ancient and Semi-Natural Woodland	A8NE (SE)	478	6	526633 117738
	Ancient Woodla	nd				
201	Name: Reference: Area(m²): Type:	Sayers Common Woode 1479570 14460.13 Ancient and Semi-Natural Woodland	A14SW (E)	593	6	527061 118147
	Ancient Woodla	nd				
202	Name: Reference: Area(m²): Type:	Coombe Farm Shaw 1479351 6659.43 Ancient and Semi-Natural Woodland	A9NW (SE)	695	6	526913 117684
	Nitrate Vulnerab	ole Zones				
203	Name: Description: Source:	Adur East (Sakeham) Nvz Surface Water Environment Agency, Head Office	A13NW (SE)	0	7	526386 118296

Order Number: 140997472\_1\_1 Date: 28-Sep-2017 rpr\_ec\_datasheet v53.0 A Landmark Information Group Service Page 31 of 38



Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Horsham District Council - Environmental Health Department	February 2015	Annual Rolling Update
Mid Sussex District Council - Environmental Services Section	November 2014	Annual Rolling Update
Lewes District Council - Environmental Health Department	September 2014	Annual Rolling Update
Discharge Consents Environment Agency - Southern Region	July 2017	Quarterly
Enforcement and Prohibition Notices		,
Environment Agency - Southern Region	March 2013	As notified
Integrated Pollution Controls		
Environment Agency - Southern Region	October 2008	Not Applicable
Integrated Pollution Prevention And Control		
Environment Agency - South East Region - Solent & South Downs Area	July 2017	Quarterly
Environment Agency - Southern Region	July 2017	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Horsham District Council - Environmental Health Department	June 2015	Annual Rolling Update
Lewes District Council - Environmental Health Department	June 2016	Annual Rolling Updat
Mid Sussex District Council - Environmental Services Section	September 2014	Annual Rolling Updat
Local Authority Pollution Prevention and Controls		
Horsham District Council - Environmental Health Department	June 2015	Annual Rolling Updat
Lewes District Council - Environmental Health Department	June 2016	Annual Rolling Updat
Mid Sussex District Council - Environmental Services Section	September 2014	Annual Rolling Updat
Local Authority Pollution Prevention and Control Enforcements		
Horsham District Council - Environmental Health Department	June 2015	Annual Rolling Updat
Lewes District Council - Environmental Health Department	June 2016	Annual Rolling Updat
Mid Sussex District Council - Environmental Services Section	September 2014	Annual Rolling Updat
Nearest Surface Water Feature		
Ordnance Survey	May 2017	
Pollution Incidents to Controlled Waters		
Environment Agency - Southern Region	December 1999	Not Applicable
Prosecutions Relating to Authorised Processes		
Environment Agency - Southern Region	March 2013	As notified
Prosecutions Relating to Controlled Waters		
Environment Agency - Southern Region	March 2013	As notified
Registered Radioactive Substances		
Environment Agency - Southern Region	January 2015	
River Quality	N	
Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points		
Environment Agency - Head Office	July 2012	Annually
River Quality Chemistry Sampling Points		
Environment Agency - Head Office	July 2012	Annually
Substantiated Pollution Incident Register		
Environment Agency - South East Region - Solent & South Downs Area	July 2017	Quarterly
Environment Agency - Southern Region - Kent and East Sussex	July 2017	Quarterly
Environment Agency - Southern Region - Solent and South Downs	July 2017	Quarterly
Environment Agency - Southern Region - Sussex Area	July 2017	Quarterly
Water Abstractions		•
Environment Agency - Southern Region	July 2017	Quarterly
Water Industry Act Referrals	luk: 0047	ا المسلم
Environment Agency - Southern Region	July 2017	Quarterly
Groundwater Vulnerability		
Environment Agency - Head Office	April 2015	Not Applicable

Order Number: 140997472\_1\_1 Date: 28-Sep-2017 rpr\_ec\_datasheet v53.0 A Landmark Information Group Service



Agency & Hydrological	Version	Update Cycle
Drift Deposits		
Environment Agency - Head Office	January 1999	Not Applicable
Bedrock Aquifer Designations		
British Geological Survey - National Geoscience Information Service	August 2015	As notified
Superficial Aquifer Designations		
British Geological Survey - National Geoscience Information Service	August 2015	As notified
Source Protection Zones		
Environment Agency - Head Office	July 2017	Quarterly
Extreme Flooding from Rivers or Sea without Defences		
Environment Agency - Head Office	August 2017	Quarterly
Flooding from Rivers or Sea without Defences		
Environment Agency - Head Office	August 2017	Quarterly
Areas Benefiting from Flood Defences		
Environment Agency - Head Office	August 2017	Quarterly
Flood Water Storage Areas		
Environment Agency - Head Office	August 2017	Quarterly
Flood Defences		
Environment Agency - Head Office	August 2017	Quarterly
OS Water Network Lines		
Ordnance Survey	July 2017	6 Weekly
BGS Groundwater Flooding Susceptibility		
British Geological Survey - National Geoscience Information Service	May 2013	Annually

Order Number: 140997472\_1\_1 Date: 28-Sep-2017 rpr\_ec\_datasheet v53.0 A Landmark Information Group Service Page 33 of 38



Waste	Version	Update Cycle
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites		
Environment Agency - Head Office	May 2017	Quarterly
Integrated Pollution Control Registered Waste Sites		
Environment Agency - Southern Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency - South East Region - Solent & South Downs Area	May 2017	Quarterly
Environment Agency - Southern Region - Kent and East Sussex	May 2017	Quarterly
Environment Agency - Southern Region - Solent and South Downs	May 2017	Quarterly
Environment Agency - Southern Region - Sussex Area	May 2017	Quarterly
Licensed Waste Management Facilities (Locations)	,	
Environment Agency - South East Region - Solent & South Downs Area	July 2017	Quarterly
Environment Agency - Southern Region - Kent and East Sussex	July 2017	Quarterly
Environment Agency - Southern Region - Solent and South Downs	July 2017	Quarterly
Environment Agency - Southern Region - Sussex Area	July 2017	Quarterly
Local Authority Landfill Coverage	53.9 25	
East Sussex County Council - Waste Management Group	May 2000	Not Applicable
Horsham District Council - Environmental Health Department	May 2000	Not Applicable
Lewes District Council	May 2000	Not Applicable
Mid Sussex District Council - Environmental Services Section	May 2000	Not Applicable
West Sussex County Council - Environment & Development	May 2000	Not Applicable
	May 2000	140t / tppiloabio
Local Authority Recorded Landfill Sites	May 2000	Not Applicable
East Sussex County Council - Waste Management Group	May 2000	Not Applicable
Horsham District Council - Environmental Health Department	May 2000	Not Applicable
Lewes District Council	May 2000	Not Applicable
Mid Sussex District Council - Environmental Services Section	May 2000	Not Applicable
West Sussex County Council - Environment & Development	May 2000	Not Applicable
Registered Landfill Sites		
Environment Agency - Southern Region - Kent and East Sussex	March 2003	Not Applicable
Environment Agency - Southern Region - Solent and South Downs	March 2003	Not Applicable
Environment Agency - Southern Region - Sussex Area	March 2003	Not Applicable
Registered Waste Transfer Sites		
Environment Agency - Southern Region - Kent and East Sussex	March 2003	Not Applicable
Environment Agency - Southern Region - Solent and South Downs	March 2003	Not Applicable
Environment Agency - Southern Region - Sussex Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites		
Environment Agency - Southern Region - Kent and East Sussex	March 2003	Not Applicable
Environment Agency - Southern Region - Solent and South Downs	March 2003	Not Applicable
Environment Agency - Southern Region - Sussex Area	March 2003	Not Applicable

Order Number: 140997472\_1\_1 Date: 28-Sep-2017 rpr\_ec\_datasheet v53.0 A Landmark Information Group Service Page 34 of 38



Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH)		
Health and Safety Executive	September 2017	Bi-Annually
Explosive Sites		
Health and Safety Executive	March 2017	Bi-Annually
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements		
Horsham District Council - Planning Department	August 2015	Annual Rolling Update
East Sussex County Council - Development Minerals & Waste	February 2016	Annual Rolling Update
Lewes District Council - Planning Department	February 2016	Annual Rolling Update
Mid Sussex District Council	January 2016	Annual Rolling Update
West Sussex County Council - Environment & Development	October 2006	Annual Rolling Update
	233333.202	
Planning Hazardous Substance Consents  Hercham District Council Planning Department	August 2015	Annual Rolling Update
Horsham District Council - Planning Department East Sussex County Council - Development Minerals & Waste	August 2015	
	February 2016 February 2016	Annual Rolling Update
Lewes District Council - Planning Department Mid Sussex District Council	January 2016	Annual Rolling Update Annual Rolling Update
West Sussex County Council - Environment & Development	October 2006	Annual Rolling Update
west Sussex County Council - Environment & Development	October 2006	Annual Rolling Opuals
Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology		
British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Recorded Mineral Sites		
British Geological Survey - National Geoscience Information Service	April 2017	Bi-Annually
CBSCB Compensation District		,
Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
	, tagast 2011	110t7 tppilodbio
Coal Mining Affected Areas	March 2014	As notified
The Coal Authority - Property Searches	March 2014	As notified
Mining Instability		
Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain		
British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Compressible Ground Stability Hazards		•
British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Ground Dissolution Stability Hazards	03.112.20.10	
•	luno 2015	Appually
British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Landslide Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Running Sand Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	June 2015	Annually
Radon Potential - Radon Affected Areas		<u> </u>
British Geological Survey - National Geoscience Information Service	July 2011	As notified
	July 2011	AS HUUHIGU
Radon Potential - Radon Protection Measures		
British Geological Survey - National Geoscience Information Service	July 2011	As notified

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Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries		
Thomson Directories	June 2017	Quarterly
Fuel Station Entries	August 2017	Quartarly
Catalist Ltd - Experian	August 2017	Quarterly
Gas Pipelines National Grid	July 2014	Quarterly
Underground Electrical Cables		
National Grid	December 2015	Bi-Annually
Sensitive Land Use	Version	Update Cycle
Ancient Woodland		
Natural England	May 2017	Bi-Annually
Areas of Adopted Green Belt	14 0047	A (15 )
Mid Sussex District Council	May 2017	As notified
Areas of Unadopted Green Belt Mid Sussex District Council	May 2017	As notified
Areas of Outstanding Natural Beauty	Way 2017	7 to Houned
Natural England	August 2017	Bi-Annually
Environmentally Sensitive Areas	-	
Natural England	January 2017	Annually
Forest Parks		
Forestry Commission	April 1997	Not Applicable
Local Nature Reserves		
Natural England	August 2017	Bi-Annually
Marine Nature Reserves Natural England	August 2017	Bi-Annually
National Nature Reserves	August 2017	DI-Allitually
Natural England	August 2017	Bi-Annually
National Parks	3	,
Natural England	August 2017	Bi-Annually
Nitrate Vulnerable Zones		
Environment Agency - Head Office	June 2017	Bi-Annually
Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	October 2015	
Ramsar Sites	A.v 1 0047	D: A
Natural England	August 2017	Bi-Annually
Sites of Special Scientific Interest Natural England	August 2017	Bi-Annually
Special Areas of Conservation	7 tagaot 2017	Di / tinidany
Natural England	August 2017	Bi-Annually
Special Protection Areas	-	-
· Natural England	August 2017	Bi-Annually

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A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	Map data
Environment Agency	Environment
Scottish Environment Protection Agency	SEPAP Scottish Instrument Frontation Agency
The Coal Authority	The Coal Authority
British Geological Survey	British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
Centre for Ecology and Hydrology	Centre for Ecology & Hydrology NATURAL ENVIRONMENT RESEARCH COUNCIL
Natural Resources Wales	Cyfoeth Naturiol Cyfreu Natural Resources Wales
Scottish Natural Heritage	SCOTTISH NATURAL HERITAGE
Natural England	NATURAL ENGLAND
Public Health England	Public Health England
Ove Arup	ARUP
Peter Brett Associates	peterbrett



## **Useful Contacts**

Contact	Name and Address	Contact Details
1	British Geological Survey - Enquiry Service  British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
3	Ordnance Survey Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 023 8079 2000 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
4	Mid Sussex District Council - Environmental Services Section The Oaklands, Oaklands Road, Haywards Heath, West Sussex, RH16 1SS	Telephone: 01444 458166 extn 2288 Fax: 01444 450027 Website: www.midsussex.gov.uk
5	West Sussex County Council - Environment & Development County Hall, Tower hall, Chichester, West Sussex, PO19 1RH	Telephone: 01243 777100 Website: www.westsussex.gov.uk
6	Natural England County Hall, Spetchley Road, Worcester, WR5 2NP	Telephone: 0300 060 3900 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
7	Environment Agency - Head Office Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409
-	Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.

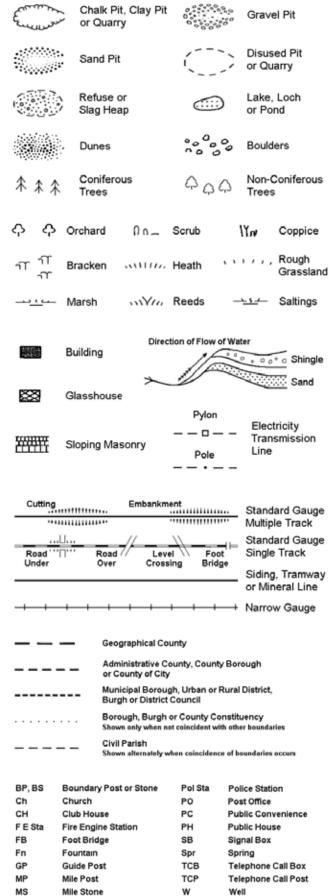
Order Number: 140997472\_1\_1 Date: 28-Sep-2017 rpr\_ec\_datasheet v53.0 A Landmark Information Group Service Page 38 of 38

## **Historical Mapping Legends**

## **Ordnance Survey County Series 1:10,560** Other Gravel Orchard Orchard Mixed Wood Brushwood Deciduous Furze Rough Pasture Arrow denotes Trigonometrical flow of water Station Site of Antiquities Bench Mark Pump, Guide Post, Well, Spring, Signal Post **Boundary Post** Surface Level Sketched Instrumental Contour Contour Fenced Main Roads Minor Roads Un-Fenced Sunken Road Raised Road Railway over Road over River Railway over Level Crossing Road over Road over Stream Road over County Boundary (Geographical) County & Civil Parish Boundary Administrative County & Civil Parish Boundary County Borough Boundary (England) Co. Boro. Bdy. County Burgh Boundary (Scotland) Rural District Boundary

· · · · · · · Civil Parish Boundary

### Ordnance Survey Plan 1:10,000



### 1:10,000 Raster Mapping

(1111)	Gravel Pit	(23)	Refuse tip or slag heap
3 2 3 2 3 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3	Rock	, ,	Rock (scattered)
	Boulders		Boulders (scattered)
\$5000 B	Shingle	Mud	Mud
Sand	Sand	(333)	Sand Pit
mm	Slopes	HILLILLI	Top of cliff
	General detail		Underground detail
	Overhead detail		Narrow gauge railway
<del>-</del>	Multi-track railway		Single track railway
	County boundary (England only)	•••••	Civil, parish or community boundary
2-3-3-0	District, Unitary, Metropolitan, London Borough boundary		Constituency boundary
مَد <sup>۵۵</sup>	Area of wooded vegetation	۵۵ ۵۵	Non-coniferous trees
۵۵	Non-coniferous trees (scattered)	** **	Coniferous trees
* *	Coniferous trees (scattered)	$\bigcirc$	Positioned tree
φ φ φ φ	Orchard	2 2	Coppice or Osiers
atte.	Rough Grassland	Mes	Heath
On	Scrub	a <u>M</u> ic	Marsh, Salt Marsh or Reeds
S	Water feature	<del>-</del>	Flow arrows
MHW(S)	Mean high water (springs)	MLW(S)	Mean low water (springs)
	Telephone line (where shown)		Electricity transmission line (with poles)
8M 123.45 m	Bench mark (where shown)	Δ	Triangulation station
P.*	Point feature (e.g. Guide Post or Mile Stone)	⊠	Pylon, flare stack or lighting tower
•‡•	Site of (antiquity)		Glasshouse
	General Building	o.	Important Building

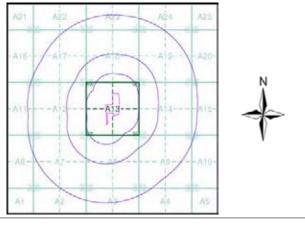
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#### **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Sussex	1:10,560	1879	2
Sussex	1:10,560	1899	3
Sussex	1:10,560	1912	4
Sussex	1:10,560	1951 - 1952	5
Ordnance Survey Plan	1:10,000	1963	6
Ordnance Survey Plan	1:10,000	1976	7
Ordnance Survey Plan	1:10,000	1993	8
10K Raster Mapping	1:10,000	2000	9
Street View	Variable		10

### **Historical Map - Slice A**



#### **Order Details**

Order Number: 140997472\_1\_1
Customer Ref: LP1490
National Grid Reference: 526390, 118300

Slice:

Site Area (Ha): 3.26 Search Buffer (m): 1000

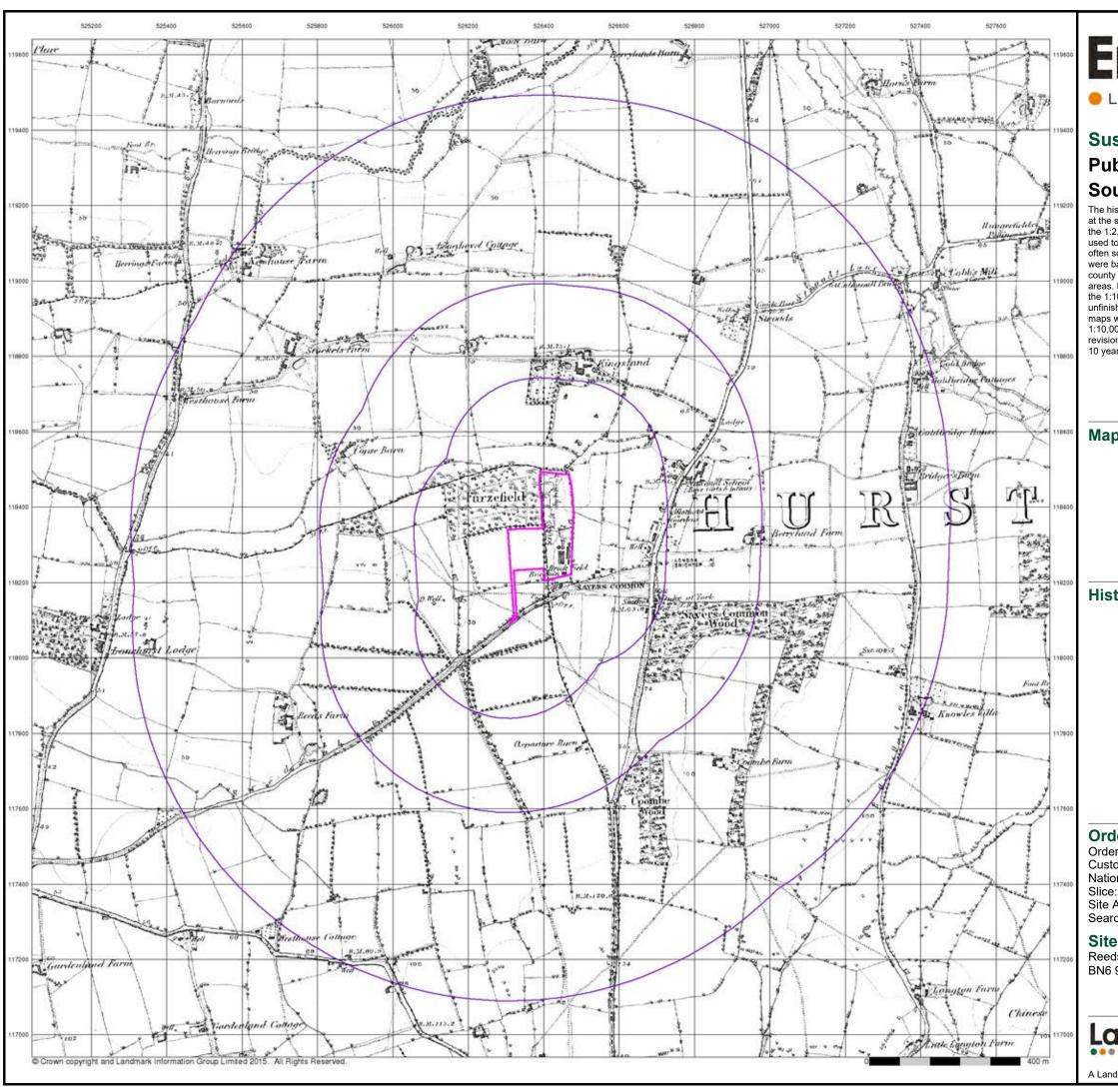
#### Site Details

Reeds Lane, Sayers Common, HASSOCKS, West Sussex, BN6 9LS



el: 0844 844 9952 ax: 0844 844 9951 'eb: www.envirocheck

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### Sussex

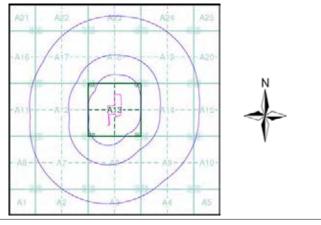
## **Published 1879** Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and o her strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued un il recently, with new editions appearing every 10 years or so for urban areas.

### Map Name(s) and Date(s)



#### **Historical Map - Slice A**



#### **Order Details**

Order Number: 140997472\_1\_1 **Customer Ref:** LP1490 National Grid Reference: 526390, 118300

Site Area (Ha): 3.26 Search Buffer (m): 1000

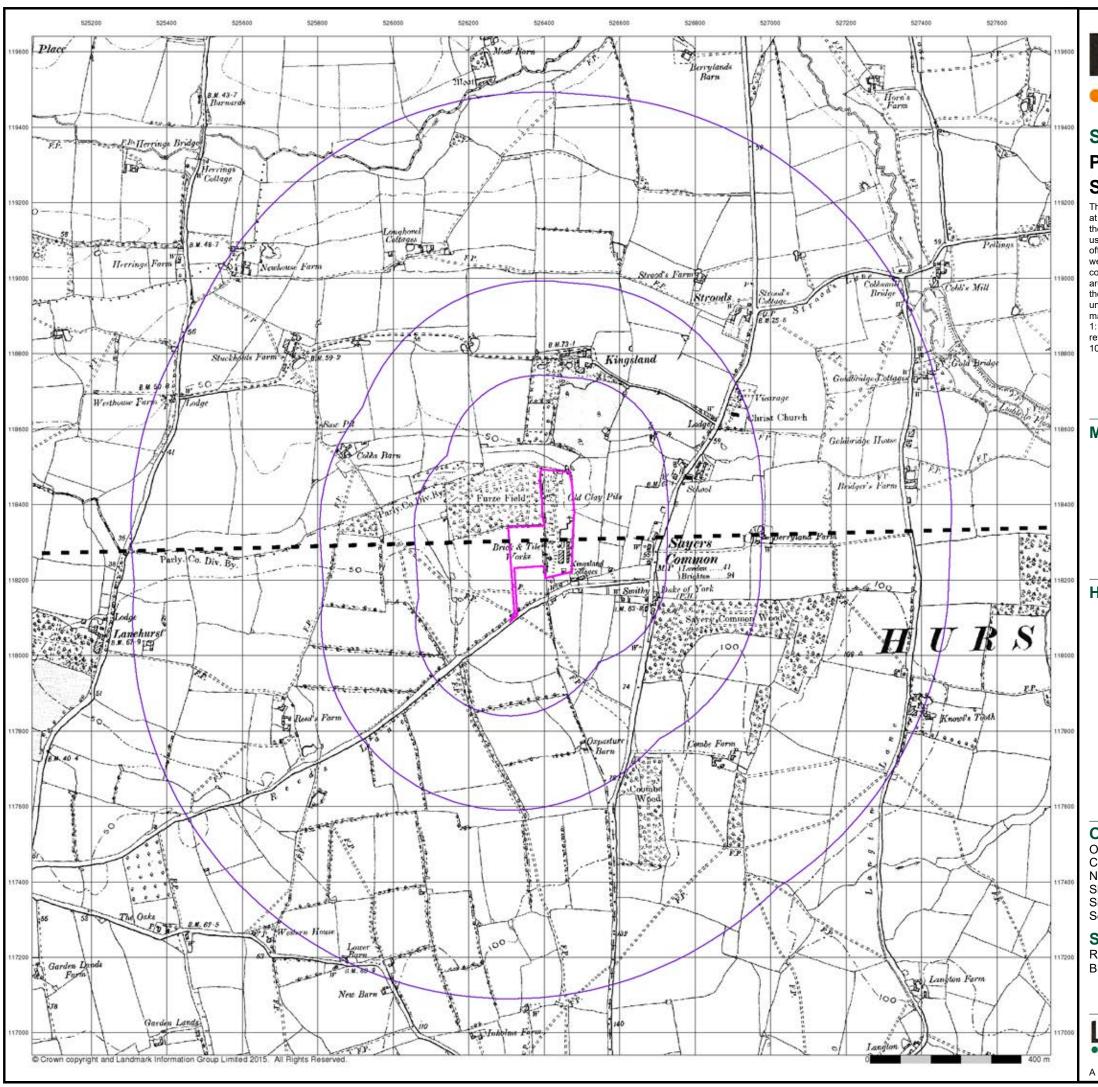
#### **Site Details**

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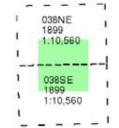
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#### Sussex

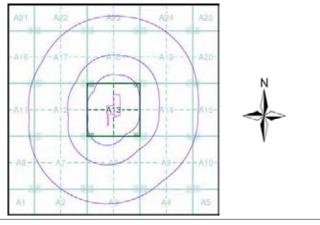
## Published 1899 Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and o her strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued un il recently, with new editions appearing every 10 years or so for urban areas.

#### Map Name(s) and Date(s)



#### **Historical Map - Slice A**



#### **Order Details**

Order Number: 140997472\_1\_1
Customer Ref: LP1490
National Grid Reference: 526390, 118300

Slice: Site Area

Site Area (Ha): 3.26 Search Buffer (m): 1000

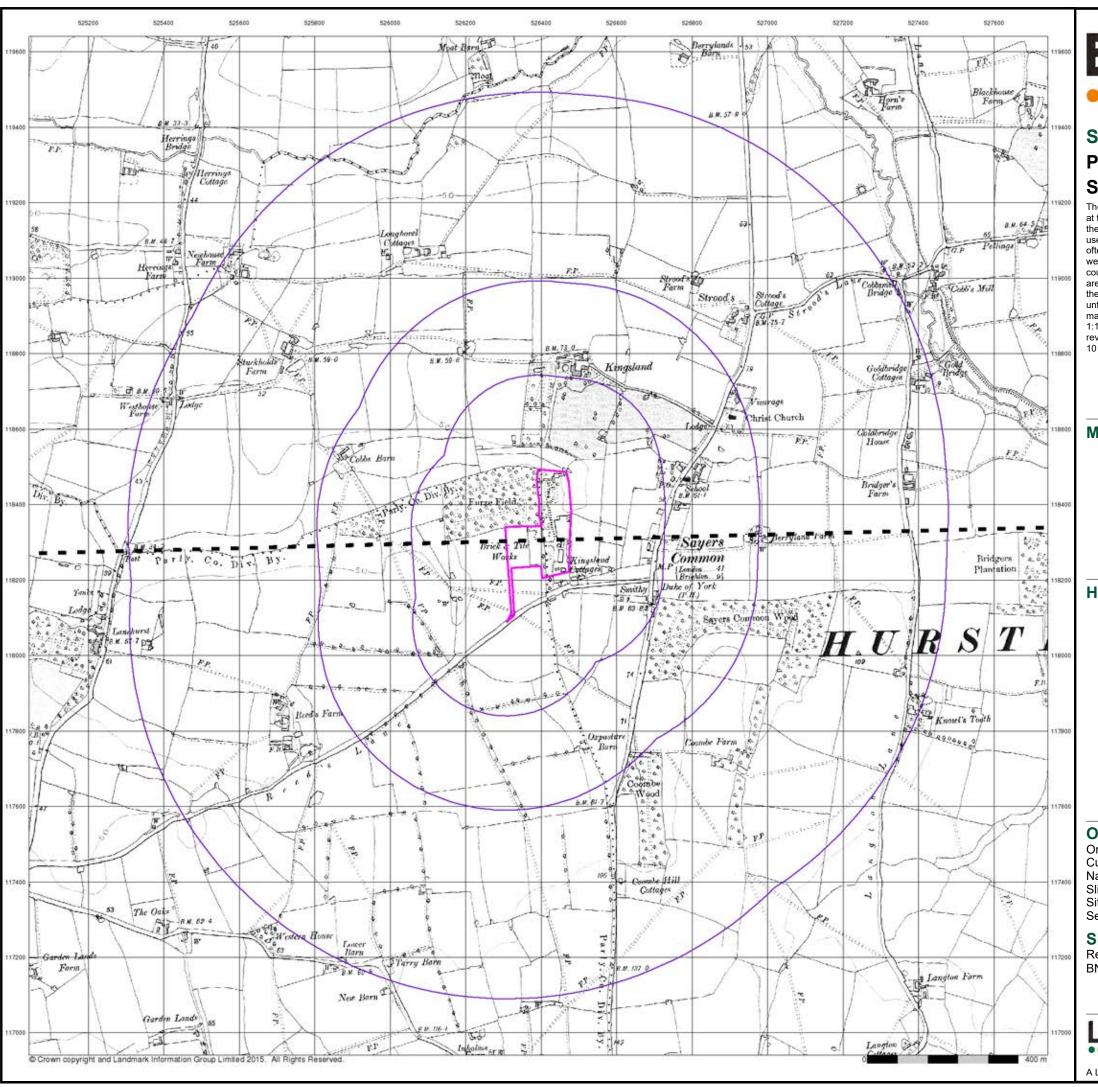
#### **Site Details**

Reeds Lane, Sayers Common, HASSOCKS, West Sussex, BN6 9LS



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A Landmark Information Group Service v50.0 28-Sep-2017 Page 3 of 10



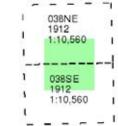
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#### Sussex

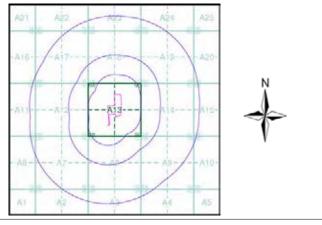
## Published 1912 Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and o her strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued un il recently, with new editions appearing every 10 years or so for urban areas.

#### Map Name(s) and Date(s)



#### **Historical Map - Slice A**



#### **Order Details**

Order Number: 140997472\_1\_1 **Customer Ref:** LP1490 National Grid Reference: 526390, 118300 Slice:

Site Area (Ha): 3.26 Search Buffer (m): 1000

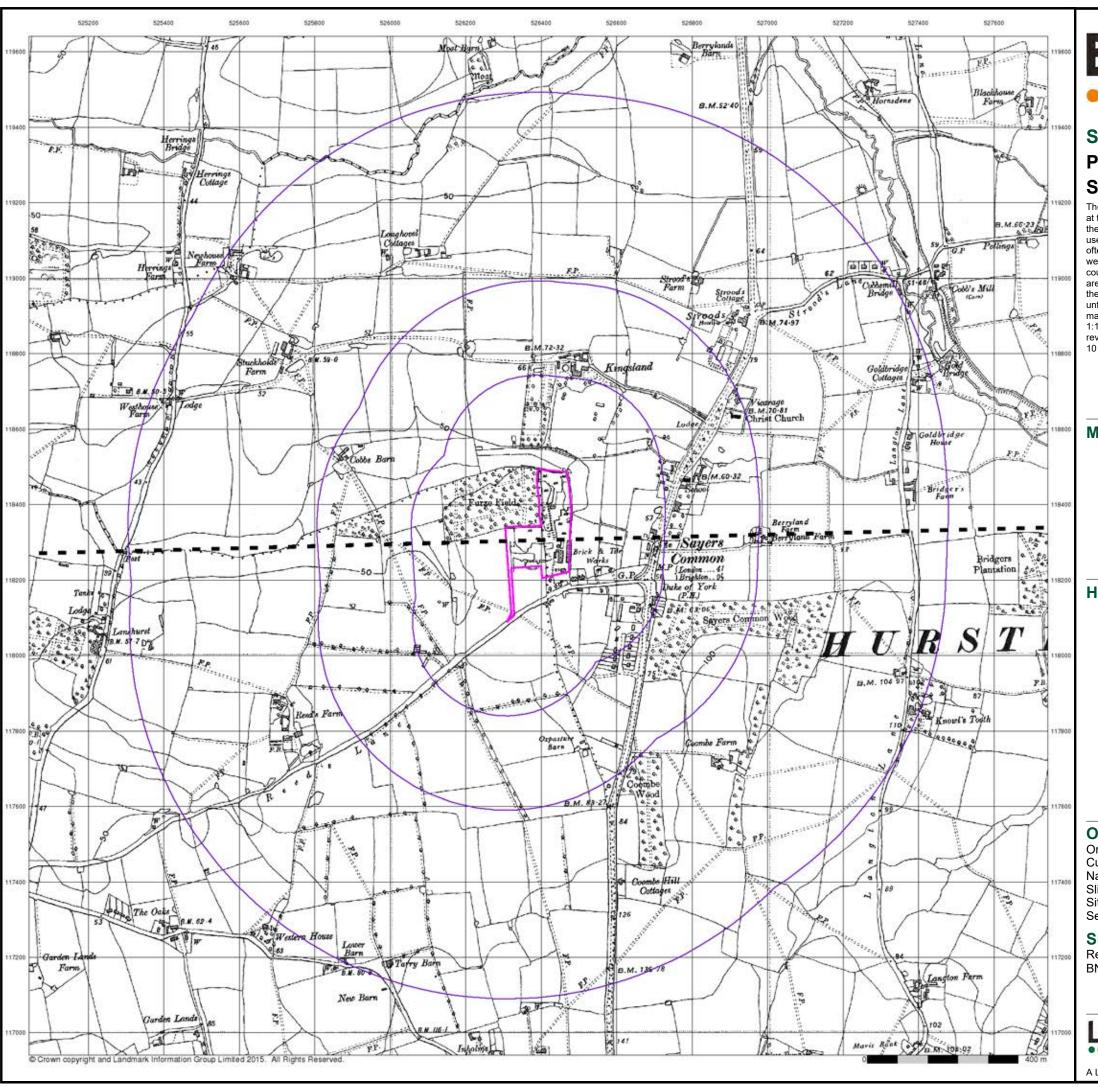
#### **Site Details**

Reeds Lane, Sayers Common, HASSOCKS, West Sussex, BN6 9LS



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A Landmark Information Group Service v50.0 28-Sep-2017 Page 4 of 10



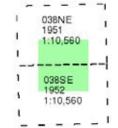
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#### Sussex

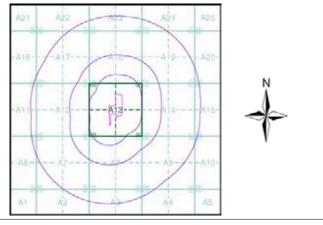
## **Published 1951 - 1952 Source map scale - 1:10,560**

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and o her strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued un il recently, with new editions appearing every 10 years or so for urban areas.

#### Map Name(s) and Date(s)



#### **Historical Map - Slice A**



#### **Order Details**

Order Number: 140997472\_1\_1
Customer Ref: LP1490
National Grid Reference: 526390, 118300

Slice:

Site Area (Ha): 3.26 Search Buffer (m): 1000

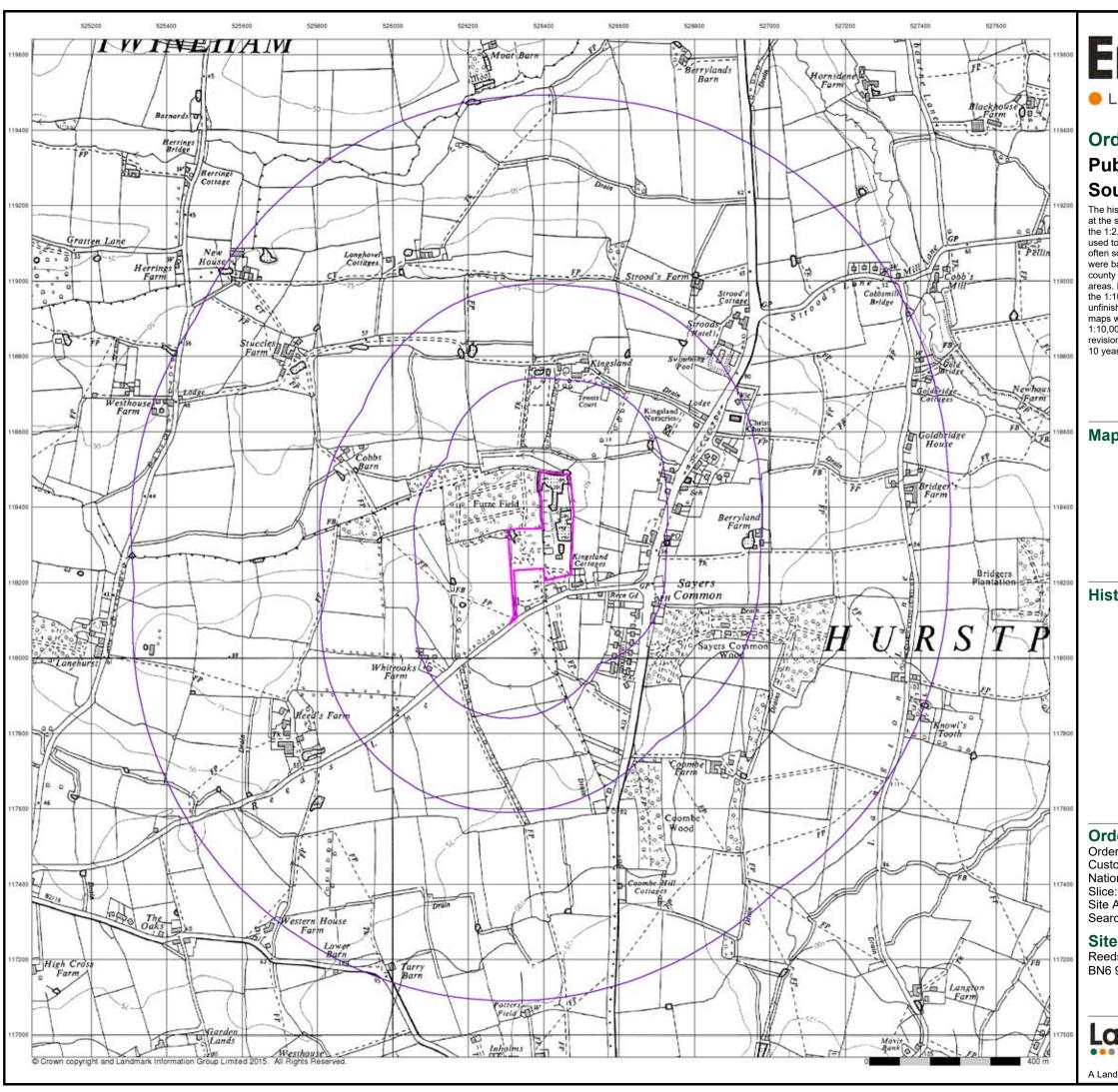
#### **Site Details**

Reeds Lane, Sayers Common, HASSOCKS, West Sussex, BN6 9LS



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A Landmark Information Group Service v50.0 28-Sep-2017 Page 5 of 10

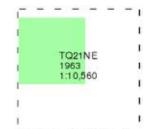


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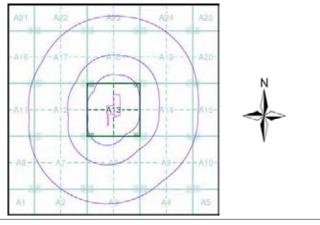
# Ordnance Survey Plan Published 1963 Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and o her strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued un il recently, with new editions appearing every 10 years or so for urban areas.

#### Map Name(s) and Date(s)



#### **Historical Map - Slice A**



#### **Order Details**

Order Number: 140997472\_1\_1
Customer Ref: LP1490
National Grid Reference: 526390, 118300

ce:

Site Area (Ha): 3.26 Search Buffer (m): 1000

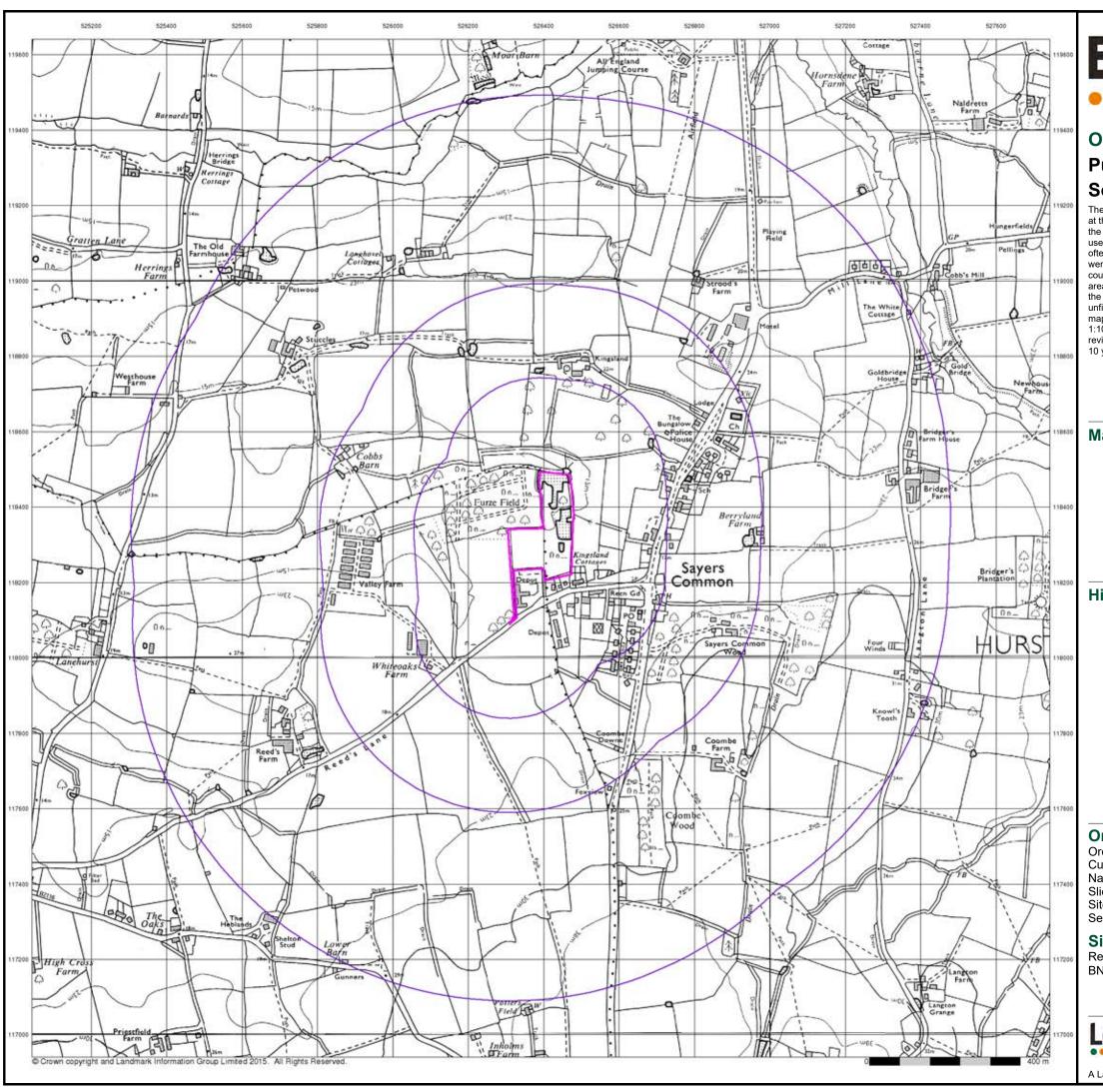
#### **Site Details**

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A Landmark Information Group Service v50.0 28-Sep-2017 Page 6 of 10



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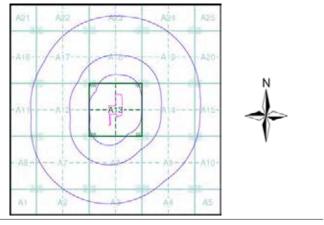
## **Ordnance Survey Plan** Published 1976 Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and o her strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued un il recently, with new editions appearing every 10 years or so for urban areas.

### Map Name(s) and Date(s)



#### **Historical Map - Slice A**



#### **Order Details**

Order Number: 140997472\_1\_1 **Customer Ref:** LP1490 National Grid Reference: 526390, 118300

Slice:

Site Area (Ha): 3.26 Search Buffer (m): 1000

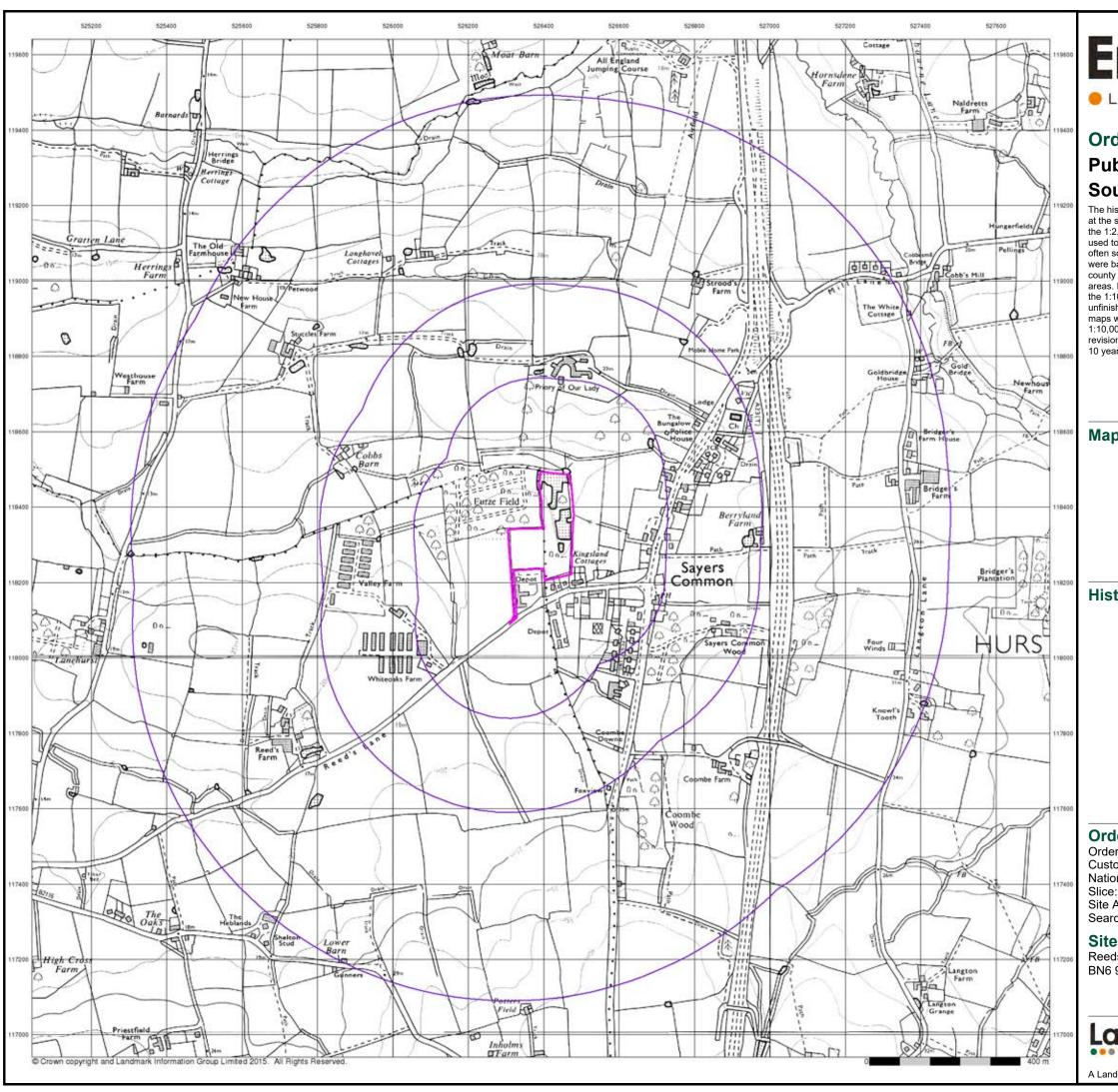
#### **Site Details**

Reeds Lane, Sayers Common, HASSOCKS, West Sussex, BN6 9LS



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A Landmark Information Group Service v50.0 28-Sep-2017 Page 7 of 10

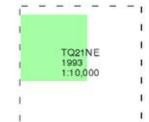


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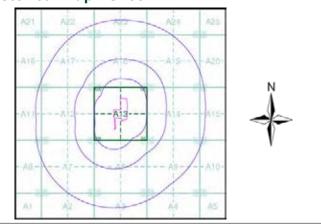
## **Ordnance Survey Plan** Published 1993 Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and o her strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued un il recently, with new editions appearing every 10 years or so for urban areas.

## Map Name(s) and Date(s)



#### **Historical Map - Slice A**



#### **Order Details**

Order Number: 140997472\_1\_1 **Customer Ref:** LP1490 National Grid Reference: 526390, 118300

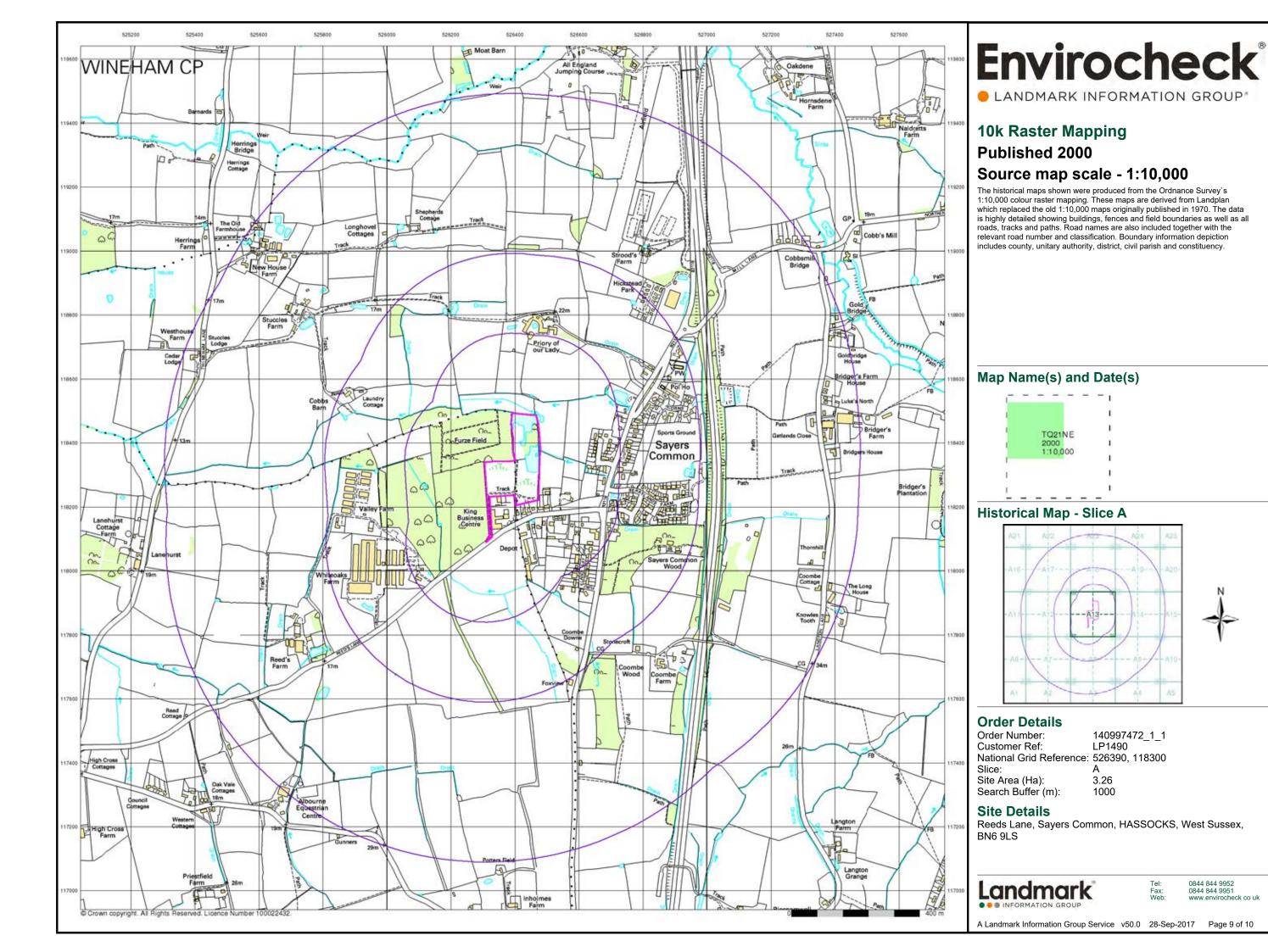
Site Area (Ha): 3.26 Search Buffer (m): 1000

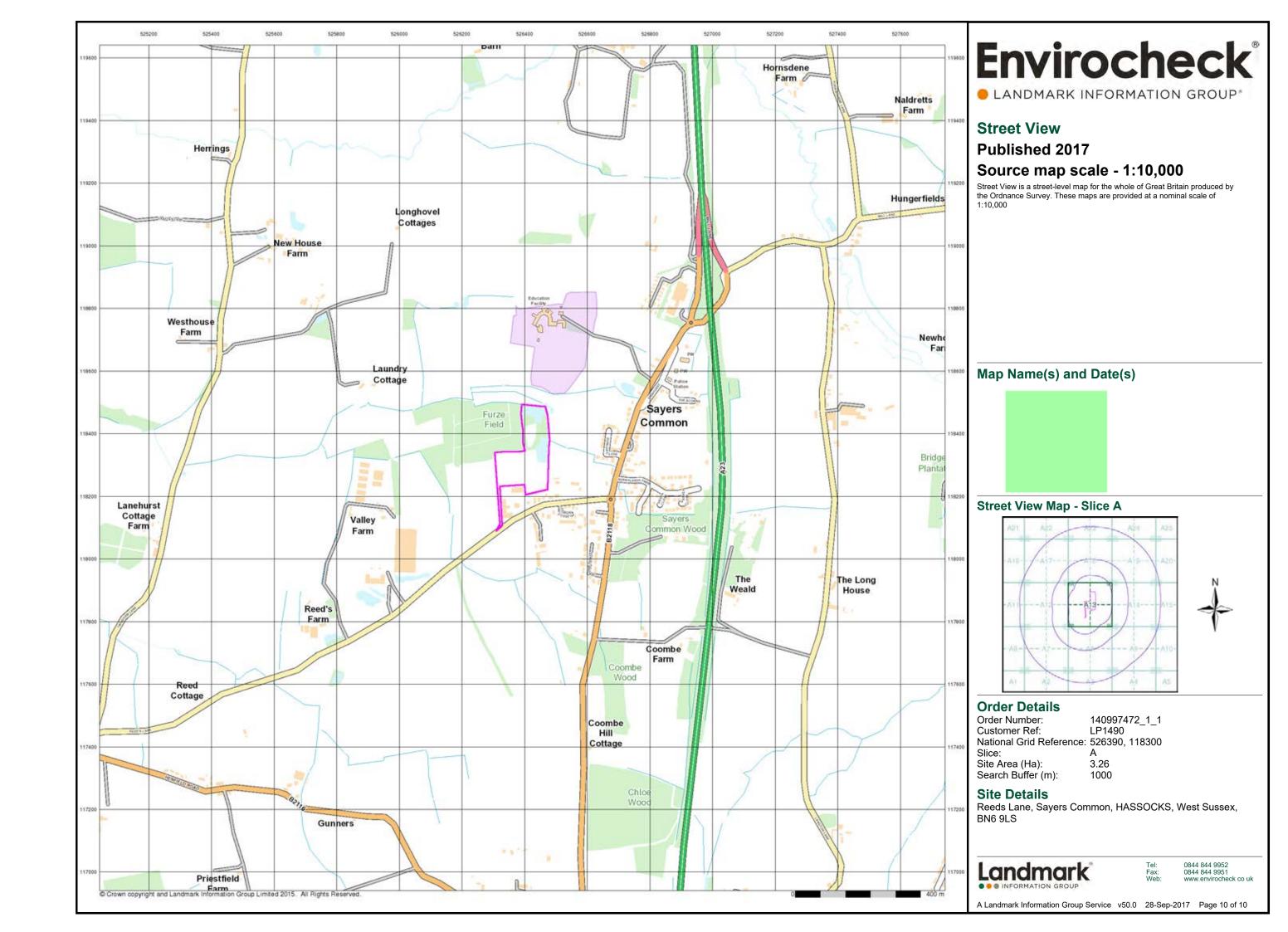
Reeds Lane, Sayers Common, HASSOCKS, West Sussex, BN6 9LS

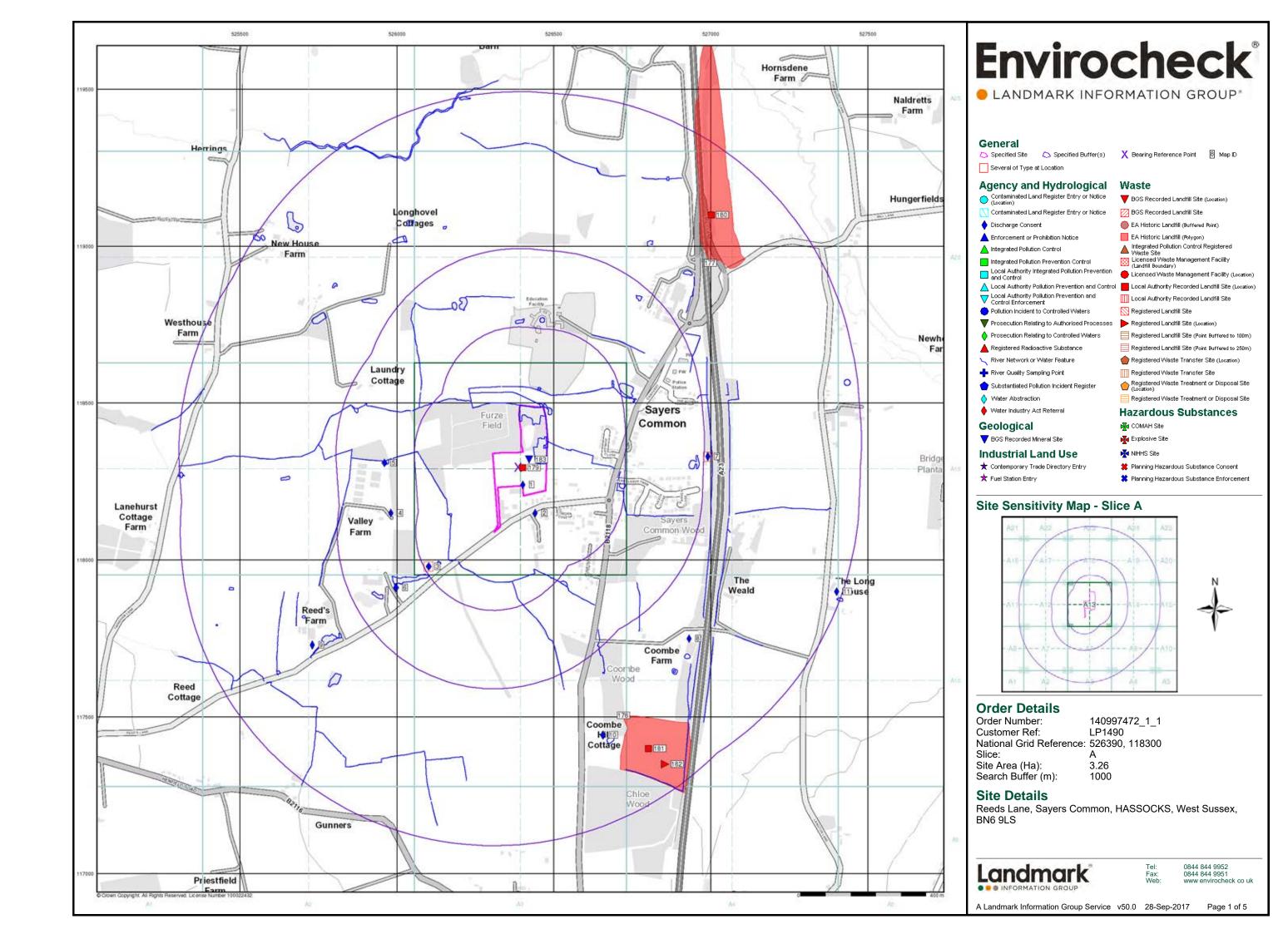


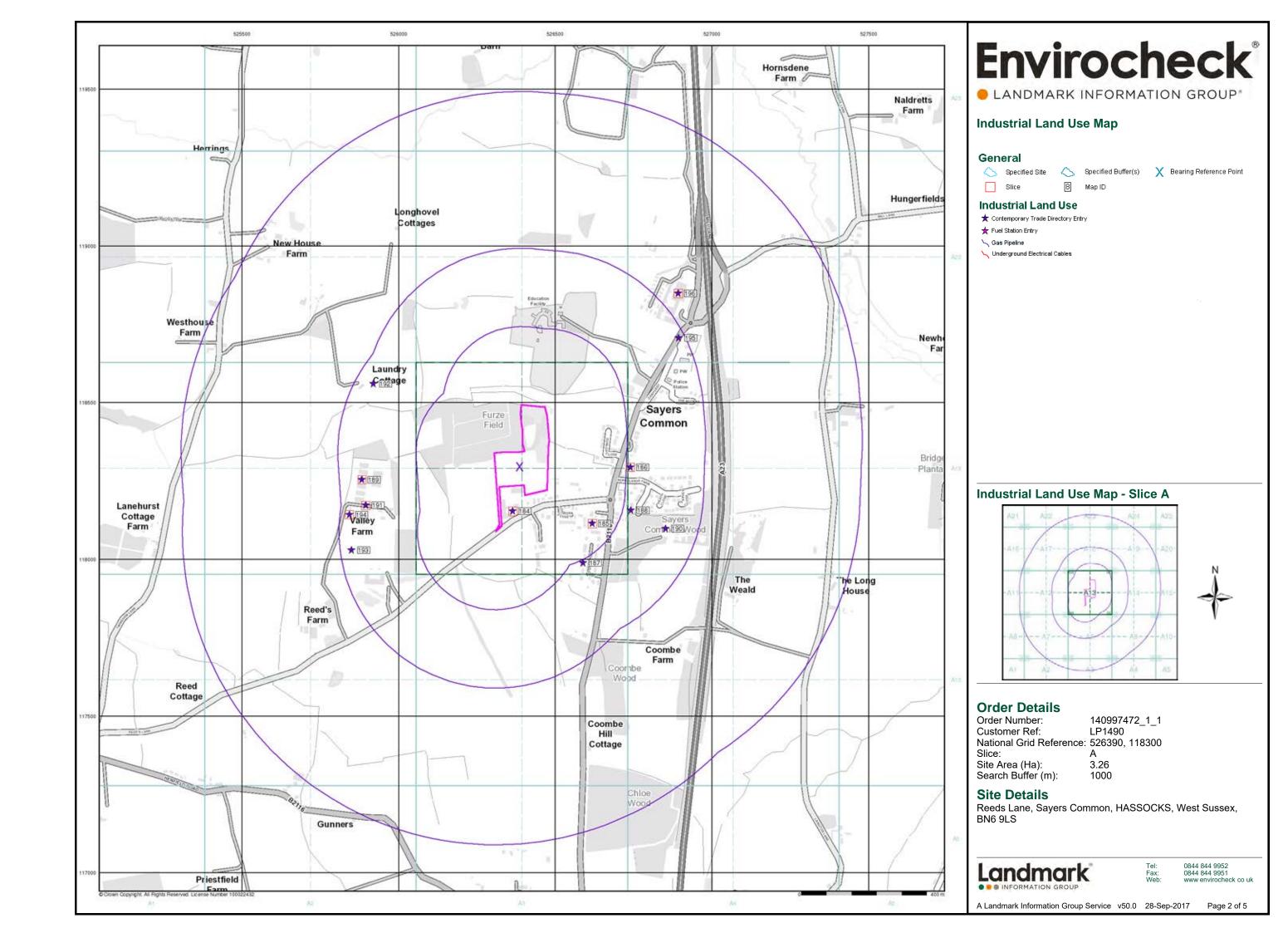
0844 844 9951

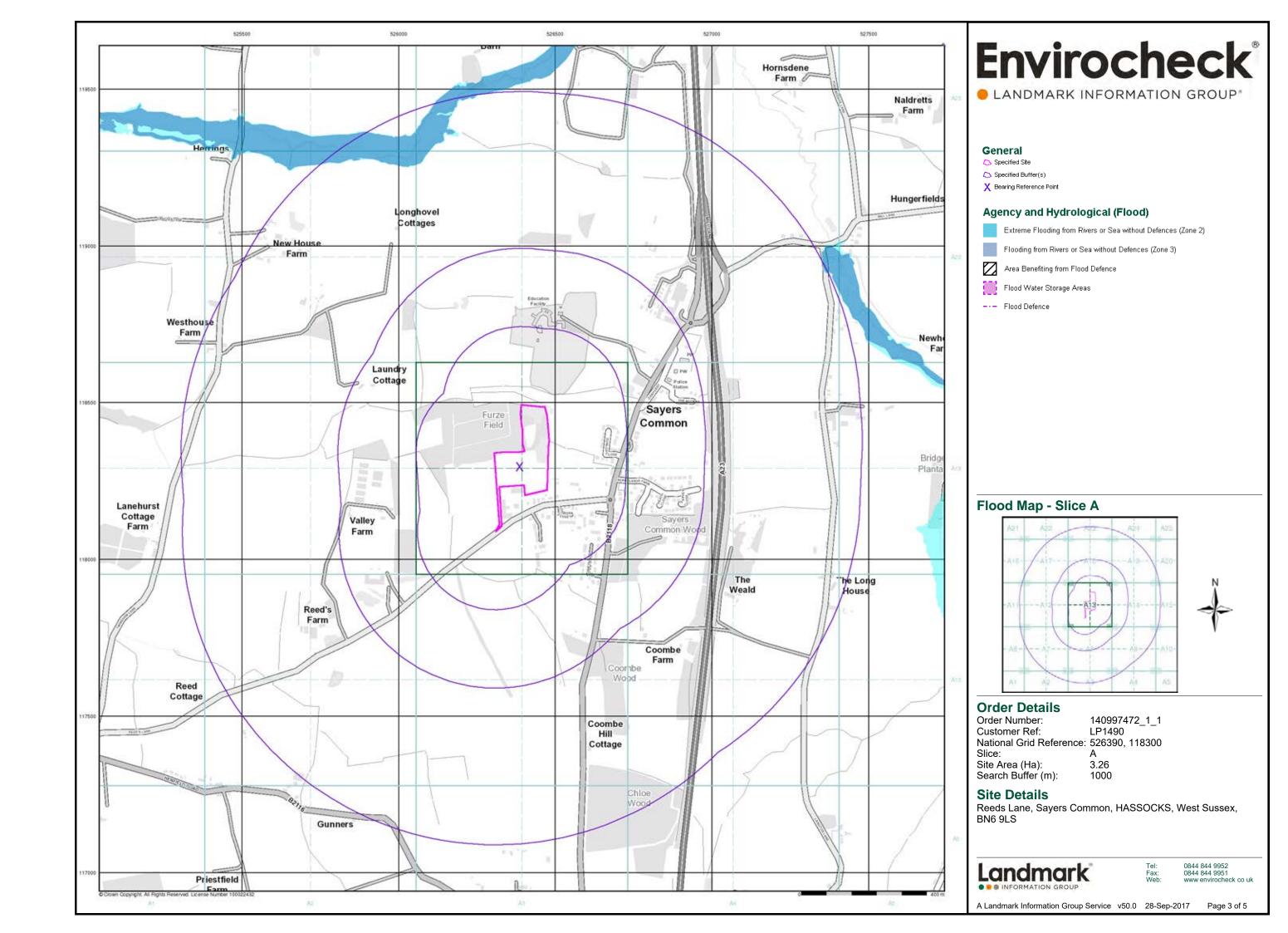
A Landmark Information Group Service v50.0 28-Sep-2017 Page 8 of 10

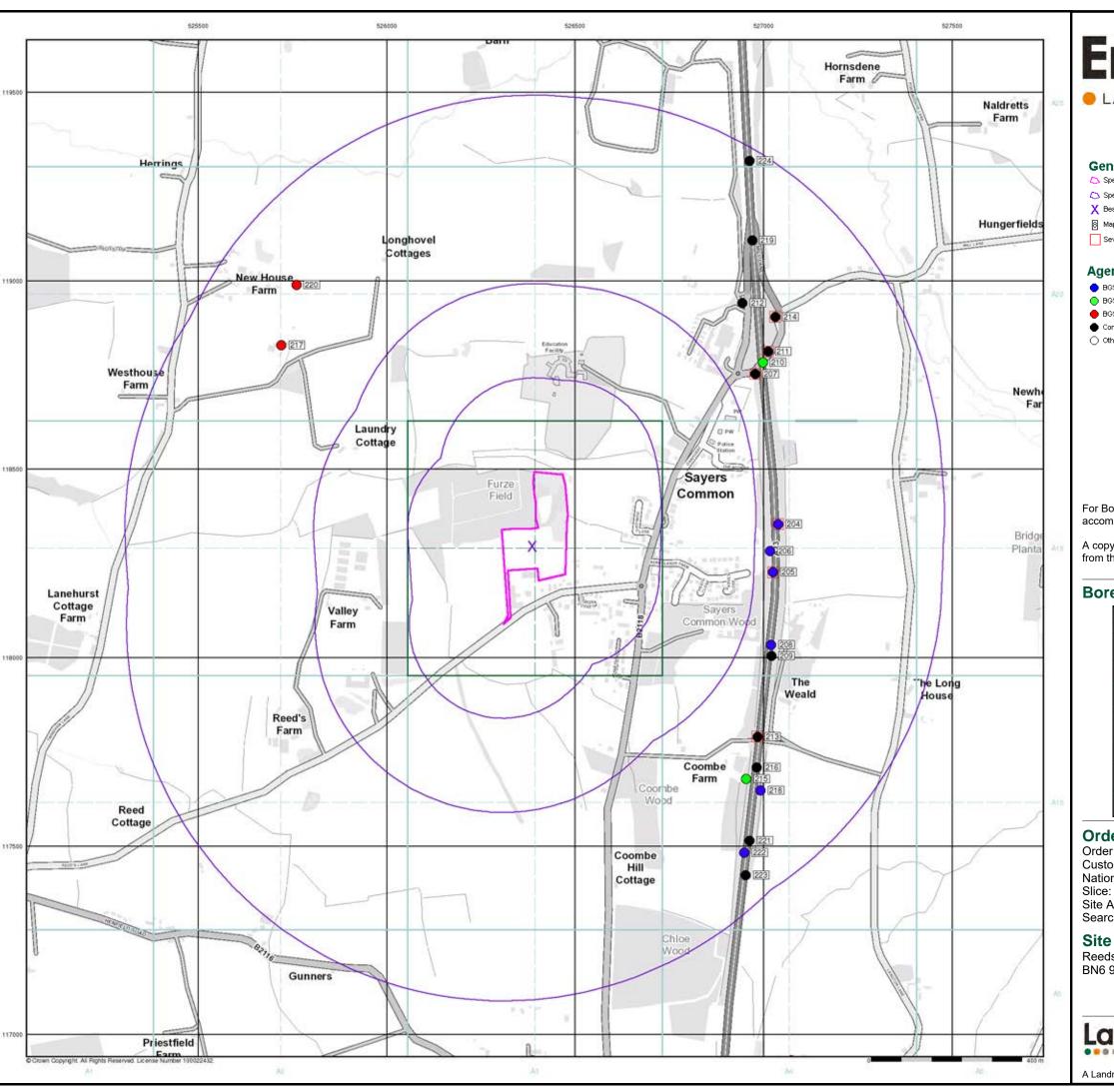












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#### General

Specified Buffer(s)

X Bearing Reference Point

8 Map ID

Several of Type at Location

#### Agency and Hydrological (Boreholes)

BGS Borehole Depth 0 - 10m

BGS Borehole Depth 10 - 30m

BGS Borehole Depth 30m +

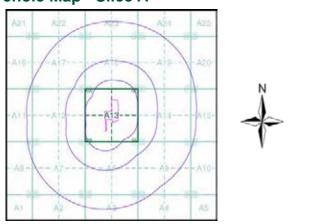
Confidential

Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

#### **Borehole Map - Slice A**



#### **Order Details**

Order Number: 140997472\_1\_1 Customer Ref: LP1490 National Grid Reference: 526390, 118300

Site Area (Ha): Search Buffer (m): 3.26 1000

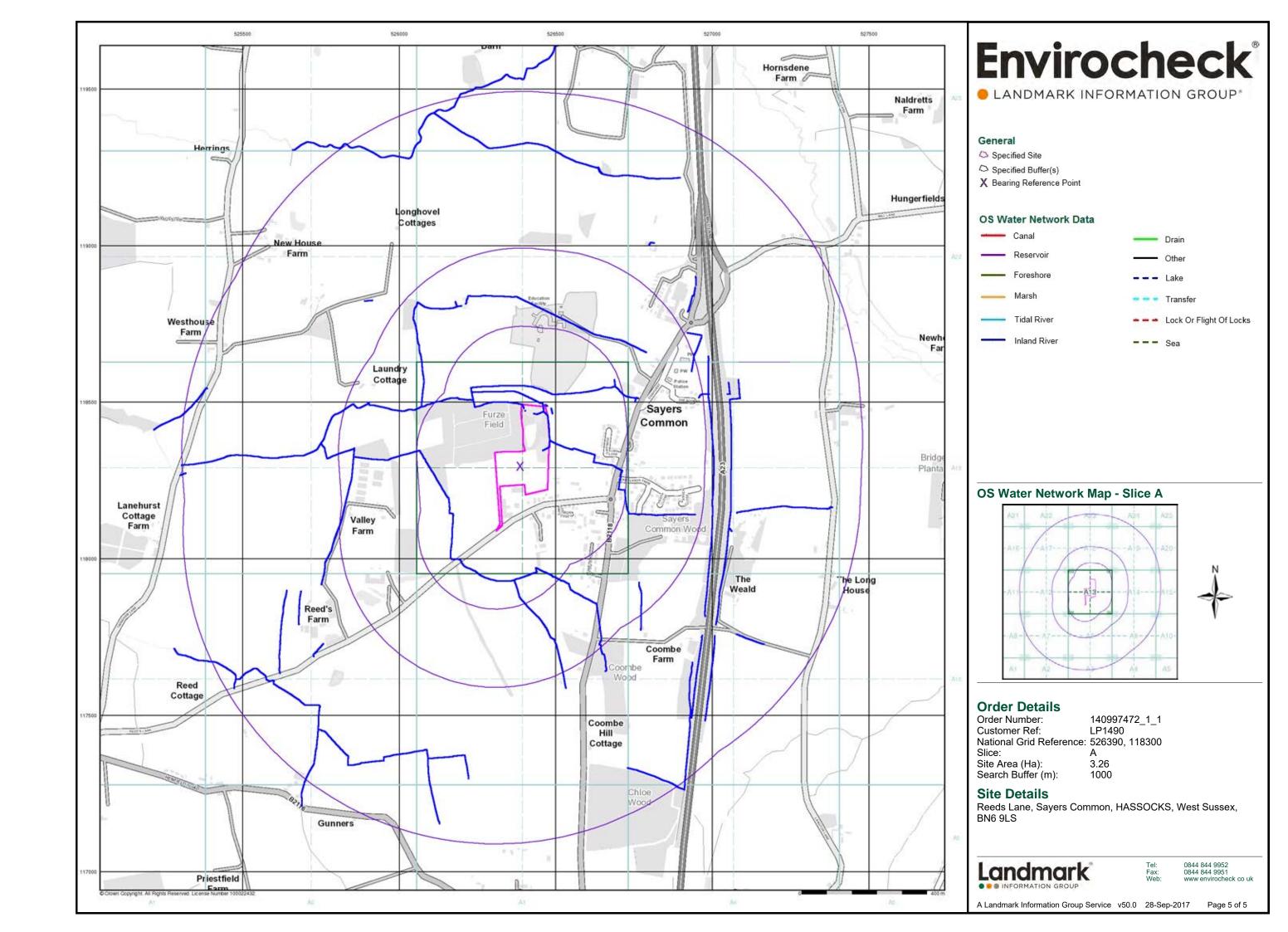
#### **Site Details**

Reeds Lane, Sayers Common, HASSOCKS, West Sussex, BN6 9LS



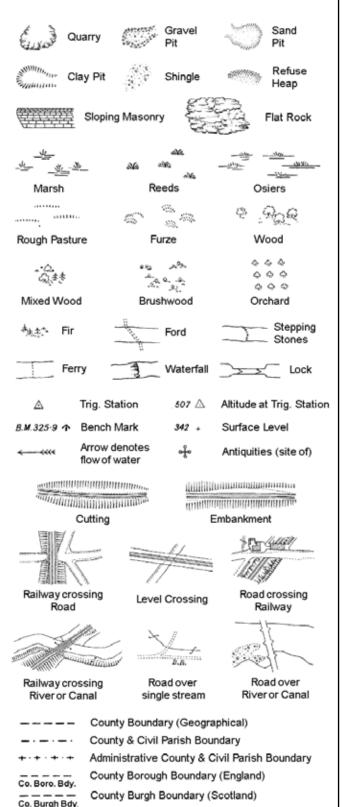
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## **Historical Mapping Legends**

### **Ordnance Survey County Series and** Ordnance Survey Plan 1:2,500



B.R.

EP

F, BF.P. Electricity Pylor

Foot Bridge

Mile Stone

M.P. M.R. Mooring Post or Ring

Police Call Box

Telephone Call Box

Signal Post

Pump

Sluice

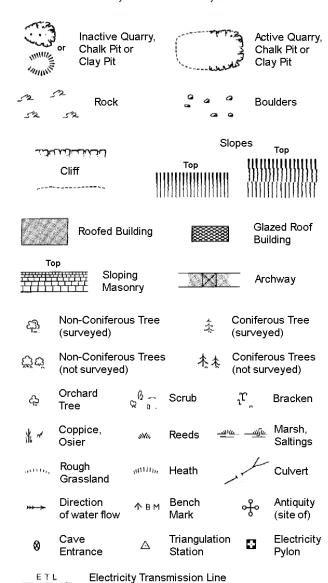
Spring

Trough Well

S.P

SL

### Ordnance Survey Plan, Additional SIMs and Large-Scale National Grid Data 1:2,500 and **Supply of Unpublished Survey Information** 1:2,500 and 1:1,250



	County Boundary (Geographical)
	County & Civil Parish Boundary
	Civil Parish Boundary
· <del></del> · <del></del> ·	Admin. County or County Bor. Boundary
L B Bdy	London Borough Boundary
***	Symbol marking point where boundary mereing changes

· <b>y</b> •	,	-	
вн	Beer House	Р	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
EIP	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
Н	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	WrPt,WrT	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

## 1:1,250

~~~~	~~~~		Slopes Top				
	Clift	1111	Тор	!!!!!!!	!!!!!!!!!!!		
				())))))	(((((((()		
72°	Rock		23	Rock (so	cattered)		
$\triangle$	Boulders		Δ	Boulders	(scattered)		
	Positioned	Boulder		Scree			
2월	Non-Conif (surveyed	erous Tree )	\$	Conifero			
ζģά	Non-Conif (not surve	erous Trees yed)	大大	Conifero	ous Trees /eyed)		
<del>ڳ</del>	Orchard Tree	Q a.	Scrub	'n,	Bracken		
* ~	Coppice, Osier	sNu,	Reeds 🛥	1 <u>100 — 70</u> 00	Marsh, Saltings		
actities.	Rough Grassland	$uuuu_{t_t}$	Heath	1	Culvert		
<del>&gt;&gt;&gt; &gt;</del>	Direction of water flo	Δ	Triangulation Station	, ÷	Antiquity (site of)		
_ETL_	_ Electric	ity Transmis	ssion Line	$\boxtimes$	Electricity Pylon		
\ <del> </del>	231.60m E	Bench Mark	7	Building Building	gs with g Seed		
	Roofe	ed Building		29	azed Roof iilding		
Civil parish/community boundary     District boundary							
_ •		County bou	ındary				
c	,	Boundary p	ost/stone				
۶		-	mereing symb ear in oppose				
Bks	Barracks		Р	Pillar, Pol	le or Post		
Bty	Battery		PO	Post Offi			
Cemy	Cemetery		PC	Public Co	onvenience		
Chy	Chimney		Pp	Pump			
Cis	Cistern		Ppg Sta	Pumping	Station		
Dismtd F	Rly Disman	tled Railway	PW	Place of\	Worship		
El Gen S	ta Electric Station	ity Generating	Sewage F		ewage Imping Station		
EIP	Electricity	Pole, Pillar	SB, S Br	Signal B	ox or Bridge		
El Sub S	ta Electricity	Sub Station	SP, SL	Signal Pe	ost or Light		
			_				

Filter Bed

Fn / D Fn Fountain / Drinking Ftn.

Gas Governer

**Guide Post** 

Manhole

Gas Valve Compound

Mile Post or Mile Stone

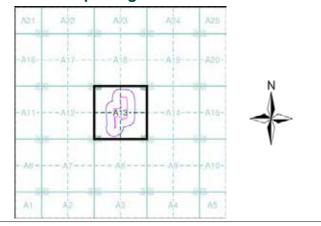
# Envirocheck®

LANDMARK INFORMATION GROUP\*

### **Historical Mapping & Photography included:**

Mapping Type	Scale	Date	Pg
Sussex	1:2,500	1874	2
Sussex	1:2,500	1897	3
Sussex	1:2,500	1910	4
Sussex	1:2,500	1937 - 1938	5
Ordnance Survey Plan	1:2,500	1956	6
Ordnance Survey Plan	1:2,500	1974 - 1977	7
Additional SIMs	1:2,500	1982 - 1993	8
Additional SIMs	1:2,500	1993	9
Large-Scale National Grid Data	1:2,500	1994	10
Large-Scale National Grid Data	1:2,500	1996	11
Large-Scale National Grid Data	1:2,500	1996	12

## **Historical Map - Segment A13**



#### **Order Details**

Order Number: 140997472\_1\_1 **Customer Ref:** LP1490 National Grid Reference: 526390, 118300 Slice:

Site Area (Ha): Search Buffer (m): 100

#### **Site Details**

Tank or Track

Trough

Wind Pump

Wr Pt. Wr T Water Point, Water Tap

Works (building or area)

Tr

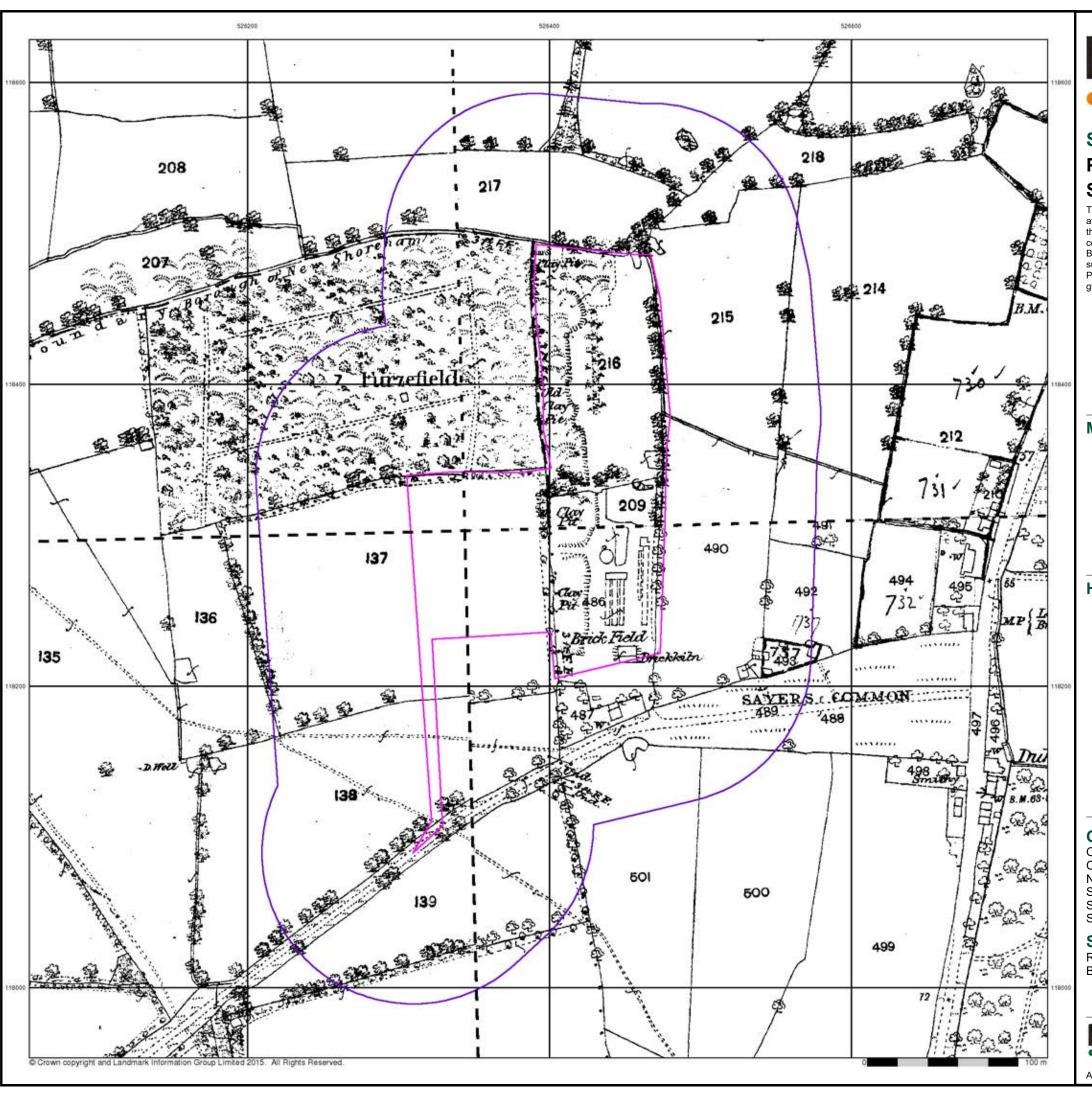
Wd Pp

Reeds Lane, Sayers Common, HASSOCKS, West Sussex, BN6 9LS



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A Landmark Information Group Service v50.0 28-Sep-2017 Page 1 of 12



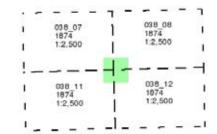
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#### Sussex

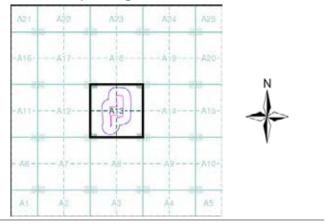
## Published 1874 Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cul ivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, wi h independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

## Map Name(s) and Date(s)



#### **Historical Map - Segment A13**



#### **Order Details**

Order Number: 140997472\_1\_1
Customer Ref: LP1490
National Grid Reference: 526390, 118300
Slice: A

Site Area (Ha): 3.26 Search Buffer (m): 100

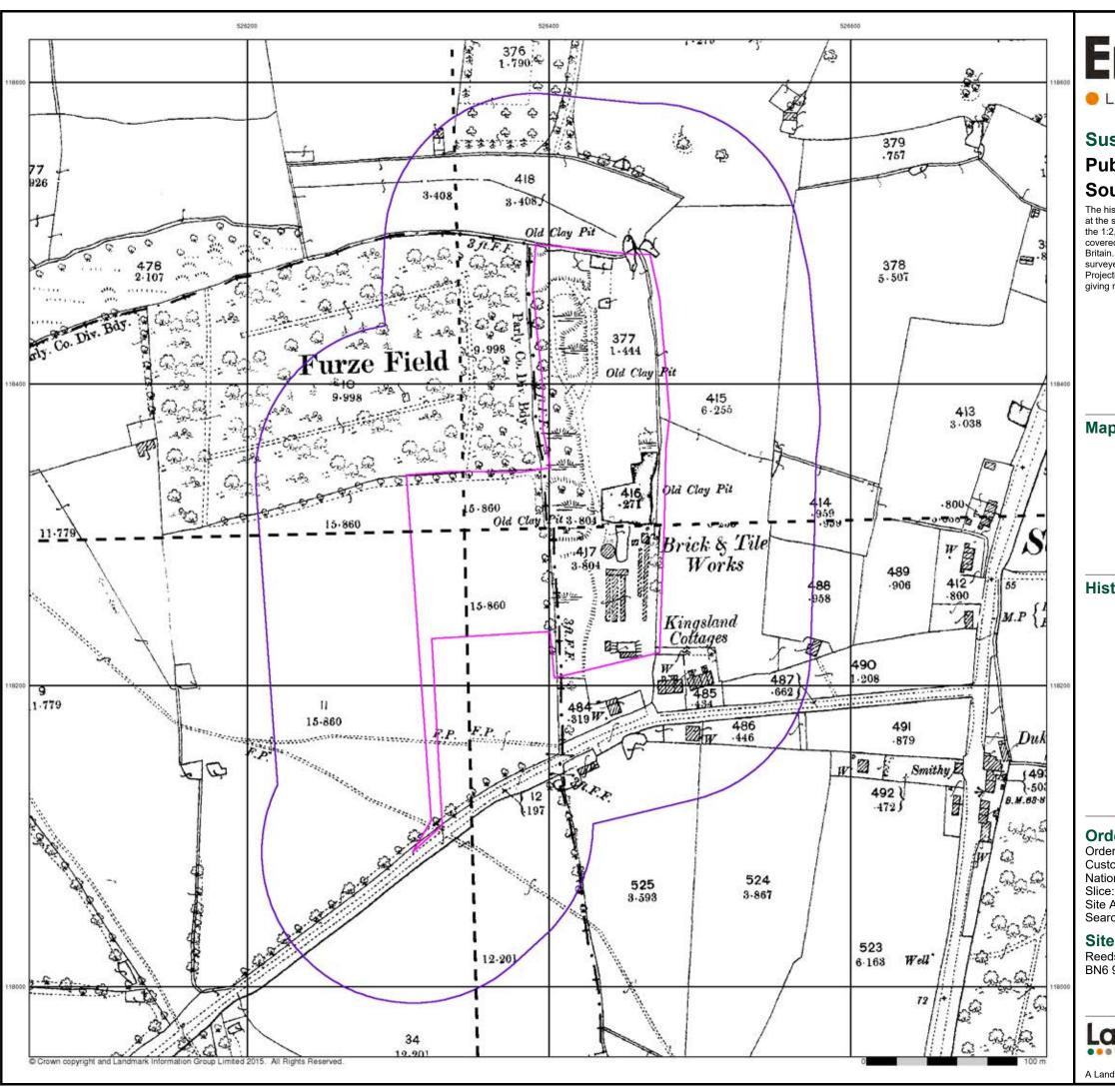
#### **Site Details**

Reeds Lane, Sayers Common, HASSOCKS, West Sussex,



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A Landmark Information Group Service v50.0 28-Sep-2017 Page 2 of 12



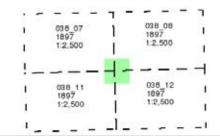
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#### Sussex

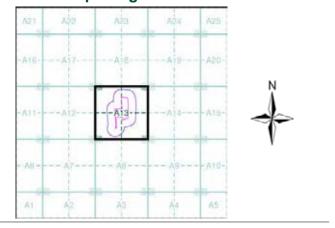
## **Published 1897** Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cul ivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, wi h independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

#### Map Name(s) and Date(s)



### **Historical Map - Segment A13**



#### **Order Details**

Order Number: 140997472\_1\_1 **Customer Ref:** LP1490 National Grid Reference: 526390, 118300

Site Area (Ha): Search Buffer (m): 3.26 100

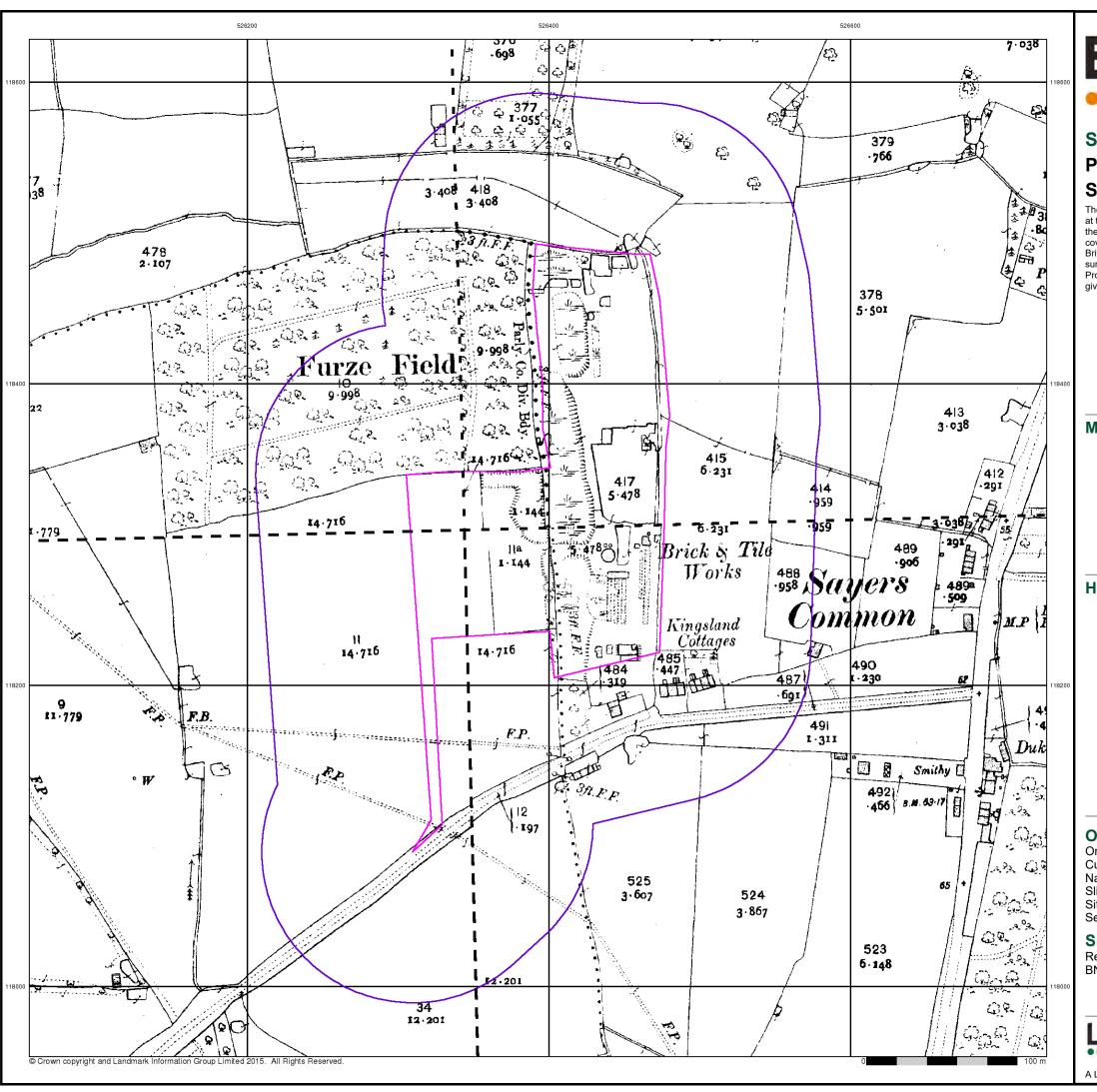
#### **Site Details**

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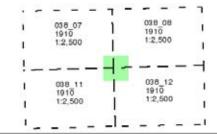
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### Sussex

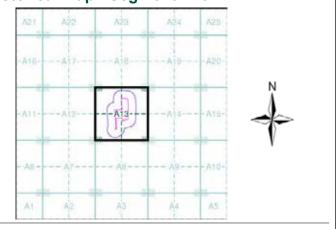
## Published 1910 Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cul ivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, wi h independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

### Map Name(s) and Date(s)



### **Historical Map - Segment A13**



#### **Order Details**

Order Number: 140997472\_1\_1 Customer Ref: LP1490 National Grid Reference: 526390, 118300 Slice: A

Site Area (Ha): 3.26 Search Buffer (m): 100

#### **Site Details**

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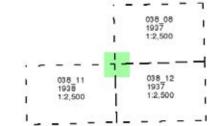
LANDMARK INFORMATION GROUP\*

#### Sussex

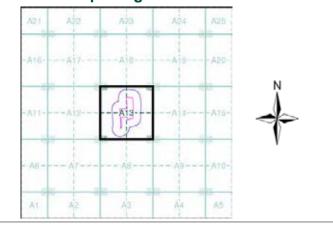
## Published 1937 - 1938 Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cul ivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, wi h independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

### Map Name(s) and Date(s)



### **Historical Map - Segment A13**



#### **Order Details**

Order Number: 140997472\_1\_1
Customer Ref: LP1490
National Grid Reference: 526390, 118300

Site Area (Ha): 3.26 Search Buffer (m): 100

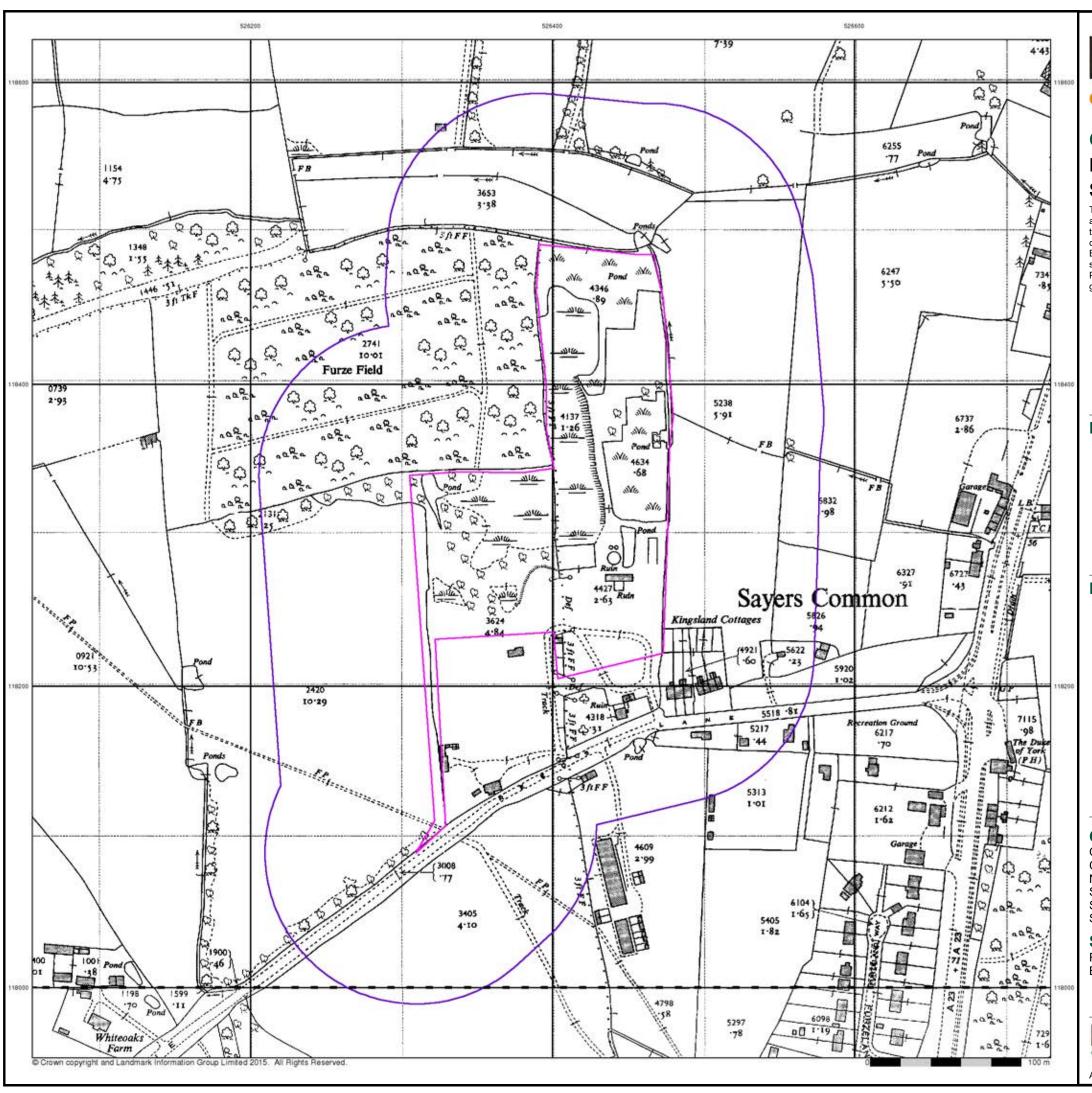
#### **Site Details**

Reeds Lane, Sayers Common, HASSOCKS, West Sussex, BN6 9LS



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A Landmark Information Group Service v50.0 28-Sep-2017 Page 5 of 12



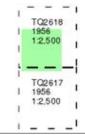
LANDMARK INFORMATION GROUP\*

## Ordnance Survey Plan Published 1956

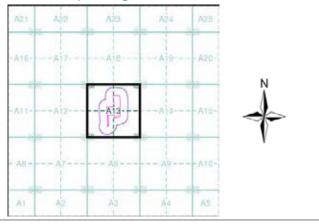
## Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cul ivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, wi h independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

### Map Name(s) and Date(s)



#### **Historical Map - Segment A13**



#### **Order Details**

Order Number: 140997472\_1\_1
Customer Ref: LP1490
National Grid Reference: 526390, 118300

Slice:

Site Area (Ha): 3.26 Search Buffer (m): 100

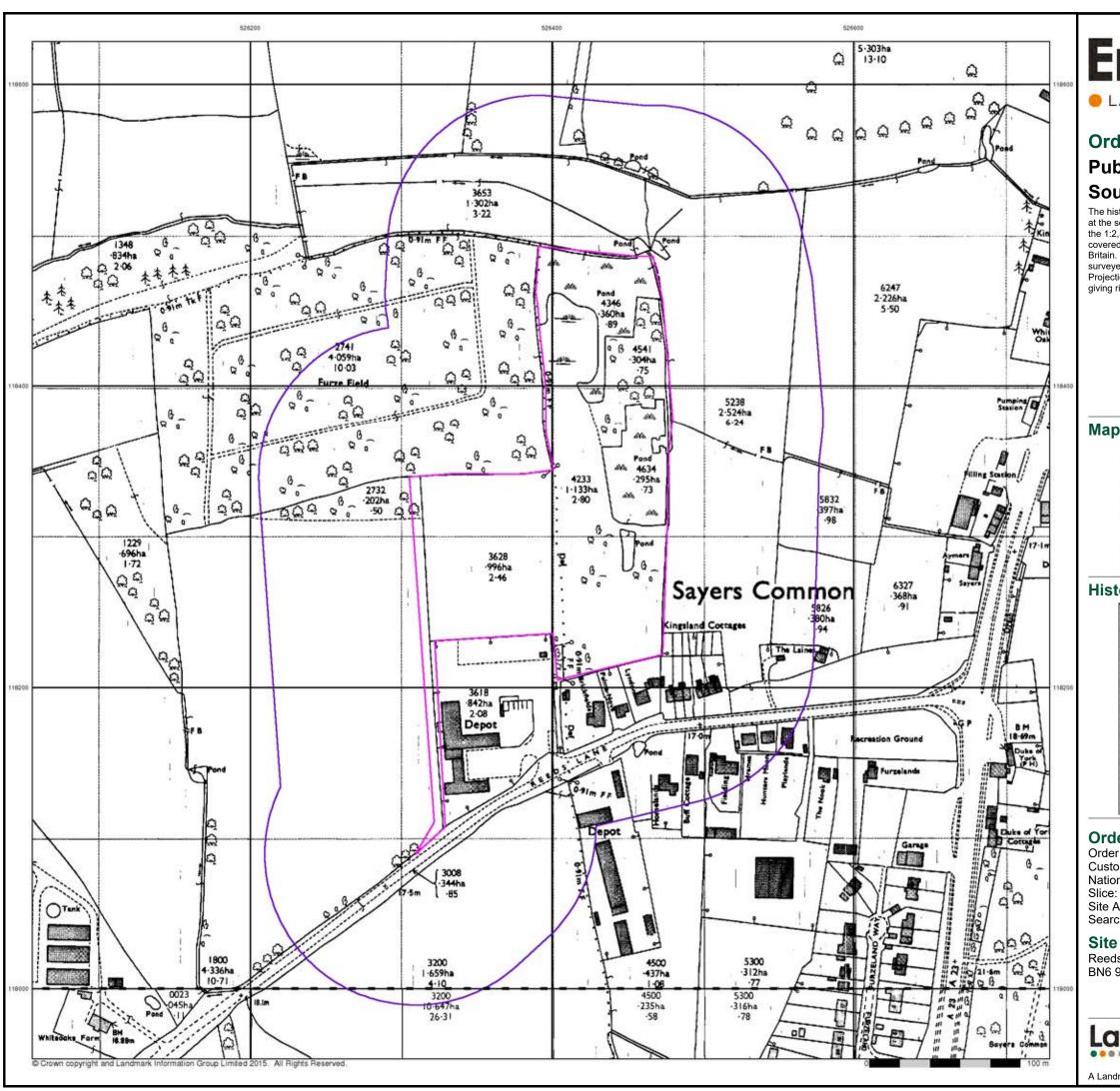
#### **Site Details**

Reeds Lane, Sayers Common, HASSOCKS, West Sussex,



Tel: 0844 844 9952 Fax: 0844 844 9951 Web: www.envirocheck

A Landmark Information Group Service v50.0 28-Sep-2017 Page 6 of 12



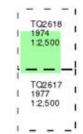
LANDMARK INFORMATION GROUP\*

## Ordnance Survey Plan

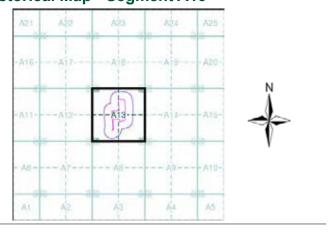
## Published 1974 - 1977 Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cul ivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, wi h independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

### Map Name(s) and Date(s)



### **Historical Map - Segment A13**



#### **Order Details**

Order Number: 140997472\_1\_1
Customer Ref: LP1490
National Grid Reference: 526390, 118300

e:

Site Area (Ha): 3.26 Search Buffer (m): 100

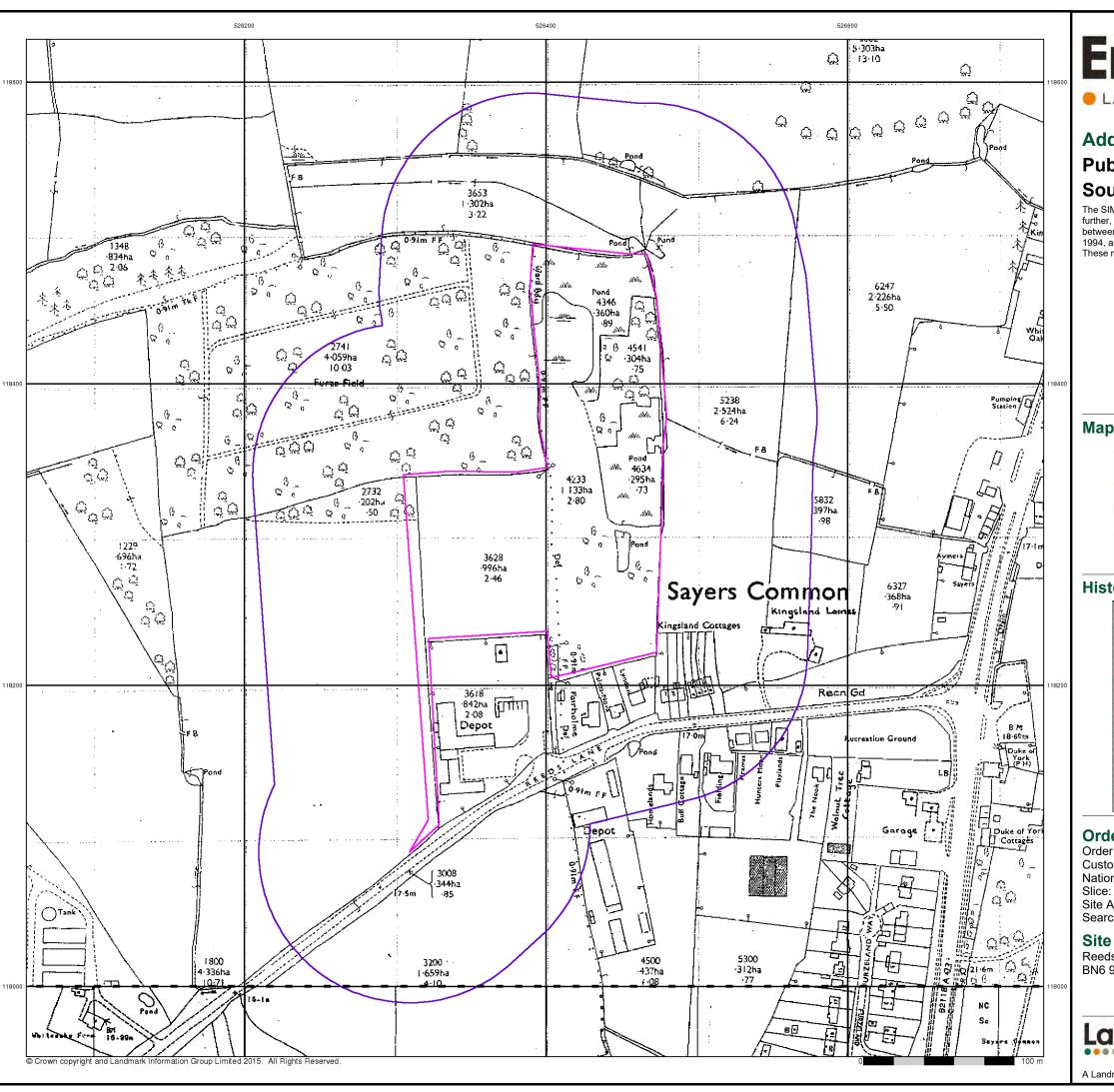
#### **Site Details**

Reeds Lane, Sayers Common, HASSOCKS, West Sussex, BN6 9I S



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A Landmark Information Group Service v50.0 28-Sep-2017 Page 7 of 12



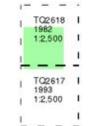
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### **Additional SIMs**

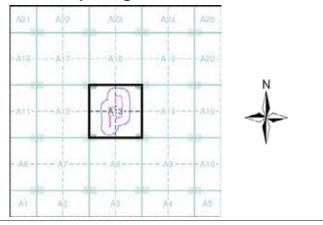
## **Published 1982 - 1993** Source map scale - 1:2,500

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

### Map Name(s) and Date(s)



#### **Historical Map - Segment A13**



#### **Order Details**

Order Number: 140997472\_1\_1 **Customer Ref:** LP1490 National Grid Reference: 526390, 118300

Site Area (Ha): Search Buffer (m): 100

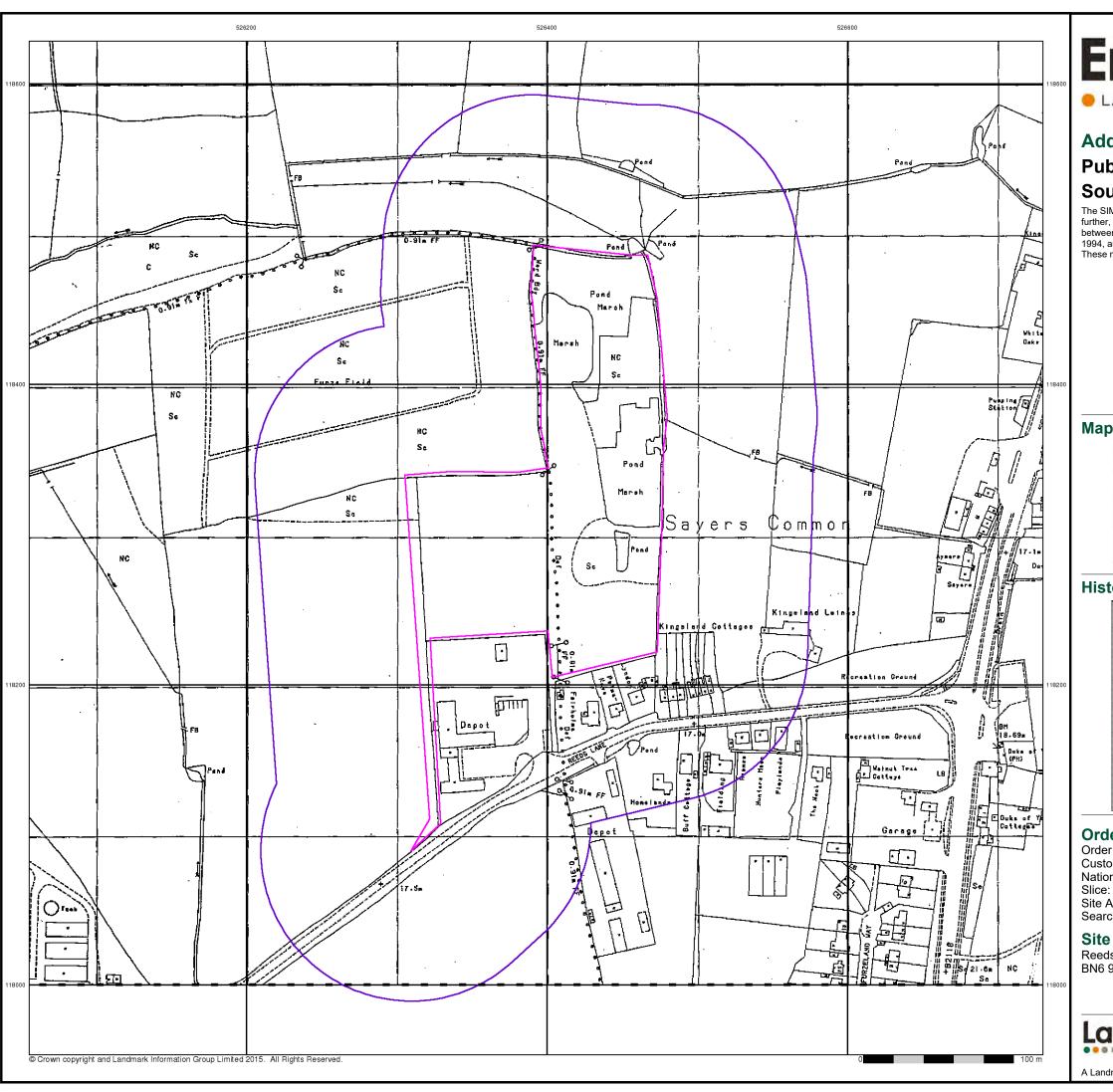
#### **Site Details**

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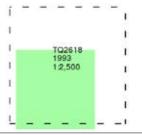
### **Additional SIMs**

## Published 1993

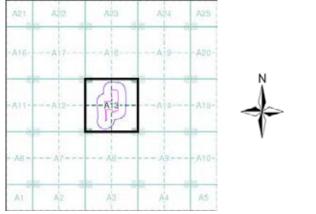
## Source map scale - 1:2,500

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

### Map Name(s) and Date(s)



## **Historical Map - Segment A13**



#### **Order Details**

Order Number: 140997472\_1\_1 Customer Ref: LP1490 National Grid Reference: 526390, 118300

Site Area (Ha): Search Buffer (m): 3.26 100

#### **Site Details**

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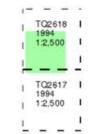
## **Large-Scale National Grid Data**

## **Published 1994**

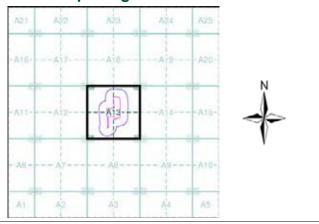
Source map scale - 1:2,500

'Large Scale Na ional Grid Data' superseded S M cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

### Map Name(s) and Date(s)



#### **Historical Map - Segment A13**



#### **Order Details**

Order Number: 140997472\_1\_1 Customer Ref: LP1490 National Grid Reference: 526390, 118300

Site Area (Ha): Search Buffer (m): 100

#### **Site Details**

Reeds Lane, Sayers Common, HASSOCKS, West Sussex,



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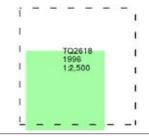
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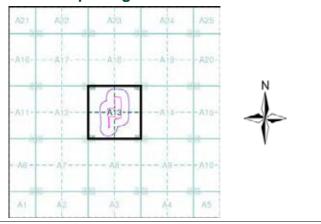
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#### **Historical Map - Segment A13**



### **Order Details**

Order Number: 140997472\_1\_1 Customer Ref: LP1490 National Grid Reference: 526390, 118300

Site Area (Ha): Search Buffer (m): 3.26 100

#### **Site Details**

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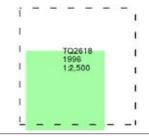
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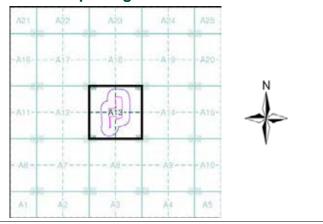
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### Map Name(s) and Date(s)



#### **Historical Map - Segment A13**



### **Order Details**

Order Number: 140997472\_1\_1 Customer Ref: LP1490 National Grid Reference: 526390, 118300

Site Area (Ha): Search Buffer (m): 3.26 100

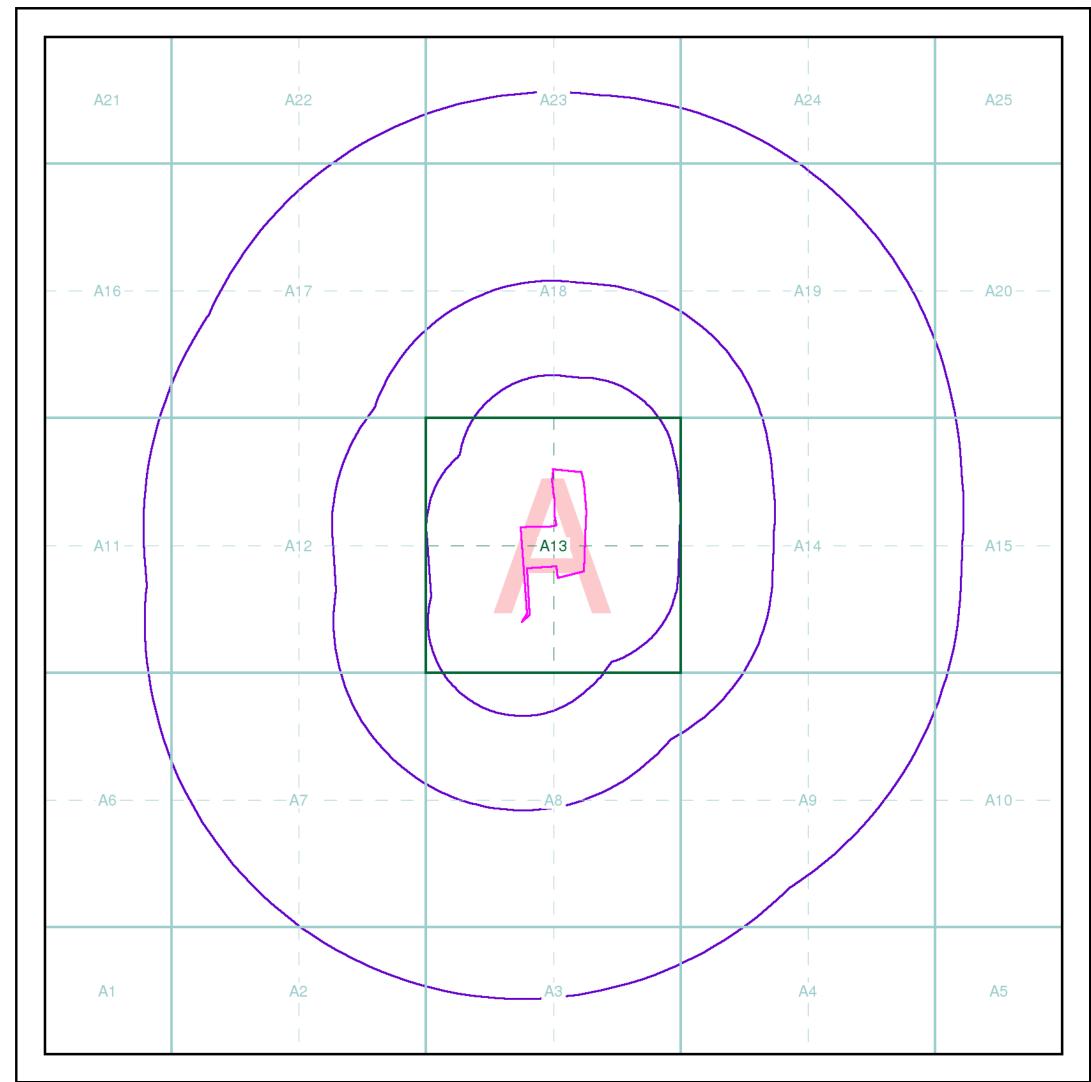
#### **Site Details**

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#### **Index Map**

For ease of identification, your site and buffer have been split into Slices, Segments and Quadrants. These are illustrated on the Index Map opposite and explained further below

#### Slice

Each slice represents a 1:10,000 plot area (2.7km x 2.7km) for your site and buffer. A large site and buffer may be made up of several slices (represented by a red outline), that are referenced by letters of the alphabet, starting from the bottom left corner of the slice "grid". This grid does not relate to National Grid lines but is designed to give best fit over the site and buffer.

#### Seamer

A segment represents a 1:2,500 plot area. Segments that have plot files associated with them are shown in dark green, others in light blue. These are numbered from the bottom left hand corner within each slice.

#### Quadrant

A quadrant is a quarter of a segment. These are labelled as NW, NE, SW, SE and are referenced in the datasheet to allow features to be quickly located on plots. Therefore a feature that has a quadrant reference of A7NW will be in Slice A, Segment 7 and the NW Quadrant.

A selection of organisations who provide data within this report:









Envirocheck reports are compiled from 136 different sources of data

#### **Client Details**

Mrs H Smith, Leap Environmental Ltd, The Atrium Business Centre, Curtis Road, Dorking, Surrey, RH4 1XA

#### **Order Details**

Order Number: 140997472\_1\_1
Customer Ref: LP1490
National Grid Reference: 526410, 118330
Site Area (Ha): 3.26

Search Buffer (m): 3.26

#### **Site Details**

Reeds Lane, Sayers Common, HASSOCKS, West Sussex, BN6 9I S

Full Terms and Conditions can be found on the following link: http://www.landmarkinfo.co.uk/Terms/Show/515



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## APPENDIX D - QUALITATIVE RISK ASSESSMENT MODEL

Qualitative Risk Assessment Model



## Qualitative Risk Assessment of Pollutant Linkages

				Likelihood of	Severity of		
Contaminant	Receptor	Route <sup>1</sup>	Pathway <sup>1</sup>	Occurrence <sup>2</sup>	Consequence <sup>2</sup>	Risk Classification <sup>3</sup>	Notes
Polyaromatic	Future Residents	1	Ingestion of soil	Low likelihood	Mild	Low risk	The proposed development includes residential units
Hydrocarbons, Petroleum		2	Ingestion of household dust	Low likelihood	Mild	Low risk	and gardens.
Hydrocarbons, VOCs and		3	Ingestion of contaminated vegetables	Low likelihood	Minor	Very low risk	
SVOCs		4	Ingestion of soil attached to vegetables	Low likelihood	Mild	Low risk	
		5	Dermal contact with soil	Likely	Minor	Low risk	
		6	Dermal contact with household dust	Likely	Minor	Low risk	
		7	Inhalation of fugitive soil dust	Likely	Minor	Low risk	•
		8	Inhalation of fugitive household dust Inhalation of vapours and	Likely	Minor	Low risk	
		9	gasses outside Ingestion of surface water	Low likelihood	Minor	Very low risk	
		13	(ponds on site)	Low likelihood	Mild	Low risk	
		14	Dermal contact with surface water (ponds on site)	Low likelihood	Minor	Very low risk	
		10	Inhalation of vapours inside	Low likelihood	Mild	Low risk	
	Construction workers	1	Ingestion of soil	Low likelihood	Mild	Low risk	Use of appropriate PPE and good working practices
		5	Dermal contact with soil	Likely	Minor	Low risk	will mitigate the risks to construction workers.
		7	Inhalation of fugitive soil dust	Likely	Minor	Low risk	
		10	Inhalation of vapours and gasses inside	Low likelihood	Mild	Low risk	
		9	Inhalation of vapours and gasses outside	Low likelihood	Minor	Very low risk	
	Neighbouring properties		Inhalation of fugitive soil dust	Low likelihood	Minor	Very low risk	
			Inhalation of vapours and gasses outside	Low likelihood	Minor	Very low risk	
	Surface water, ponds and drains	11	Rainwater infiltration and leaching, intergranular flow via groundwater to controlled waters	Unlikely	Minor	Very low risk	The flat topography of the site and the low leaching potential of the clay soils should restrict the migration of contaminants off site.



0	December	D4-1	D-4b1	Likelihood of Occurrence <sup>2</sup>	Severity of	Diale Olassisia di ang	Neter
Contaminant	Receptor	Route <sup>1</sup>	Pathway <sup>1</sup>		Consequence <sup>2</sup>		Notes
	Material construction of	12	Surface water run-off	Low likelihood	Mild	Low risk	
	buildings and infrastructure	15	Contact of building materials, including water supply pipes with contaminated soils and/or contaminated groundwater	Likely	Minor	Low risk	
Heavy Metals	Future Residents		ů .	3			The proposed development includes residential units
r reavy ivietais	Tuture Residents	1	Ingestion of soil	Low likelihood	Mild	Low risk	and gardens.
		2	Ingestion of household dust	Likely	Minor	Low risk	y and gar dense.
		3	Ingestion of contaminated vegetables	Low likelihood	Mild	Low risk	
		4	Ingestion of soil attached to vegetables	Low likelihood	Mild	Low risk	
		5	Dermal contact with soil	Low likelihood	Minor	Very low risk	
		6	Dermal contact with household dust	Likely	Minor	Low risk	
		7	Inhalation of fugative soil dust	Likely	Minor	Low risk	
		13	Ingestion of surface water (ponds on site)	Low likelihood	Mild	Low risk	
		14	Dermal contact with surface water (ponds on site)	Low likelihood	Minor	Very low risk	
		8	Inhalation of fugative household dust	Likely	Minor	Low risk	
	Construction workers	1	Ingestion of soil	Low likelihood	Mild	Low risk	Use of appropriate PPE and good working practices
		5	Dermal contact with soil	Likely	Minor	Low risk	will mitigate the risks to construction workers.
		7	Inhalation of fugative soil dust	Likely	Minor	Low risk	
	Neighbouring Properties	7	Inhalation of fugative soil dust	Unlikely	Minor	Very low risk	
	Surface water		Rainwater infiltration and leaching, intergranular flow via groundwater to controlled waters	Unlikely	Mild	Very low risk	The flat topography of the site and the low leaching potential of the soils should restrict the migration of contaminants off site.
			Surface water run-off	Low likelihood	Mild	Low risk	
Asbestos	Future Residents	7	Inhalation of fugative soil dust	Low likelihood	Severe	Moderate risk	



Contaminant	Receptor	Route <sup>1</sup>	Pathway <sup>1</sup>	Likelihood of Occurrence <sup>2</sup>	Severity of Consequence <sup>2</sup>	Risk Classification <sup>3</sup>	Notes
		8	Inhalation of fugative soil dust	Low likelihood	Severe	Moderate risk	
	Neighbouring Properties	7	Inhalation of fugative soil dust	Unlikely	Severe	Moderate/low risk	
		8	Inhalation of fugative soil dust	Unlikely	Severe	Moderate/low risk	
	Construction workers	7	Inhalation of fugative soil dust	Low likelihood	Severe	Moderate risk	

#### Notes to table:

- 1. Classification of human exposure pathways (routes) from The CLEA model, Research and Development Publication CLR10.
- 2. Classification of Probability and Consequence from CIRIA C552 Contaminated land risk assessment, a guide to good practice 2001
- 3. Risk Classification from DETR Guidelines for Environmental Risk Assessment and Management, 2000



#### Preliminary Geotechnical Risk Register

Geotechnical risk is the risk to building and construction work created by the site ground conditions. The Preliminary Geotechnical Risk Register has been compiled to provide an assessment of the likely risks that may impact on the proposed development based on the results of the desk study, and should be used to specify the type and extent of the intrusive investigation and testing undertaken, and to identify potential mitigation measures to control the risk to an acceptable level.

The inclusion of a risk in the register does not indicate that the risk is present, rather the likelihood of mitigation measures being required due to that risk, based on the available data. Equally, a risk classified as low indicates that mitigation measures are unlikely to be required for the hazard identified based on the available data.

The risk register should be developed and refined throughout the design process such that it will enable the management of geotechnical risk.

The Geotechnical Risk Register has been developed in accordance with the guidance presented in ICE/DETR Document "Managing Geotechnical Risk" (2002). The degree of risk (R) is determined by assessing the likelihood of a hazard (L) occurring and the effect of the hazard (E) on the project (R=LxE). The effect may be measured in one or more aspect e.g. increased cost, delays in the program, health and safety etc. The scale of the likelihood, effect and risk are determined as follows:-

Likelihood of Occurrence					
Scale	Likelihood	Chance			
4	Probable	>1 in 2			
3	Likely	1 in 10 to 1 in 2			
2	Unlikely	1 in 100 to 1 in 10			
1	Negligible	<1 in 100			

Effect of Hazard					
Scale	Effect	Increase in cost or time			
4	Very High	>10%			
3	High	4-10%			
2	Low	1-4%			
1	Very Low	<1%			

X

	Degree of Risk				
Degree of Risk	Risk Level	Action required			
1-4	Trivial	None			
5-8	Significant	Consider cost effective solutions or improvements at no extra cost			
9-12	Substantial	Work must not start until risk has been reduced. Additional resource required			
13-16	Intolerable	Work must not start until risk has been reduced. If risk can not be reduced, project should not proceed.			



#### Geotechnical Risk Register

Hazard	Effect	Likelihood of Occurrence	Effect of Hazard	Risk Classification	Notes	
Made Ground	Deepened foundations					
		Likely	Low	Significant	Made ground anticipated in areas previously used as clay	
	Unstable excavations				pits at the former brickworks	
		Unlikely	Low	Trivial		
Compressible Ground	Bearing capacity failure	Negligible	High	Trivial	Strata on-site is not deemed excessively compressible	
	Excessive settlement	Unlikely	Low	Trivial	Strata on site is not decined excessively compressible	
High Groundwater Table	Unstable excavations/ running sands	Negligible	High	Trivial		
	Dewatering	Unlikely	Low	Trivial	Groundwater is level is not believed to be high	
	Contamination	Unlikely	Low	Trivial		
Deep Excavations	Deepened foundations	Negligible	High	Trivial	Absence of deep excavations on-site	
Working in highway	Traffic Management	Negligible	Very low	Trivial	N/A	
Shrinkable soils	Deepened foundations			01 101 1	Large trees on the perimeter of the site and clusters of trees in the centre which could result in soil heave.	
	Honyo	Unlikely	High	Significant		
	Heave	Likely	Low	Significant		
Frost Susceptible soils	Road Design	Unlikely	Low	Trivial	Soils on-site are not deemed frost susceptible.	
Aggressive ground conditions for Concrete	Concrete design	Likely	Low	Significant	Naturally occurring selenite crystals can produce ground that is aggressive to concrete.	
Slope Stability/Retianing Structure	Local stability	Unlikely	Low	Trivial	The level topography of the site makes this improbable.	
	Global stability	Unlikely	Low	Trivial	The level topography of the site makes this improbable.	
Mining	Suitability for development				Excavations on the site due to its previous use as a brickworks are expected although these are not	
		Unlikely	Low	Trivial	anticipated to be deep.	
Ground dissolution/ Natural cavities	Remedial measures	Negligible	High	Trivial	Site is underlain by clays so solution features are not expected in the mapped geology.	
Landfill	Land gas	Unlikely	Low	Trivial	Any gas from the landfill is expected to have discharged over the 50 years from infill.	
Contaminated land	Remedial measures				Given the nature of the proposed development (residential with gardens and public open space), it is believed that any potential contaminant pathways will be	
		Unlikely	High	Significant	restricted during development phase.	



#### Geotechnical Risk Register

Archaeological rema	ins Remedial measures	Negligible	High	Trivial	
UXO	UXO supervision				UXO risk has been deemed LOW based on proximity of
		Negligible	Very high	Trivial	previously-found ordnance.



### APPENDIX E - SITE PHOTOGRAPHS

Site Photographs















































## Report presented by



Reside Developments Ltd The Dutch House 132-134 High Street Dorking RH4 1BG

Telephone: 01306 877500

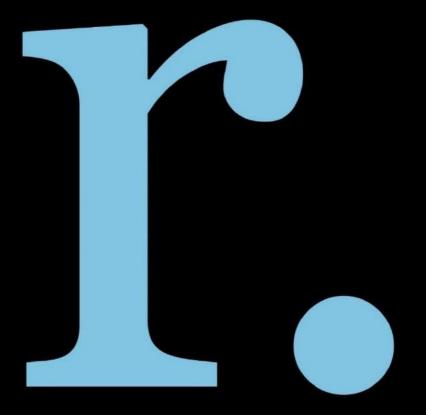
Email: amunton@residedevelopments.co.uk

residedevelopments.co.uk

# reside.

## The Old Brickworks, Reeds Lane Sayers Common

Transport Statement





## **Transport Statement**

Reeds Lane, Sayers Common

Iceni Projects Limited on behalf of Reside Developments Ltd

October 2017

#### Iceni Projects



#### **CONTENTS**

1.	INTRODUCTION	1
2.	THE SITE AND SURROUNDINGS	3
3.	TRANSPORTATION POLICY	9
4.	PROPOSED DEVELOPMENT	16
5.	TRAFFIC GENERATION	19
6.	CONCLUSIONS	23

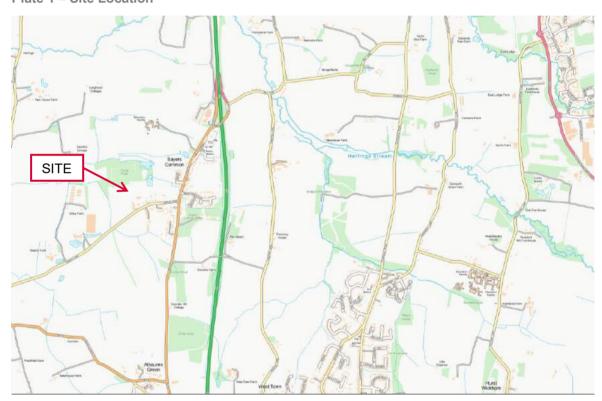
#### **APPENDICES**

- A1. SITE LOCATION PLAN
- A2. ATC SURVEY DATA
- A3. BUS INFORMATION
- A4. TRAIN INFORMATION
- A5. PROPOSED SITE LAYOUT
- A6. VISIBILITY SPLAY
- A7. TRICS DATA
- A8. JUNCTIONS 9 PICADY REPORT

#### 1. INTRODUCTION

- 1.1 Iceni Projects Ltd has been appointed by Reside Developments Ltd to provide transportation advice in regard to their development proposals at their site at a former brick works in Reeds Lane, Sayers Common.
- 1.2 The site is shown in **Plate 1** below, with a full site location plan attached at **Appendix A1** at the end of this report.

Plate 1 - Site Location



- 1.3 The proposed scheme comprises of the development of approximately 29(no.) dwellings and a doctors' surgery, including a number of affordable dwellings, on the former brickworks site, which has been returned to its undeveloped form over the past decades.
- 1.4 This Transport Statement (TS) is informed by the requirements of West Sussex County Council (WSCC) as the highways authority, and Mid Sussex District Council (MSDC) as the local highway and planning authorities.
- 1.5 The methodology used in the preparation of this TS follows the document '*Travel Plans, Transport Assessments and Statements in decision taking*' (March 2014), which forms part of the National Planning Practice Guidance.

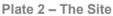
- 1.6 This Transport Statement is set out as follows:
  - Section 2 provides an assessment of the existing site conditions, incorporating a description of the existing site use, local highway network, public transport accessibility, cycling and walking facilities and a highway safety assessment;
  - **Section 3** provides a review of national, regional and local development and transport planning policy relevant to the location, scale and type of proposal;
  - **Section 4** provides a description of the development proposals, including access, parking, servicing and refuse collection arrangements;
  - Section 5 considers the trip generation associated with the development site; and
  - Section 6 sets out a summary and draws conclusions.
- 1.7 The results of this assessment demonstrate that the development proposal is acceptable from a transport perspective.

#### 2. THE SITE AND SURROUNDINGS

#### **Site Description**

- 2.1 The application site is located off Reeds Lane, towards the north-western side of Sayers Common.

  The characteristics of the surrounding area are predominantly residential, with residential units immediately to the south of the site, and the village located to the east of the site.
- 2.2 Sayers Common is a village in Sussex, located in the South-East of England. The village is located approximately one mile to the northwest of the village of Hurstpierpoint, two miles to the west of the town of Burgess Hill, eleven miles to the south of Crawley, and eight miles to the north of Brighton.
- 2.3 The site is bound to the north, west and east by undeveloped land parcels, including Furze Field woods to the north of the site. The south of the site is bound by residential dwellings fronting onto Reeds Lane. The site includes one of these units, as well as two existing paths which links the site to the public highway.
- 2.4 The site is currently an undeveloped land parcel, having been returned to such state after being used as a brick clay mining site and a brickworks in the past.
- 2.5 The application site in context with its surroundings is shown below at **Plate 2**.





#### **Surrounding Highway Network**

- 2.6 Reeds Lane terminates to the west into B2118 London Road, running through the centre of Sayers Common. B2118 London Road runs parallel to the A23, by-passing local villages, and linking the B2118 London Road to Brighton to the south and to Crawley to the north, where it becomes the M23 and then continuing onto the M25.
- 2.7 The roads surrounding the site are illustrated in **Plate 3** overleaf.
- 2.8 The site is accessible via two existing vehicular crossovers, as well as a pedestrian path from Reeds Lane. Reeds Lane is accessible from the arterial network via a grade separated junction on the A23.



**Plate 3: Local Highway Network** 

2.9 The site access enjoys a good level of visibility along the edge of the kerb from the site access. On street parking is not restricted on this section of Reeds Lane.

#### 2017 Automatic Traffic Count Surveys: Volume

- 2.10 ATC surveys were undertaken on Reeds Lane to record directional classified vehicle flows in hourly intervals for a period of one week (Posted Speed Limit 30mph).
- 2.11 Based on the automatic traffic count data, the network peak hours were generally identified as being:
  - AM Peak 0800-0900
  - PM Peak 1700-1800

2.12 **Tables 2.1 to 2.3** below summarise the results of these surveys.

Table 2.1 Traffic Surveys - ATC Traffic Flow Data (Two-Way) - AM Peak Hour

Road	5-day average	7-day average
Reeds Lane	131 eastbound / 201 westbound / 332 total	107 eastbound / 156 westbound / 263 total

Table 2.2 Traffic Surveys - ATC Traffic Flow Data (Two-Way) - PM Peak Hour

Road	5-day average	7-day average
Reeds Lane	204 eastbound / 110 westbound / 314 total	166 eastbound / 95 westbound / 261 total

Table 2.3 Traffic Surveys - ATC Traffic Flow Data (Two-Way) - Daily

Road	5-day average	7-day average
Reeds Lane	1,522 eastbound / 1,412 westbound / 2,934 in total	1,332 eastbound / 1,232 westbound / 2,564 in total

2.13 It can be seen from the results summarised in **Tables 2.1 and 2.2** that the traffic on Reeds Lane during the weekday AM and PM peak hours are quite low, with a total two-way flows of 332 and 314 vehicles respectively. It can also be noted that 7-day averages are lower than 5-day averages, noting that traffic volumes are lower during weekends.

#### 2017 Automatic Traffic Count Surveys: Speed

2.14 The ATCs recorded the speed of vehicles as well as volume of traffic. The results are included in **Appendix A3** and the average and 85<sup>th</sup> percentile speeds are summarised in **Table 2.4** below.

Table 2.4 Traffic Surveys - ATC Traffic Flow Data (Two-Way) - Vehicle Speeds

Road	Average	85 <sup>th</sup> Percentile
Reeds Lane	28mph eastbound / 25.2mph westbound	34mph eastbound / 31.3mph westbound

Note: No wet weather correction applied

2.15 The above tables demonstrate that the average and 85<sup>th</sup> percentile speeds are slightly above the posted speed limit.

#### **Highway Safety Assessment**

2.16 In order to assess the safety of the existing highway network surrounding the site, Personal Injury Collision (PIC) data within 200m of the site have been reviewed on the CrashMap portal (<a href="http://www.crashmap.co.uk/Search">http://www.crashmap.co.uk/Search</a>) for the most recent five year period available (2012 to 2016). The area covered by the data, and full details of the collisions, are shown in **Plate 4** below.

2.17 Over the five years surveyed, only one PIC occurred within 500m of the site. The only recorded collision happened in 2013 whereby a slight injury was recorded, involving a pedal cycle and a car, at an agricultural site access on B2118 London Road. This was not related to traffic within the village.

SITE

LVS Hassocks Or Orbits Church

With Blace Centre

PAV II Services Orbits Church

North Star Sussex Orbits

Red Line Clickel Orbits Church

Red Line Church

Red

Plate 4: Map of Collisions as set out in the CrashMap portal

Source: www.crashmap.co.uk/search

2.18 It is therefore evident that there are not any underlying highway safety issues that would be exacerbated by the proposed development. Furthermore, it is considered that the number of collisions is very low for the five year period under consideration.

#### **Public Transport Assessment**

#### **Bus Services**

2.19 The provision of bus based public transport in the area has been assessed in terms of access to routes and frequencies of services, in addition to the quality of the bus infrastructure within the area.

Table 2.5 Bus Services

#	Route	Monday - Friday service		Saturday service		Sundays & PH	
		First Bus	Last Bus	First Bus	Last Bus	service	
100	Burgess Hill - Henfield - Steyning -	06:55	18:20	07:55	18:20	No	
100	Pulborough - Billingshurst - Horsham	1 service	per hour	1 service	per hour	service	
273	Crawley - Pease Pottage - Bolney -	05:19	18:06	08:02	17:59	No	
213	Hurstpierpoint - Hassocks - Brighton	1 service e	every 2 hrs	1 service e	every 2 hrs	service	
331		08:00	n/a	No se	ervice		

Sayers Common - Hurstpierpoint -	1 service per day	No
Hassocks – Downlands School	,	service

Notes: Information taken from the supplier website. Correct at the time of writing report.

- 2.20 There are two bus stops located within the vicinity of the site. The closest bus stops to the site are located on B2118 London Road approximately 430m (6 minute walk) away from the site access, serving bus routes 100, 273 and 331. The bus stops are demarked by typical bus flagpoles.
- 2.21 **Table 2.5** demonstrates the services that are available from the bus stops detailed above. Further information is attached at **Appendix A3**. In summary, there are a number of bus services operating throughout the day, Mondays to Saturdays, within the vicinity of the site.

#### **Rail Services**

- 2.22 The nearest train stations are Burgess Hill and Wivelsfield Train Stations, located approximately 6km east of the site. Both stations are visited by seven trains per hour during peak hours, running between Bedford and Brighton via London and Gatwick Airport on Thameslink, Southern and Gatwick Express train services.
- 2.23 It is therefore considered that the site has good levels of access to a wide range of rail services providing frequent connections both to London and onward travel on a national scale.
- 2.24 Route maps and timetables discussed above are included as **Appendix A4** of this document.

#### Walking and Cycling Assessment

#### Walking

- 2.25 The area surrounding the site has good pedestrian links with an established network of footways, in addition to several Public Rights of Way, which are located within the vicinity of the site and provide good access to the surrounding area, as demonstrated by **Plate 5** overleaf.
- 2.26 The site also enjoys the availability of a footway along the opposite side of the road of Reeds Lane.

  This footway is approximately 1.8m wide and links the site to centre of Sayers Common.
- 2.27 The site also enjoys access to a variety of local stores and services on B2118 London Road, including a village hall community shop, convenience store, dental laboratory a car dealership garage and a public house, all located within a 1km walk of the site.

Herrings Bridge New House Strood's Farm Herrings Farm New House Farm Hickstead Stuccles Farm Goldbridge Priory o House schouse Farm Cobbs Bank Furze Field Sayers Bridger's Common Valley Farm hurst Public Rights of Way Footpath Bridleway Coombe Restricted Byway SITE

Plate 5: Public Rights of Way

Note: Image extracted from www.westsussex.gov.uk website

#### Cycling

- 2.28 A National Cycle Route is available within the vicinity of the site. Route 20 runs approximately 200m to the east of the site via the B2118 London Road, running between Brighton and London. In addition, a number of the local roads are suitable for use by cyclists.
- 2.29 It is therefore considered that there is potential to cycle to and from the site, and within the surrounding area. Cycling has the potential to substitute for short car trips, especially those less than 5km. Thus, amenities and services including bus stops, rail stations, educational facilities, religious centres, restaurants, supermarkets and numerous retail and leisure opportunities are located within an acceptable cycling distance of the site and there is ample opportunity for users of the site to utilise this mode of transport.
- 2.30 It should also be noted that Burgess Hill is within 5km of the site meaning that cycling to the site may be attractive to some residents living at the site working in or commuting from Burgess Hill.

#### **Summary**

2.31 The above shows that the site is located in a sustainable location with acceptable levels of access to existing pedestrian and cycling facilities, in addition to the public transport services available, which will encourage use of these modes.

#### **Travel Patterns of Local Residents**

2.32 The 2011 Census was queried to review the existing travel to work patterns of local residents, resident within the surrounding areas. Within the local ward (E05007692: Hurstpierpoint and Downs), it was noted that almost half of the respondents stating that they use the private car to commute to work. This is very much in line with the regional and national averages, as shown in **Table 2.6** below.

Table 2.6 Method of Travel to Work of Local Residents

Method of Travel to Work (2011	Hurstpierpoint & Downs		West Sussex	England	
Census)	Number	Percentage	Percentage	Percentage	
Work mainly at or from home	473	8%	5%	3%	
Underground, metro, light rail, tram	5	0%	0%	3%	
Train	369	7%	9%	3%	
Bus, minibus or coach	63	1%	1%	5%	
Taxi	7	0%	0%	0%	
Motorcycle, scooter or moped	27	0%	0%	1%	
Driving a car or van	2,465	44%	43%	37%	
Passenger in a car or van	174	3%	3%	3%	
Bicycle	70	1%	1%	2%	
On foot	277	5%	8%	7%	
Other method of travel to work	27	0%	0%	0%	
Not in employment	1,658	30%	28%	35%	
Total residents	5,615	100%	100%	100%	

2.33 The 2011 Census data was also queried regarding the car availability levels within the area.

Table 2.7 Car availability of Local Residents

Car Availability (2011 Census)	Hurstpierpoint & Downs		West Sussex	England
	Number	Percentage	Percentage	Percentage
No cars or vans in household	330	10%	14%	26%
1 car or van in household	1,328	41%	42%	42%
2 cars or vans in household	1,205	37%	33%	25%
3 cars or vans in household	262	8%	8%	5%
4 or more cars or vans in household	126	4%	3%	2%
Total households	3,251	100%	100%	100%

2.34 **Table 2.7** shows that local residents had a similar car ownership levels as to regional and national averages, as well equating to an average vehicle ownership figure of 1.55 cars per dwelling.

#### 3. TRANSPORTATION POLICY

3.1 The proposed development is subject to both national and local planning policy guidance, with respect to transportation and its impact upon the local environment and surrounding infrastructure.

The relevant policies are detailed within this following section.

#### **National Planning Policy**

National Planning Policy Framework - March 2012

- 3.2 The National Planning Policy Framework (NPPF), which was adopted in March 2012, sets out the Government's planning policies for England and how these are expected to be applied. It provides a framework within which local people and their accountable councils can produce their own distinctive local and neighbourhood plans, which reflect the needs and priorities of their communities. As a result of the NPPF being adopted, all Planning Policy Guidance and Planning Policy Statements have been superseded, including PPG13 (Transport), which was formerly used as a basis for national transport policy. As such, any detailed policy guidance previously provided within PPG13 will no longer act as the default policy where no policy has been set by the local authority. All detailed transport polies will now be found within Unitary Development Plan and Local Development Framework documents adopted by each local authority.
- 3.3 While no longer policy, there are two key aspects within PPG13 which are still of relevance when determining a sites levels of sustainable travel access. *Paragraph 74* states the following:

"Walking is the most important mode of travel at the local level and offers the greatest potential to replace short car trips, particularly under two kilometres. Walking also forms an often forgotten part of all longer journeys by public transport and car."

3.4 Paragraph 77 goes on to state that:

"Cycling also has potential to substitute for short car trips, especially those under five kilometres, and to form part of a longer journey by public transport".

- 3.5 It is considered that the above walking and cycling distances referred to in PPG13 remain valid and should not be overlooked when determining the walking and cycling accessibility of development sites.
- 3.6 Notwithstanding, as stated above, NPPF has superseded PPG13, and the relevant sections of the NPPF are detailed below.
- 3.7 With regard to transport policy, the NPPF states at *Paragraph 29* that:

"Transport policies have an important role to play in facilitating sustainable development but also in contributing to wider sustainability and health objectives" and that "The transport systems needs to be balanced in favour of sustainable transport modes, giving people a real choice about how they travel".

3.8 Paragraph 32 goes on to state that:

"All developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment" and that "Plans and decisions should take account of whether

- The opportunities for sustainable transport modes have taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure;
- Safe and suitable access to the site can be achieved for all people; and
- Improvements can be undertaken within the transport network that cost effectively limit the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe".
- 3.9 As described in **Section 2** of this report, the site is located within an area that provides good opportunities for all future uses of the site to walk, cycle and use public transport.

National Planning Practice Guidance (NPPG) - March 2014

3.10 Information contained as part of the NPPG provides advice for travel plans, transport assessments and statements in decision taking.

"Travel Plans, Transport Assessments and Statements are all ways of assessing and mitigating the negative transport impacts of the development in order to promote sustainable development. They are required for all developments which generate significant amounts of movement".

3.11 This TS follows the advice provided within the NPPG and provides the information which should be included as part of an assessment.

#### West Sussex County Council - Regional Policy

**Local Transport Plan 2011-2026** 

- 3.12 WSCC's Local Transport Plan (LTP3), known as the *West Sussex Transport Plan*, adopted in February 2011. It is the main statutory document focused on transport developing strategic policy of managing growth in the County.
- 3.13 The LTP includes a number of policies that set out WSCC's approach to transport, which have been reviewed during the preparation of this report, in addition to its Parking Strategy document. The policies in the Core Strategy that are pertinent to the proposed development are listed below.

3.14 Strategic Policy 1 aims at promoting economic growth network:

#### Strategic Policy 1 - Promoting Economic Growth

"improve quality of life for the people of West Sussex by helping to provide:

A high quality transport network that promotes a competitive and prosperous economy in all parts of the County"

3.15 Strategic Policy 2 encourages the development of sustainable growth through:

#### Strategic Policy 2 - Tackling Climate Change

"improve quality of life for the people of West Sussex by helping to provide:

A resilient transport network that complements the built and natural environment whilst reducing carbon emissions over time"

3.16 Strategic Policies 3 and 4 aim to provide an accessible transport network, providing travel opportunities for everyone by:

#### Strategic Policy 3 - Improving Accessibility

"improve quality of life for the people of West Sussex by helping to provide:

Access to services, employment and housing."

#### Strategic Policy 4 - Improving Safety, Health & Security

"improve quality of life for the people of West Sussex by helping to provide:

A transport network that feels, and is, safer and healthier to use."

Parking in New Residential Developments (September 2010)

- 3.17 The latest edition of the WSCC Parking Standards were published in September 2010. Within this document, the design consultants are referred to a spreadsheet that is available on the council webpage, calculating parking demand.
- 3.18 This document dictates a parking guideline requirements, which aims at providing enough parking within each development to avoid overspill into on-street parking.
- 3.19 This document also requires new residential units to provide cycle parking spaces with each dwelling:

#### Strategic Policy 4 – Cycle Parking Standards

Туре	Size	Cycle Provision (per unit)
Houses	Up to 4 rooms (1 & 2 bed)	1 space
Houses	5+ rooms (3+ bed)	2 spaces
Flats	Up to 3 rooms (1 & 2 bed)	0.5 space (if communal storage otherwise same as 1 & 2 bed house)
Flats	4+ rooms (3+ bed)	1 space

- 3.20 Following the above, each of the two bedroom houses will require one cycle parking space, whereas larger units, having three or more bedrooms will require two cycle parking spaces for each dwelling.
- 3.21 From the above spreadsheet calculation it was estimated that the development will require a total of 70(no.) allocated spaces, as well as another nine unallocated spaces, six for visitors, and three for residents. This is slightly less than the proposed 84(no.) spaces (shared between 16(no.) garage spaces, 58(no.) allocated spaces and ten visitor spaces).
- 3.22 Given the scale of this development, and the access proposals as detailed within Section 4, it is considered that the development accords with the above policy. Details of the proposed off-site highway arrangements are detailed in Section 4.

#### **Mid Sussex District Council Policy**

Adopted Policy - Development and Infrastructure SPG

- 3.23 Mid Sussex District Council's *Development and Infrastructure* (SPG) was formally adopted by the Council in 2006, and forms the main guidelines for Residential Development. Those policies which are pertinent to this proposal are detailed below.
- 3.24 Annex 4 of the SPG note the parking standards that apply within the District:

#### Parking Standards for Residential Dwellings

DWELLING TYPE (FLATS AND HOUSES)	Maximum standard
1 bed dwellings	1 car space* per dwelling and 1 cycle space per dwelling**
2 and 3 bed dwellings	2 spaces per dwelling and 2 cycle spaces per dwelling**
4 bed dwellings	3 spaces per dwelling and 2 cycle spaces per dwelling**
5 or more bed dwellings	Car and cycle parking to be assessed individually.

<sup>\*</sup> A residential parking space is defined as a garage, spaces on driveway within the curtilage of property or designated parking outside the curtilage of the property such as parking courts and lay bys.

- 3.25 This policy requires that two and three bedroom units are provided a maximum of two car parking spaces per dwelling, whereas four bedroom dwellings are allocated a maximum of three parking spaces.
- 3.26 The policy also requires two, three and four bedroom units requires developers to provide two cycle parking spaces per dwelling, plus an additional visitor space for every eight dwellings (equating to four spaces in this case), which can be included within garages.
- 3.27 Additionally, **Section 4** includes details on the proposed site access into the site and the parking arrangements.

<sup>\*\*</sup> No cycle parking is required if a garage is provide and the garage is of sufficient size. On larger developments (8 dwellings or more) cycle parking for visitors should be provided at a ratio of 1 cycle space per 8 dwellings.

#### **Emerging Policy - District Plan**

- 3.28 The emerging District Plan is scheduled to be adopted in spring 2018 as the main planning guideline document which will be used at reviewing planning applications once this is fully adopted. It is currently undergoing its Main Modifications Consultation stage, which will be completed in November the 13<sup>th</sup> of November 2017. This document includes amendments to existing transport policy.
- 3.29 Within *Policy DP19* of this document, the policy states that:
  - "...decisions on development proposals will take account of whether:
  - Appropriate opportunities to facilitate and promote the increased use of alternative means of transport
    to the private car, such as the provision of, and access to, safe and convenient routes for walking, cycling
    and public transport, including suitable facilities for secure and safe cycle parking, have been fully
    explored and taken up;
  - The scheme provides adequate car parking for the proposed development taking into account the accessibility of the development, the type, mix and use of the development and the availability and opportunities for public transport; and with the relevant Neighbourhood Plan where applicable;
  - The scheme avoids severe additional traffic congestion, individually or cumulatively, taking account of any proposed mitigation;"

Note: Extracts not relevant to the paragraph not included within quote.

3.30 The application scheme accords with the relevant points of Policy DP19 of the emerging District Plan.

#### **Local Planning Applications**

3.31 An outline planning application for the development of 120 residential units, community facility, office space, care home and retail units (12/04347/OUT and 12/01240/OUT) were recently refused on a neighbouring site (land at Kingsland Laines, Reeds Lane, Sayers Common) to the east of the application site. Although these applications were refused, with the latter also dismissed at appeal, it is pertinent to note that within the appeal decision the inspector stated that:

"The site is in a sustainable location for housing, with good access to a range of local facilities and services. Subject to a planning obligation to secure an agreed package of highway works and other transport related measures and financial contributions, the Council's objection in relation to reason for refusal 3 is addressed."

3.32 Subsequently an outline planning application for the approval of access details for 40 houses, extra care facility with access from London Road/B2118 (15/1467/OUT) was approved for the site. Within the committee report for the application the Inspectors comments, along with those made by the Secretary of State, was referred to in regard to the sustainability of the site as follows;

"In considering the sustainability of the site for 120 units the appeal Inspector made the following conclusions:

'All in all, it seems to me that residents of Sayers Common have access to a reasonable range of services and that it would be appropriate to permit further development here, both in terms of there being a range of services and facilities to support an increased population, and in terms of the potential that the increased population itself would have in helping maintain the viability of those services and facilities.

As recognised by the Highway Authority, whilst the elements included in the planning obligation do not, of themselves, make the site sustainable in transport terms, they are, together with the existing public transport, walking and cycling provision, sufficient to ensure that access to those services and facilities required by people on an everyday basis, by sustainable modes, is a realistic prospect. In principle therefore, and notwithstanding that the development proposed exceeds the upper figure referred to in the RIBP, I am satisfied that future occupiers would not be heavily reliant on the private car and that the site can be considered as a reasonably accessible location for the residential development proposed. I find no material conflict with policies G2 and T4 of the Local Plan, or the thrust of the National Planning Policy Framework in this regard which, together, seek to direct development to sustainable locations in order to reduce reliance on the private car.'

This Council did not object to the appeal scheme on the grounds of sustainability. The SoS made the following conclusions on this matter:

'He has carefully considered the Inspector's assessment of accessibility/sustainability at IR12.30-12.42, and, for the reasons contained therein, he agrees that the elements included in the planning obligation, together with existing public transport, walking and cycling provision, would be sufficient for there to be a reasonable prospect of providing access by sustainable modes to those services and facilities required by people on an everyday basis.'

3.33 Given the location of the approved scheme at Kingsland Laines, Reeds Lane, Sayers Common in proximity to the application site and the similar scale of development proposed, it can be agreed that the site is sustainable within the context of relevant policy, to the benefit of prospective residents.

#### **Summary**

3.34 National and local policies highlight the need to reduce the number of trips by car, particularly single occupancy vehicle trips. Based on the foregoing, it is clear that the site is located within a sustainable location and that the proposed development accords well with national and local policies.

### 4. PROPOSED DEVELOPMENT

- 4.1 The proposed development includes the development of the former brickworks site and brick pit into a residential area comprising of 29(no.) residential dwellings and a doctors' surgery, as well as ancillary landscaping, garages and parking spaces.
- 4.2 The proposed development will expand the existing site access into an existing property named Lyndon, located on Reeds Lane.
- 4.3 The proposed site layout is attached as **Appendix A5**.

### **Site Access**

4.4 The site will take access from an existing crossover, which will be extended into a bell mouth junction onto Reeds Lane, having kerb radii of 6m on either side. The proposed site access is 4.8m wide, leading to the proposed dwellings on site to the north of the residences fronting Reeds Lane.

### **Visibility Splays**

- 4.5 The proposed site access enjoys good visibility along both sides of Reeds Lane, exceeding the 43m along the street, from a position 2.4m behind the give way line, as required by Manual for Streets, Table 7.1, for the existing posted speed limit on Reeds Lane of 30mph. Visibility is also available when based upon the measured 85th percentile speeds of 34mph eastbound and 31mph westbound. These are shown in **Appendix A6**.
- 4.6 The two priority junctions within the site have been reviewed and provide adequate visibility of 25m from 2.4m behind the give way line. These are proposed for a design speed 20mph.
- 4.7 It is considered that the proposed highway arrangement for the development is safe and efficient for the proposed land-use changes.

### **Unit Mix & Parking Provision**

- 4.8 The proposed site will consist of a doctors' surgery and 29(no.) residential units based on the following unit mix:
  - 4(no.) affordable two-bedroom houses;
  - 4(no.) private two-bedroom houses;
  - 5(no.) affordable three-bedroom houses;
  - 12(no.) private three-bedroom houses; and

- 4(no.) private four-bedroom houses.
- 4.9 The dwellings each have assigned car parking spaces, which varies between two and four vehicle spaces allocated to each dwelling, as well as cycle parking. In total 74(no.) allocated vehicular parking spaces are being proposed in the development (16 garage spaces and 58 car parking spaces). Another ten spaces are allocated for visitors, as well as another six spaces for the doctors' surgery. Cycle spaces are allocated within the unit garages and in cycle stores (sheds) within the respective dwellings.

### **Vehicular Parking**

4.10 The WSCC parking standards are discussed within the *West Sussex County Council Guidance for Parking in New Residential Developments (September 2010)* document. Using the Parking Demand Calculator tool provided in this document, the parking requirements are shown in **Table 4.1** below.

Table 4.1 WSCC Parking Standards – New Residential developments

Parking type	Recommended provision
Allocated vehicle parking	70 spaces
Unallocated resident vehicle parking	3 spaces
Unallocated visitor vehicle parking	6 spaces
Allocated cycle parking	50 spaces

Note: Calculation based within parking\_demand\_calculator.xlsm spreadsheet

- 4.11 According to the WSCC parking standards the site would therefore require 79(no.) car parking spaces.
- 4.12 The WSCC guidelines do not require any allocated blue-badge parking spaces allocated for disabled users. However, a safe access is required to be provided within the development.

### **Cycle Parking**

4.13 Cycle parking requirements according to WSCC policy are also included within **Table 4.1** above. These standards require the provision of 50(no.) long term spaces, which are to be provided in garages or cycle stores within each respective dwelling.

Table 4.2 MSDC Parking Standards – New Residential developments

Parking type	Recommended provision
Allocated vehicle parking	62 spaces
Allocated cycle parking	58 spaces
Unallocated visitor cycle parking	4 spaces

- 4.14 The MSDC requires a total of 62(no.) car parking spaces as shows within **Table 4.2** above. This is split as two spaces each for two and three-bedroom units and three spaces for the four-bed dwellings. This include the parking provision within the respective garages.
- 4.15 In comparison to the WSCC policy above, the MSDC policy requires two cycle parking spaces for every dwellings as well as an unallocated visitor parking space for every eight dwellings, equating to 58(no.) allocated cycle parking spaces and 4(no.) unallocated spaces.
- 4.16 The cycle spaces are split between the 30(no.) cycle spaces within sheds, 28(no.) garages, and four cycle spaces on two 'Sheffield type' cycle stands. These are therefore in compliance with the requested parking standards provided within the WSCC and MSDC Parking Standards.
- 4.17 It is considered that whilst the development proposals slightly exceeds the WSCC and MSDC policy, the car parking provision is adequate for the proposed development, as the proposed garages would in some cases not be used for car parking as such. It is therefore considered that this would not affect the development's ability in promoting the existing sustainable movement networks, including public transport, walking and cycling.

### Site Servicing

- 4.18 Servicing for the proposed dwellings will typically follow servicing for an average residential unit. This would include refuse servicing, postal service, and the more irregular home delivery and supermarket delivery services. As such, no dedicated parking spaces will be required for these processes.
- 4.19 **Table 4.3** shows the types of delivery being expected to the site, along with the frequency, typical time and typical vehicle type.

Table 4.3 Types of Delivery

Delivery Type	Frequency	Typical Vehicle Type	Vehicle Length	Typical Delivery Time	Typical Dwell Time
Postal Delivery	Daily (pass-by)	Transit van	5.7m	10:00-16:00	5 minutes
Waste Collection	Two times a week	Refuse Vehicle	12.0m	06:00-07:00 / 20:00-21:00	10-20 mins
General deliveries	Ad hoc	Various from Car to Transit Van	4.4m to 5.7m	08:00-17:30	5-10 minutes
Supermarket deliveries	Weekly	Transit van	5.7m	06:00-23:00	5-10 minutes

4.20 The application site also accords with access for emergency vehicles as stated in *Manual for Streets* and within the *Building Regulations Part B5 (Fire Safety)*. All areas of the site will remain accessible by a fire pump within 45m of a public road or vehicle access.

4.21	In respect of waste collection it is intended that refuse vehicles would make their collections from within the site. The layout complies with minimum walk distances for both residents and refuse collectors as prescribed in relevant transport guidance documents such as <i>Manual for Streets</i> and the <i>MSDC Waste Storage and Collection Guidance for new Developments</i> .

### 5. TRAFFIC GENERATION

5.1 This section will outline the existing and proposed trip generation associated with this development and explain how suitable trip rates for the proposed site use have been derived to assess the capacity of the surrounding highway network.

### **TRICS Methodology**

- 5.2 The TRICS database is a national dataset incorporating a large number of traffic surveys which are used as an estimation model for trip generation, based on evidence of similar developments elsewhere throughout the country. The TRICS database allows the filtering of sites by land use type, location, size and a variety of other parameters to generate a trip generation model by the proposed land use development.
- 5.3 In this case, the latest iteration of the TRICS model, version 7.4.2, was used in this analysis. The sites were filtered to include sites in England, excluding Greater London and the north of the country. Sites were restricted to sites of less than 200 units in size and located within Neighbourhood Centres only.

### **Proposed Trip Generation - Dwellings**

To determine the likely number of vehicle trips that could be generated by the proposed site, the TRICS database has been interrogated to obtain trip rates for Class C3 Residential land-use. This has been applied to the proposed 29 houses on site. The trip rates and resultant trips which could be generated by the proposed development are displayed in **Table 5.1** below, with the full TRICS data attached at **Appendix A7**.

Table 5.1 Proposed Trip Rates and Trip Generation for Proposed Dwellings

	Trip	Rate / Dwe	lling	N	umber of Trip	os
	Arrive	Depart	Total	Arrive	Depart	Total
AM Peak (08:00 – 09:00)	0.05	0.383	0.433	1	11	12
PM Peak (17:00 – 18:00)	0.45	0.183	0.633	13	5	18
Daily (7am - 7pm)	2.567	2.616	5.183	74	76	150

Note: Numbers may not equate perfectly due to rounding error.

5.5 The above trip generation assessment demonstrates that the proposed dwellings could generate a total of 12(no.) two-way trips in the AM peak and 18(no.) two-way trips in the PM peak, with 150(no.) vehicular trips expected to arrive and depart to the residential dwellings every day on average. This would equate to a trip every five and three minutes respectively during the AM and PM peak hours.

### **Proposed Trip Generation – Doctors' Surgery**

To determine the likely number of vehicle trips that could be generated by the proposed site, the TRICS database has again been interrogated to obtain trip rates for Class D1 Non-residential institutions land-use. This is now applied to the proposed doctors' surgery on site. The trip rates and resultant trips which could be generated by the proposed development are displayed in **Table 5.2** below, with the full TRICS data attached at **Appendix A7**.

Table 5.2 Proposed Trip Rates and Trip Generation for Proposed Dwellings

	Trip	Rate / 100s	sqm	N	umber of Trip	os
	Arrive	Depart	Total	Arrive	Depart	Total
AM Peak (08:00 – 09:00)	4.256	2.128	6.384	3	1	4
PM Peak (17:00 – 18:00)	1.957	2.842	4.799	1	2	3
Daily (7am – 7pm)	34.885	34.748	69.633	23	22	45

Note: Numbers may not equate perfectly due to rounding error.

5.7 The above trip generation assessment demonstrates that the proposed dwellings could generate a total of four two-way trips in the AM peak and three two-way trips in the PM peak, with 45(no.) vehicular trips expected to arrive and depart to the surgery every day on average. This would equate to a trip every fifteen and twenty minutes respectively during the AM and PM peak hours.

### **Proposed Trip Generation for the whole Site**

5.8 The proposed trip generation for the proposed dwellings and the doctors' surgery has been therefore combined into one flow within **Table 5.3** below:

Table 5.3 Combined Trip Generation for Proposed Site

	Prop	osed dwe	llings	Prop	osed Sur	gery	Co	mbined S	ite
	Arrive	Depart	Total	Arrive	Depart	Total	Arrive	Depart	Total
AM Peak (08:00 – 09:00)	1	11	12	3	1	4	4	12	16
PM Peak (17:00 – 18:00)	13	5	18	1	2	3	14	7	21
Daily (7am – 7pm)	74	76	150	23	22	45	97	98	195

The proposed trip generation equates to 16(no.) two-way trips in the AM peak hours and 21(no.) in the PM hour. This is considered as a small change and would make a negligible effect on the local highway network, with an additional trip every three minutes during the evening peak hour. It is therefore not envisaged that the proposed development would make a noticeable effect on the highway network.

### **Site Access Junction Analysis**

- 5.10 The proposed site access was also reviewed through the industry-standard priority junction review software Junctions 9 module PICADY. PICADY is a TRL software which has been developed over the past three decades to model priority junctions through the TRL/Kimber capacity relationships (also known as the PICADY Model). This considers key geometries such as road widths, visibility, turning space. This model links priority junction geometry to driver behaviour and to predicted capacities, queues and delays.
- 5.11 Through this model, it has been concluded that the junction will work at the highest levels of movements with minimal delays, as the traffic generated by the site is quite minimal. The report for this analysis is included as **Appendix A8**.

### **Parking Accumulation**

5.12 A parking accumulation table has also been prepared for the proposed Doctors' Surgery, to ensure that the car park does not exceed the allowed parking provision. This is included as **Table 5.4** below:

Table 5.4 Parking Accumulation calculation for the proposed Doctors Surgery

Time	Arrivals	Departures	Parking Accumulation
07:00-08:00	1	0	1
08:00-09:00	3	1	3
09:00-10:00	3	3	3
10:00-11:00	3	3	3
11:00-12:00	3	3	3
12:00-13:00	2	2	3
13:00-14:00	1	1	3
14:00-15:00	2	2	3
15:00-16:00	2	2	3
16:00-17:00	2	2	3
17:00-18:00	1	2	2
18:00-19:00	0	1	1
19:00-20:00	0	0	1

5.13 This shows that the maximum number of visitors to the surgery during the peak hours is of three vehicles, with a parking accumulation of three vehicles as well. This confirms that the provision of six spaces is more than adequate for this site, and would allow for any abnormal peak usage to park within the site.

### 6. CONCLUSIONS

- 6.1 Iceni Projects Ltd has been appointed by Reside Developments Ltd to provide transportation advice in regard to their development proposals at the industrial plant at Reeds Lane, in Sayers Common, West Sussex.
- 6.2 The proposed development comprises the development of a former brickworks site into 29(no.) residential dwellings, ancillary garages and associated vehicle parking, as well as a doctors' surgery.
- 6.3 The location of the site provides good opportunities to use transport modes other than the single occupancy vehicle, as it benefits from a good level of pedestrian and cycle facilities in the locality, as well as having existing public transport facilities available. An assessment of the local area has also demonstrated that the site is closely located to a range of services / amenities, and also has a good highway safety record.
- 6.4 Vehicular access to the site will be facilitated by the provision of a bell mouth access at the southern extents of the site on Reeds Lane.
- The proposals include for the provision of 90(no.) car parking spaces, 84(no.) of which are allocated to the residential dwellings and visitors. This is slightly more than the recommended 79(no.) spaces allocated to the dwellings as per WSCC model guidelines. However, it is pertinent to note that this includes 16(no.) garage spaces, which are typically used as storage space, rather than for parking, and the allocated provision is considered acceptable. 58(no.) cycle parking spaces will be located within garages and sheds, as well as an additional 4(no.) cycle spaces on 'Sheffield type' stands in accordance with the relevant standards.
- 6.6 Given the proposed use, it is not expected that there will be a large number of servicing trips associated with the site. Furthermore, it has been confirmed that the site is accessible to emergency vehicles in accordance with standards.
- 6.7 A trip generation assessment has been undertaken which demonstrates that the trip generation associated with the proposed development will have a minor impact during peak hours, through the increase of 16 and 21 trips to and from the site in the morning and evening peak hours respectively. This would have a negligible impact on the local highway network.
- 6.8 In summary, the site is considered to be suitably located for the proposed development. The assessment undertaken within this report demonstrates that the proposals will not have a significant or detrimental impact upon the local transport network.

# **A1. SITE PLAN**



reside. Title: Location Plan Scale: Date: CMYK (Planning & Design) Ltd 6 The Gavel Centre, Porters Wood St Albans, Herts. AL3 6PQ Reside Developments Ltd The Dutch House, 132-134 High Street, Dorking, Surrey RH4 1BG 1:1250 @A3 Oct 2017 Drg No: Rev: t: 01727 830123 e: email@cmykuk.net www.cmykuk.net 10 20 100m www.residedevelopments.co.uk 1636 / P / 10.01



### **Traffic Surveys UK Globals** Report Id CustomList-99 **Descriptor** Traffic Surveys UK Created by MetroCount Traffic Executive **Creation Time (UTC)** 2017-10-17T11:40:23 Legal Copyright (c)1997 - 2016 MetroCount Graphic header.gif Language English **Country** United Kingdom Time UTC + 60 min Create Version 5.0.1.0 Metric Non metric Speed Unit mph Length Unit ft Mass Unit ton **Dataset** Site Name 15485-001 Site Attribute Traffic Surveys UK File Name Q:\15485 Hassocks, Sussex\15485-001 0 2017-10-17 0835.EC0 File Type Plus B Algorithm Factory default axle **Description** Reeds Lane [30m] Lane 0 **Direction** 8 Direction Text 8 - East bound A]B, West bound B]A. Layout Text Axle sensors - Paired (Class/Speed/Count) **Setup Time** 2017-10-09T06:27:43 Start Time 2017-10-09T06:27:43 Finish Time 2017-10-17T08:35:43 **Operator** Traffic Surveys UK Configuration 40 MC5600 00 00 00 00 00 ? A810JFDF MC56-L5 [MC55] (c)Microcc **Profile** Name Traffic Surveys UK Title Traffic Surveys UK Graphic Logo C:and SettingsDocuments3.21 on us logo cmyk 50.BMP Header **Footer** Percentile 1 85 Percentile 2 95 Pace 12 Filter Start 2017-10-09T06:28:00 Filter End 2017-10-17T08:35:43 Class Scheme ARX F Cls(1-10) Dir(E) Sp(0,120) Headway(]0) Span(0 - 328.084) Lane(0-16) Low Speed 0 High Speed 120 Posted Limit 30 **Speed Limits** 35 45 30 30 30 0 0 0 0 30 Separation 0.000 **Separation Type** Headway

**Direction** East

**Encoded Direction 2** 

# Traffic Surveys UK

Column	
Time	24-hour time (0000 - 2359)
Total	Number in time step
Cls 1	Class totals
Cls 2	Class totals
Cls 3	Class totals
Cls 4	Class totals
Cls 5	Class totals
Cls 6	Class totals
Cls 7	Class totals
Cls 8	Class totals
Cls 9	Class totals
Cls 10	Class totals
Fix1	User defined fixed text
Time	24-hour time (0000 - 2359)
Vbin 0 10	Speed bin totals
Vbin 10 15	Speed bin totals
Vbin 15 20	Speed bin totals
Vbin 20 25	Speed bin totals
Vbin 25 30	Speed bin totals
Vbin 30 35	Speed bin totals
Vbin 35 40	Speed bin totals
Vbin 40 45	Speed bin totals
Vbin 45 50	Speed bin totals
Vbin 50 60	Speed bin totals
Vbin 60 70	Speed bin totals
Vbin 70 80	Speed bin totals
Vbin 80 90	Speed bin totals
Vbin 90 100	Speed bin totals
Mean	Average speed
Vpp 85	Percentile speed
]PSL 30	Number exceeding Posted Speed Limit
]PSL% 30	Percent exceeding Posted Speed Limit
JSL1 35 ACPO	Number exceeding Speed Limit 1
JSL1% 35 ACPO	Percent exceeding Speed Limit 1
]SL2 45 DFT	Number exceeding Speed Limit 2
]SL2% 45 DFT	Percent exceeding Speed Limit 2

# **Traffic Surveys UK**

Report Id - CustomList-99 Site Name - 15485-001

**Description - Reeds Lane [30m]** 

**Direction -** East

### 09 October 2017

Time	Total	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Fix1	Time	Vbin	Mean	Vpp	]PSL	]PSL%	]SL1	]SL1%	]SL2	]SL2%													
		1	2	3	4	5	6	7	8	9	10			0	10	15	20	25	30	35	40	45	50	60	70	80	90		85	30	30	35	35	45	45
														10	15	20	25	30	35	40	45	50	60	70	80	90	100					ACPO	ACPO	DFT	DFT
0600	29	1	24	0	4		0 0	(	)	0 0	)	0	0600	1	0	4	3	12	6	2	1	0	0	0	0	0	0	27.4	34.3	9	31.03	3	10.34	0	0
0700	122	2	100	3	16		0 1	(	)	0 0	)	0	0700	0	4	7	8	42	46	14	1	0	0	0	0	0	0	29	33.9	61	50	15	12.3	0	0
0800	131	1	115	1	12		1 0	(	)	1 C	)	0	0800	1	5	7	30	49	30	9	0	0	0	0	0	0	0	27.1	32.7	39	29.77	9	6.87	0	0
0900	85	1	74	2	8		0 0	(	)	0 0	)	0	0900	2	1	9	24	27	16	4	2	0	0	0	0	0	0	26.4	33.1	22	25.88	6	7.059	0	0
1000	78	0	60	1	14		1 2	. (	)	0 0	)	0	1000	3	4	13	19	24	11	4	0	0	0	0	0	0	0	24.3	32.6	15	19.23	4	5.128	0	0
1100	78	0	60	1	12		0 4	. (	)	1 0	)	0	1100	1	3	11	19	26	16	1	1	0	0	0	0	0	0	25.5	31.3	18	23.08	2	2.564	0	0
1200	81	0	67	0	12		1 1	(	)	0 0	)	0	1200	1	3	5	18	29	19	5	1	0	0	0	0	0	0	26.8	32.9	25	30.86	6	7.407	0	0
1300	126	2	102	1	18		0 3	(	)	0 0	)	0	1300	3	11	11	36	26	31	7	1	0	0	0	0	0	0	25.3	32.4	39	30.95	8	6.349	0	0
1400	107	1	90	1	11		0 4	. (	)	0 0	)	0	1400	0	2	18	32	29	21	5	0	0	0	0	0	0	0	25.6	32	26	24.3	5	4.673	0	0
1500	118	1	93	0	18		1 4	. (	)	1 0	)	0	1500	1	3	7	27	41	25	10	4	0	0	0	0	0	0	27.7	33.8	39	33.05	14	11.86	0	0
1600	110	2	96	0	11		0 0	(	)	0 0	)	1	1600	0	3	11	13	41	32	8	2	0	0	0	0	0	0	28	33.6	42	38.18	10	9.091	0	0
1700	216	3	201	2	10		0 0	(	)	0 0	)	0	1700	2	5	44	26	68	61	10	0	0	0	0	0	0	0	26.3	32.5	71	32.87	10	4.63	0	0
1800	97	1	90	0	6		0 0	(	)	0 0	)	0	1800	0	0	6	16	40	21	12	2	0	0	0	0	0	0	28.7	34.8	35	36.08	14	14.43	0	0
1900	62	0	56	1	5		0 0	(	)	0 0	)	0	1900	0	3	1	1	23	21	10	2	1	0	0	0	0	0	30.4	35.3	34	54.84	13	20.97	1	1.613
2000	25	0	23	0	2		0 0	(	)	0 0	)	0	2000	0	1	0	2	10	8	4	0	0	0	0	0	0	0	29.6	35.4	12	48	4	16	0	0
2100	16	0	15	0	1		0 0	(	)	0 0	)	0	2100	0	0	0	0	7	6	3	0	0	0	0	0	0	0	31.5	37.5	9	56.25	3	18.75	0	0
2200	7	0	7	0	0		0 0	(	)	0 0	)	0	2200	0	0	0	0	2	4	1	0	0	0	0	0	0	0	31.7 -		5	71.43	1	14.29	0	0
2300	7	0	4	0	3		0 0	(	)	0 0	)	0	2300	0	0	0	0	1	2	2	1	1	0	0	0	0	0	36.8 -		6	85.71	4	57.14	1	14.29
07-19	1349	14	1148	12	148		4 19	(	)	3 0	1	1	07-19	14	44	149	268	442	329	89	14	0	0	0	0	0	0	26.8	33	432	32.02	103	7.635	0	0
06-22	1481	15		13	160		4 19		)	3 0		1	06-22	15	48	154	274	494	370	108	17	1	0	0	0	0	0	27	33.2	496	33.49	126	8.508	1	0.068
06-00	1495	15		13	163		4 19		)	3 0		1	06-00	15	48	154	274	497	376	111	18	2	0	0	0	0	0	27.1	33.3	507	33.91	131	8.763	2	0.134
00-00	1495	15		13	163		4 19		)	3 0		1	00-00	15	48	154	274	497	376	111	18	2	0	0	0	0	0	27.1	33.3	507	33.91	131	8.763	2	0.134

### 10 October 2017

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	C	is Cis	Cls 10		Time	Vbin 0	Vbin 10	Vbin 15	Vbin 20	Vbin 25	Vbin 30	Vbin 35	Vbin 40	Vbin 45	Vbin 50	Vbin 60	Vbin 70	Vbin 80	Vbin 90	Mean	Vpp 85	]PSL 30	]PSL% 30	]SL1 35	]SL1% 35	]SL2 45	]SL2% 45
		·	_	_	·									10	15	20	25	30	35	40	45	50	60	70	80	90	100					ACPO		DFT	DFT
0000	3	0	1	0	2	2	0 0	)	0	0	0	0	0000	0	1	0	0	1	0	1	0	0	0	0	0	0	0	26.3 -		1	33.33	1	33.33	0	0
0100	2	0	2	0	C	)	0 0	)	0	0	0	0	0100	0	1	0	0	1	0	0	0	0	0	0	0	0	0	19.8 -		0	0	C	0	0	0
0200	1	1	0	0	C	)	0 0	)	0	0	0	0	0200	1	0	0	0	0	0	0	0	0	0	0	0	0	0	8.8 -		0	0	C	0	0	0
0300	2	0	2	0	C	)	0 0	)	0	0	0	0	0300	0	0	0	1	1	0	0	0	0	0	0	0	0	0	26.2 -		0	0	C	0	0	0
0400	7	0	6	0	1		0 0	)	0	0	0	0	0400	0	0	0	1	2	1	3	0	0	0	0	0	0	0	32.2 -		4	57.14	3	42.86	0	0
0500	25	0	19	1	5	5	0 0	)	0	0	0	0	0500	0	0	0	1	7	7	6	3	1	0	0	0	0	0	33.9	41.1	17	68	10	40	1	4
0600	47	1	40	0	5	5	1 (	)	0	0	0	0	0600	0	2	0	5	14	17	9	0	0	0	0	0	0	0	30.5	36.6	26	55.32	9	19.15	0	0
0700	126	1	105	1	16	6	0 2	2	0	1	0	0	0700	1	5	7	22	43	38	10	0	0	0	0	0	0	0	27.6	34	48	38.1	10	7.937	0	0
0800	124	0	107	0	14		1 2	2	0	0	0	0	0800	0	5	7	26	35	41	10	0	0	0	0	0	0	0	27.8	33.8	51	41.13	10	8.065	0	0
0900	94	2	78	1	10	)	1 2	2	0	0	0	0	0900	2	2	5	14	33	26	10	2	0	0	0	0	0	0	28.2	34.1	38	40.43	12	12.77	0	0
1000	95	2	79	2	8	3	1 3	3	0	0	0	0	1000	0	4	8	15	39	22	5	1	1	0	0	0	0	0	27.3	32.2	29	30.53	7	7.368	1	1.053
1100	87	2	67	1	13	3	1 3	3	0	0	0	0	1100	4	1	12	21	33	12	4	0	0	0	0	0	0	0	24.7	31.7	16	18.39	4	4.598	0	0
1200	87	1	71	2	12	2	0 1		0	0	0	0	1200	0	3	12	14	32	22	3	1	0	0	0	0	0	0	26.6	32.1	26	29.89	4	4.598	0	0
1300	94	4	77	0	11		0 2	2	0	0	0	0	1300	0	1	11	27	23	25	7	0	0	0	0	0	0	0	26.7	32.9	32	34.04	7	7.447	0	0
1400	95	0	72	1	18		0 4		0	0	0	0	1400	0	2	6	18	31	28	8	1	1	0	0	0	0	0	28.4	34.1	38	40	10	10.53	1	1.053
1500	92	2	78	0	12		0 (	)	0	0	0	0	1500	0	3	/	19	27	27	8	1	0	0	0	0	0	0	27.7	33.9	36	39.13	40	9.783	0	0
1600	125	4	106	0	15		0 (	)	0	0	0	0	1600	4	5	8	21	39	35	11	2	0	0	0	0	0	0	27.3	34.5	48	38.4	13	10.4	0	0
1700	217 77	5	196 71	1	15		0 (	)	0	0	0	0	1700	1	11	46	51	66	34	7	1	0	0	0	0	0	0	24.6	30.9	42	19.35 45.45	٥	3.687 5.195	0	0
1800 1900	70	1	67	0		)	0 (	) \	1	0	0	0	1800 1900	1	3	0	6	27 25	31 21	10	ا د	0	0	0	0	0	0	28.2 29.4	33.2 36.2	35 34	45.45 48.57	12	18.57	0	0
2000	21	0	21	0	2	<u>.</u> 1	0 (	) \	Ι Λ	0	0	0	2000	0	J 1	1	0	20	Z I	10	ა ე	1	0	0	0	0	0	30.4	39.5	10	47.62	13	5 23.81	1	4.762
2100	9	0	6	0	2	) !	0 (	)	0 0	0	0	0	2100	0	1	1	0	9	3	1	2	0	0	0	0	0	0	32.4 -	39.3	6	66.67	9	33.33	0	4.702
2200	13	0	12	0	1	,	0 (	) )	0 0	0	0	0	2200	1	3	0	1	2	3	1	1	0	0	0	0	0	0	24.8	35.5	5	38.46	2	15.38	0	0
2300	8	0	7	0	1		0 (	, )	n	0	0	0	2300	0	0	1	0	3	2	2	0	0	0	0	0	0	0	29.8 -		4	50.40	2	25	0	0
07-19	1313	24	1107	9	149	)	4 10	,	n	1	0	0	07-19	12	45	135	<b>254</b>	428	341	86	10	2	0	0	0	0	0	26.9	33.2	439	33.43	98		2	0.152
06-22	1460	25	1241	9	159		5 19	)	1	1	0	0	06-22	13	52	137	265	478	387	108	17	3	0	0	0	0	0	27.2	33.6	515	35.27	128		3	0.205
06-00	1481	25	1260	9	161		5 19	)	1	1	0	0	06-00	14	55	138	266	484	392	111	18	3	0	0	0	0	0	27.2	33.6	524	35.38	132		3	0.203
00-00	1521	26	1290	10	169		5 19	)	1	1	0	0	00-00	15	57	138	269	496	400	121	21	4	0	0	0	0	0	27.3	33.7	546	35.9	146		4	0.263

Time	e Total	Cls	Fix1	Time	Vbin	Mean	Vpp	]PSL	]PSL%	]SL1	]SL1%	]SL2	]SL2%																						
		1	2	3	4	5	6	7	8	9	10			0	10	15	20	25	30	35	40	45	50	60	70	80	90		85	30	30	35	35	45	45
														10	15	20	25	30	35	40	45	50	60	70	80	90	100					ACPO	ACPO	DFT	DFT
0000		1 (	) 1	0	0	0	0	0	0	0	0	)	0000	0	0	0	0	0	0	1	0	0	0	0	0	0	0	35.8	-	1	100	1	100	0	0

0100	0	0	0	0	0	0	0	0	0	0	0	0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0 -	-		0	0	0	0	0	0
0200	1	0	1	0	0	0	0	0	0	0	0	0200	0	0	0	0	0	0	1	0	0	0	0	0	0	0	35.6 -		1	100	1	100	0	0
0300	1	0	1	0	0	0	0	0	0	0	0	0300	0	0	0	0	0	0	1	0	0	0	0	0	0	0	37.6 -		1	100	1	100	0	0
0400	6	0	4	0	2	0	0	0	0	0	0	0400	0	0	0	1	1	3	1	0	0	0	0	0	0	0	31 -		4	66.67	1	16.67	0	0
0500	26	0	24	0	2	0	0	0	0	0	0	0500	0	0	0	0	3	11	9	3	0	0	0	0	0	0	34.9	39.3	23	88.46	12	46.15	0	0
0600	38	1	33	1	3	0	0	0	0	0	0	0600	1	0	1	1	6	21	7	1	0	0	0	0	0	0	31.1	36	29	76.32	8	21.05	0	0
0700	128	1	109	2	13	1	0	1	1	0	0	0700	0	7	9	13	47	43	8	1	0	0	0	0	0	0	27.8	32.8	52	40.63	9	7.031	0	0
0800	136	0	121	0	15	0	0	0	0	0	0	0800	1	6	4	25	39	45	14	2	0	0	0	0	0	0	28.4	34.2	61	44.85	16	11.76	0	0
0900	88	2	70	0	14	0	0	0	2	0	0	0900	1	1	6	13	34	25	7	1	0	0	0	0	0	0	28	32.9	33	37.5	8	9.091	0	0
1000	80	0	65	0	13	2	0	0	0	0	0	1000	0	4	7	7	19	27	15	1	0	0	0	0	0	0	29	35.4	43	53.75	16	20	0	0
1100	94	2	67	1	22	1	0	0	0	1	0	1100	2	4	9	14	26	28	10	1	0	0	0	0	0	0	27.6	34.2	39	41.49	11	11.7	0	0
1200	81	0	62	1	15	1	1	0	0	1	0	1200	0	1	7	3	32	26	11	1	0	0	0	0	0	0	29.3	34.6	38	46.91	12	14.81	0	0
1300	89	2	76	1	8	1	0	0	0	0	1	1300	0	0	10	15	25	28	11	0	0	0	0	0	0	0	28.3	34.6	39	43.82	11	12.36	0	0
1400	89	1	75	0	12	0	1	0	0	0	0	1400	1	6	8	12	21	30	10	1	0	0	0	0	0	0	27.7	34.5	41	46.07	11	12.36	0	0
1500	103	1	86	1	10	1	3	0	1	0	0	1500	0	3	10	19	36	28	6	1	0	0	0	0	0	0	27.2	32.8	35	33.98	7	6.796	0	0
1600	135	2	115	0	18	0	0	0	0	0	0	1600	0	3	9	28	42	34	19	0	0	0	0	0	0	0	28.1	34.8	53	39.26	19	14.07	0	0
1700	196	3	182	1	10	0	0	0	0	0	0	1700	2	3	28	35	72	45	9	2	0	0	0	0	0	0	26.5	32.5	56	28.57	11	5.612	0	0
1800	97	2	89	0	5	1	0	0	0	0	0	1800	1	2	5	17	38	28	6	0	0	0	0	0	0	0	27.6	32.5	34	35.05	6	6.186	0	0
1900	76	0	73	0	3	0	0	0	0	0	0	1900	0	1	2	10	32	28	3	0	0	0	0	0	0	0	28.7	32.8	31	40.79	3	3.947	0	0
2000	32	0	31	0	1	0	0	0	0	0	0	2000	0	1	0	3	12	10	5	1	0	0	0	0	0	0	29.9	36.1	16	50	6	18.75	0	0
2100	20	0	16	0	4	0	0	0	0	0	0	2100	0	0	2	5	3	6	4	0	0	0	0	0	0	0	28.3	35.4	10	50	4	20	0	0
2200	11	0	10	0	1	0	0	0	0	0	0	2200	0	1	0	1	2	3	4	0	0	0	0	0	0	0	30.7	38.7	7	63.64	4	36.36	0	0
2300	6	0	3	0	3	0	0	0	0	0	0	2300	0	1	0	1	0	1	2	1	0	0	0	0	0	0	31 -		4	66.67	3	50	0	0
07-19	1316	16	1117	7	155	8	5	1	4	2	1	07-19	8	40	112	201	431	387	126	11	0	0	0	0	0	0	27.8	33.7	524	39.82	137	10.41	0	0
06-22	1482	17	1270	8	166	8	5	1	4	2	1	06-22	9	42	117	220	484	452	145	13	0	0	0	0	0	0	28	33.8	610	41.16	158	10.66	0	0
06-00	1499	17	1283	8	170	8	5	1	4	2	1	06-00	9	44	117	222	486	456	151	14	0	0	0	0	0	0	28	33.8	621	41.43	165	11.01	0	0
00-00	1534	17	1314	8	174	8	5	1	4	2	1	00-00	9	44	117	223	490	470	164	17	0	0	0	0	0	0	28.2	33.9	651	42.44	181	11.8	0	0

Time	Total	Cls	Cls	Cls	CI	ls C	Cls	Cls	Cls	Cls	Cls	Cls	Fix1	Time	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Mean	Vpp	]PSL	]PSL%	]SL1	]SL1%	]SL2	]SL2%
		1	2	3	4	4	5	6	7	8	9	10			0	10	15	20	25	30	35	40	45	50	60	70	80	90		85	30	30	35	35	45	45
															10	15	20	25	30	35	40	45	50	60	70	80	90	100					ACPO	ACPO	DFT	DFT
0000	4	0		3 0	)	1	0	0	(	)	0 (	)	0	0000	0	0	0	1	0	2	1	0	0	C	) 0	0	(	) 0	31.1		3	75	1	25	0	0
0100	4	0		2 0	)	2	0	0	(	)	0 (	)	0	0100	0	0	0	0	1	2	1	0	0	(	) 0	0	(	) 0	31.1		3	75	1	25	0	0
0200	5	0		5 0	)	0	0	0	(	)	0 (	)	0	0200	0	0	0	2	1	2	0	0	0	(	) 0	0	(	) 0	27.3		2	40	0	0	0	0
0300	2	0		1 0	)	1	0	0	(	)	0 (	)	0	0300	0	0	0	0	1	0	1	0	0	(	) 0	0	(	) 0	33.3	-	1	50	1	50	0	0
0400	6	0		5 0	)	1	0	0	(	)	0 (	)	0	0400	0	0	0	0	2	2	1	1	0	(	) 0	0	(	) 0	33.8	-	4	66.67	2	33.33	0	0
0500	20	0		6 1		3	0	0	(	)	0 (	)	0	0500	0	1	0	0	3	/	9	0	0	(	) 0	0	(	) 0	32.9	38.8	16	80	9	45	0	0
0600	47	1	3		)	9	0	0	(	)	0 (	)	0	0600	2	1	0	6	8	16	9	5	0	(	) 0	0	(	) 0	30.6	37.8	30	63.83	14	29.79	0	0
0700	127	1	10			19	0	1	(	)	1 (	)	0	0700	0	4	5	13	53		13	0	0	(	) 0	0	(	) 0	28.4	33.9	52	40.94	13	10.24	0	0
0800	128	0	11		,	12	1	0	(	)	1 (	)	0	0080	1	5	10	21	50		10	1	0	(	) 0	0	(	) 0	28.4 26.7	33.8 33.7	49 34	38.28	11	8.594 9.184	1	1.02
0900	98 90	0	8	5 0	, ,	12	1	1	(	)	0 (	)	1	0900 1000	4	7	10	10	30 34		0	0	1		) 0	0	(	) 0	26.7 25.7	32.2	25	34.69 27.78	9	3.333	0	1.02
1000 1100	90 97	2		5 2	,	15	2	0	(	)	1 (	)	ı ∩	1100	0	1	11	14	31		3 7	1	0	(	) 0	0	(	) 0	25.7 27.1	33.3	33	34.02	0	8.247	0	0
1200	110	1	9		1	13	1	1	(	)	0 (	)	0 N	1200	0	3	18	10	40		, α	0	0		) 0	0	(	) 0	26.7	33.3	37	33.64	Ω	7.273	0	0
1300	83	2	6		<b>,</b>	1/	0	2		)	0 (	, I	0 N	1300	1	<i>J</i>	17	13	21		3	2	0		) 0	0		) 0	25.8	32.1	27	32.53	5	6.024	0	0
1400	88	2	7		, )	12	0	3	(	)	0 0 (	)	n N	1400	0	1	3	9	40		10	2	0	(	) 0	0	(	) 0	29	33.3	35	39.77	12	13.64	0	0
1500	107	1	9		)	15	0	1	(	)	0 (	)	0	1500	0	3	2	10	37		17	1	0	(	) 0	0	(	) 0	30.1	35.2	55	51.4	18		0	0
1600	137	2	12		)	8	1	0	(	) )	0 (	)	0	1600	0	2	8	16	51	_	10	4	0	(	) 0	0	(	) 0	29	34.5	60	43.8	14	10.22	0	0
1700	205	5	18			15	2	0	Ċ	) )	0 (	)	0	1700	0	6	32	35	56		18	2	0	Č	) 0	0	Ċ	) 0	27.2	33.8	76	37.07	20	9.756	0	0
1800	95	3	8		)	5	0	0	(	)	0 (	)	0	1800	0	2	6	13	34		12	1	0	2	2 0	0	Ċ	) 0	29	35.6	40	42.11	15	15.79	2	2.105
1900	70	1	6		)	1	0	0	Ċ	)	0 (	)	0	1900	0	1	1	8	23		7	0	0	C	) 0	0	Ċ	0	29.8	34.4	37	52.86	7	10	0	0
2000	30	0	2		)	1	0	0	(	)	0 (	)	0	2000	0	4	1	0	8	12	2	3	0	C	0	0	C	0	29	36.4	17	56.67	5	16.67	0	0
2100	14	0	1	4 0	)	0	0	0	(	)	0 (	)	0	2100	0	1	0	2	4	2	3	0	2	C	0	0	C	0	31.4	46.7	7	50	5	35.71	2	14.29
2200	14	0	1	3 0	)	1	0	0	(	)	0 (	)	0	2200	0	1	0	3	1	5	3	1	0	C	0	0	C	0	30.5	39.5	9	64.29	4	28.57	0	0
2300	9	0		7 0	)	2	0	0	(	)	0 (	)	0	2300	0	0	0	2	0	6	1	0	0	C	0	0	C	0	30.3	-	7	77.78	1	11.11	0	0
07-19	1365	22	116	0 6	5	154	9	9	(	)	3 ′		1	07-19	5	47	123	190	477	387	119	14	1	2	2 0	0	C	0	27.8	33.8	523	38.32	136	9.963	3	0.22
06-22	1526	24	130	8 6	3	165	9	9	(	)	3		1	06-22	7	54	125	206	520	447	140	22	3	2	2 0	0	C	0	28	33.9	614	40.24	167	10.94	5	0.328
06-00	1549	24	132	8 6	3	168	9	9	(	)	3		1	06-00	7	55	125	211	521	458	144	23	3	2	2 0	0	C	0	28.1	34	630	40.67	172	11.1	5	0.323
00-00	1590	24	136	0 7		176	9	9	C	)	3 ′		1	00-00	7	56	125	214	529	473	157	24	3	2	2 0	0	C	0	28.2	34.2	659	41.45	186	11.7	5	0.314

	Time	Total	Cls	Fix1	Time	Vbin	Mean	Vpp	]PSL	]PSL%	]SL1	]SL1%	]SL2	JSL2%																							
			1	2	3	4	5	6	7	8	9	10			0	10	15	20	25	30	35	40	45	50	60	70	80	90		85	30	30	35	35	45	45	
															10	15	20	25	30	35	40	45	50	60	70	80	90	100					ACPO	ACPO	DFT	DFT	
(	0000	2	0	1	0	1	1 C	) (	)	0	0	0 (	)	0000	0	0	0	1	0	1	0	0	0	0	0	0	0	0	28.3 -		1	50	0	0	0	0	
(	0100	2	0	1	0	1	1 (	) (	0	0	0	0 (	)	0100	0	0	0	1	0	0	1	0	0	0	0	0	0	0	30.9 -		1	50	1	50	0	0	
(	0200	2	0	2	0	(	) (	) (	0	0	0	0 (	)	0200	0	0	0	0	1	0	1	0	0	0	0	0	0	0	32.2 -		1	50	1	50	0	0	
(	0300	1	0	1	0	(	) (	) (	0	0	0	0 (	)	0300	0	0	0	0	0	1	0	0	0	0	0	0	0	0	32.6 -		1	100	0	0	0	0	
(	0400	7	0	7	0	(	) (	) (	0	0	0	0 (	)	0400	0	0	0	1	1	1	3	1	0	0	0	0	0	0	33.6 -		5	71.43	4	57.14	0	0	
(	0500	22	0	17	1	4	4 C	) (	0	0	0	0 (	)	0500	0	0	0	0	3	7	11	1	0	0	0	0	0	0	34.8	39.4	19	86.36	12	54.55	0	0	
(	0600	39	1	33	0	5	5 0	) (	0	0	0	0 (	)	0600	0	1	0	2	11	15	6	4	0	0	0	0	0	0	31.9	37	25	64.1	10	25.64	0	0	
(	0700	116	2	97	3	12	2 (	) 1	1	0	1	0 (	)	0700	0	3	4	10	36	51	10	2	0	0	0	0	0	0	29.5	34.3	63	54.31	12	10.34	0	0	
(	0800	133	2	113	1	13	3 (	) 3	3	0	1	0 (	)	0800	0	6	17	25	40	37	8	0	0	0	0	0	0	0	26.6	32.6	45	33.83	8	6.015	0	0	
(	0900	101	4	83	1	10	) (	) 3	3	0	0	0 (	)	0900	2	6	12	14	36	24	7	0	0	0	0	0	0	0	26.3	33.3	31	30.69	7	6.931	0	0	

1000	86	1	64	0	15	0	5	0	1	0	0	1000	0	3	7	10	32	23	9	2	0	0	0	0	0	0	28.1	34.4	34	39.53	11	12.79	0	0
1100	95	1	72	0	14	2	6	0	0	0	0	1100	0	4	7	10	31	26	12	5	0	0	0	0	0	0	28.9	36.1	43	45.26	17	17.89	0	0
1200	119	2	97	2	16	0	1	0	0	1	0	1200	0	3	13	16	40	38	9	0	0	0	0	0	0	0	27.8	34.3	47	39.5	9	7.563	0	0
1300	104	3	80	1	13	1	6	0	0	0	0	1300	1	3	7	14	31	31	13	4	0	0	0	0	0	0	28.6	35.3	48	46.15	17	16.35	0	0
1400	110	6	78	1	15	0	7	0	0	0	3	1400	1	4	13	21	38	22	8	2	1	0	0	0	0	0	26.9	33.8	33	30	11	10	1	0.909
1500	101	0	84	1	12	1	2	1	0	0	0	1500	0	6	6	10	29	36	14	0	0	0	0	0	0	0	28.9	34.8	50	49.5	14	13.86	0	0
1600	114	1	104	1	8	0	0	0	0	0	0	1600	0	2	4	24	26	39	17	2	0	0	0	0	0	0	29	35.7	58	50.88	19	16.67	0	0
1700	207	5	193	0	9	0	0	0	0	0	0	1700	0	4	34	36	68	53	11	1	0	0	0	0	0	0	26.7	33.2	65	31.4	12	5.797	0	0
1800	81	1	75	0	5	0	0	0	0	0	0	1800	0	1	2	6	34	29	8	1	0	0	0	0	0	0	29.5	33.7	38	46.91	9	11.11	0	0
1900	75	1	73	0	1	0	0	0	0	0	0	1900	0	6	6	15	22	21	5	0	0	0	0	0	0	0	26.7	33.3	26	34.67	5	6.667	0	0
2000	17	0	16	0	1	0	0	0	0	0	0	2000	0	1	1	1	8	4	1	1	0	0	0	0	0	0	28.2	34.9	6	35.29	2	11.76	0	0
2100	20	0	18	0	2	0	0	0	0	0	0	2100	1	0	2	0	10	4	3	0	0	0	0	0	0	0	27.6	35.3	7	35	3	15	0	0
2200	14	0	13	0	1	0	0	0	0	0	0	2200	0	0	0	2	6	4	1	1	0	0	0	0	0	0	30.6	36.3	6	42.86	2	14.29	0	0
2300	6	0	6	0	0	0	0	0	0	0	0	2300	0	0	0	1	1	3	1	0	0	0	0	0	0	0	31.9 -		4	66.67	1	16.67	0	0
07-19	1367	28	1140	11	142	4	34	1	3	1	3	07-19	4	45	126	196	441	409	126	19	1	0	0	0	0	0	27.9	34.1	555	40.6	146	10.68	1	0.073
06-22	1518	30	1280	11	151	4	34	1	3	1	3	06-22	5	53	135	214	492	453	141	24	1	0	0	0	0	0	28	34.1	619	40.78	166	10.94	1	0.066
06-00	1538	30	1299	11	152	4	34	1	3	1	3	06-00	5	53	135	217	499	460	143	25	1	0	0	0	0	0	28	34.1	629	40.9	169	10.99	1	0.065
00-00	1574	30	1328	12	158	4	34	1	3	1	3	00-00	5	53	135	220	504	470	159	27	1	0	0	0	0	0	28.1	34.3	657	41.74	187	11.88	1	0.064
2300 <b>07-19</b> <b>06-22</b> <b>06-00</b>	6 1367 1518 1538	30 30	1280 1299	0 11 11 11 12	151 152	0 4 4 4 4	34 34	0 1 1 1	0 3 3 3	0 1 1 1	0 3 3 3	2300 <b>07-19</b> <b>06-22</b> <b>06-00</b>	0 4 5 5 5	53 53	135 135	214 217	492 499	453 460	141 143	24 25	0 1 1 1	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	31.9 - 27.9 28 28	34.1 34.1 34.1	4 555 619 629	66.67 <b>40.6</b> <b>40.78</b> <b>40.9</b>	166 169	16.67 10.68 10.94 10.99	0 1 1 1	0.06

Time	Total	Cls	Cls	Cls	Cls	Cls	Cls	5	Cls	Cls	Cls	Cls	Fix1	Time	Vbin	Mean	Vpp	]PSL	]PSL%	]SL1	]SL1%	]SL2	]SL2%													
		1	2	3	4	5	6		7	8	9	10			0	10	15	20	25	30	35	40	45	50	60	70	80	90		85	30	30	35	35	45	45
															10	15	20	25	30	35	40	45	50	60	70	80	90	100					ACPO	ACPO	DFT	DFT
0000	2	0	2	2 (	)	0	0	0	0	0	0	0		0000	0	0	0	0	0	0	2	0	0	0	0	0	0	0	36.7 -		2	100	2	100	0	0
0100	6	0	4	4 (	)	2	0	0	0	0	0	0		0100	1	0	1	0	2	1	0	1	0	0	0	0	0	0	26 -		2	33.33	1	16.67	0	0
0200	1	0	•	1 (	)	0	0	0	0	0	0	0		0200	0	1	0	0	0	0	0	0	0	0	0	0	0	0	11.9 -		0	0	0	0	0	0
0300	3	0	2	2 (	)	1	0	0	0	0	0	0		0300	0	0	0	0	2	0	1	0	0	0	0	0	0	0	31.9 -		1	33.33	1	33.33	0	0
0400	3	0	3	3 (	)	0	0	0	0	0	0	0		0400	0	0	0	0	1	1	1	0	0	0	0	0	0	0	32.8 -		2	66.67	1	33.33	0	0
0500	11	0	8	3 1		2	0	0	0	0	0	0		0500	1	0	1	0	1	3	5	0	0	0	0	0	0	0	30.7	37	8	72.73	5	45.45	0	0
0600	8	0	7	7 (	)	1	0	0	0	0	0	0		0600	0	0	0	1	3	1	3	0	0	0	0	0	0	0	30.8 -		4	50	3	37.5	0	0
0700	36	0	29	9 (	)	5	0	0	1	1	0	0		0700	0	1	0	4	12	16	1	2	0	0	0	0	0	0	30	34.3	19	52.78	3	8.333	0	0
0800	55	2	44	4 3	3	6	0	0	0	0	0	0		0800	1	6	3	11	12	12	9	1	0	0	0	0	0	0	27.1	35.2	22	40	10	18.18	0	0
0900	76	1	66	6 (	)	9	0	0	0	0	0	0		0900	1	7	3	7	26	25	7	0	0	0	0	0	0	0	27.1	33.5	32	42.11	7	9.211	0	0
1000	73	2	64	4 1		4	0	2	0	0	0	0		1000	0	5	4	12	29	13	8	2	0	0	0	0	0	0	27.7	33.8	23	31.51	10	13.7	0	0
1100	89	5	74	4 1		8	0	1	0	0	0	0		1100	1	6	5	10	28	26	13	0	0	0	0	0	0	0	28.1	35	39	43.82	13	14.61	0	0
1200	92	1	85		)	4	2	0	0	0	0	0		1200	0	4	4	7	28	34	13	2	0	0	0	0	0	0	29.6	35.9	49	53.26	15	16.3	0	0
1300	60	2	55	5 (	)	3	0	0	0	0	0	0		1300	1	2	2	7	14	24	8	1	1	0	0	0	0	0	29.7	35.8	34	56.67	10	16.67	1	1.667
1400	76	7	62		)	7	0	0	0	0	0	0		1400	0	4	2	0	11	36	17	5	1	0	0	0	0	0	31.9	37.5	59	77.63	23	30.26	1	1.316
1500	54	0	52		)	0	1	0	0	1	0	0		1500	1	2	4	7	15	20	5	0	0	0	0	0	0	0	28.2	34.2	25	46.3	5	9.259	0	0
1600	50	1	45		)	3	0	1	0	0	0	0		1600	1	1	5	10	14	14	5	0	0	0	0	0	0	0	27.6	33.6	19	38	5	10	0	0
1700	47	0	43		)	4	0	0	0	0	0	0		1700	0	2	4	5	27	5	4	0	0	0	0	0	0	0	26.9	31.6	9	19.15	4	8.511	0	0
1800	41	1	39		)	1	0	0	0	0	0	0		1800	1	1	0	2	19	12	6	0	0	0	0	0	0	0	29.5	35.4	18	43.9	6	14.63	0	0
1900	34	0	33	3 (	)	1	0	0	0	0	0	0		1900	0	3	0	1	16	11	3	0	0	0	0	0	0	0	28.7	34.6	14	41.18	3	8.824	0	0
2000	9	0	8	В (	)	1	0	0	0	0	0	0		2000	0	1	0	0	2	3	3	0	0	0	0	0	0	0	30.7 -		6	66.67	3	33.33	0	0
2100	7	0	(	6 (	)	1	0	0	0	0	0	0		2100	0	0	0	0	5	1	1	0	0	0	0	0	0	0	29.6 -		2	28.57	1	14.29	0	0
2200	9	0	(	9 (	)	0	0	0	0	0	0	0		2200	0	0	0	0	7	1	0	1	0	0	0	0	0	0	30.6 -		2	22.22	1	11.11	0	0
2300	9	0	7	/ (	,	2	0	0	0	0	0	0		2300	0	3	0	2	3	0	1	0	0	0	0	0	0	0	22.4 -		1	11.11	1	11.11	0	0
07-19	749	22	658		5 5		3	4	1	2	0	0		07-19	7	41	36	82	235		96	13	2	0	0	0	0	0	28.6	35	348	46.46	111	14.82	2	0.267
06-22	807	22	712		5	-	3	4	1	2	0	0		06-22	7	45	36	84	261	253	106	13	2	0	0	0	0	0	28.7	35	374	46.34	121	14.99	2	0.248
06-00	825	22	728		6		3	4	1	2	0	0		06-00	7	48	36	86	271	254	107	14	2	0	0	0	0	0	28.7	35	377	45.7	123	14.91	2	0.242
00-00	851	22	748	B 6	6	55	3	4	1	2	0	0		00-00	9	49	38	86	277	259	116	15	2	0	0	0	0	0	28.7	35.1	392	46.06	133	15.63	2	0.235

Time	Total	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Fix1	Time	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Mean	Vpp	]PSL	]PSL%	]SL1	]SL1%		SL2%
		1	2	3	4	5	ь	′	8	9	10			10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 60	60 70	70 80	80 90	90 100		85	30	30	35 ACPO	35 ACPO	45 DFT	45 DFT
0000	6	0	Ę.	5 0	1	1 (	0 (	) (	)	0 0	0		0000	0	0	0	1	5	0	0	0	0	0	0	0	00	0	26.9 -		0	0	0	0	0	0
0100	4	0	2	1 0	Ć	·	0 (	) (	)	0 0	0		0100	0	1	0	0	1	1	1	0	0	0	0	0	Č	0	28.9 -		2	50	1	25	0	0
0200	0	0	(	) 0	Č	) (	0 (	) (	)	0 0	0		0200	0	0	0	0	0	0	0	0	0	0	0	0		0			0	0	0	0	0	0
0300	0	0	(	) 0	(	) (	0 (	) (	)	0 0	0		0300	0	0	0	0	0	0	0	0	0	0	0	0	(	0			0	0	0	0	0	0
0400	4	0	2	. 0	(	) (	0 (	) (	)	0 0	0		0400	0	0	0	0	2	1	1	0	0	0	0	0	(	0	31.6 -		2	50	1	25	0	0
0500	5	0	ŗ	5 0	(	) (	0 (	) (	)	0 0	0		0500	0	1	0	0	0	2	2	0	0	0	0	0	(	0	29 -		4	80	2	40	0	0
0600	10	0	10	) 0	(	) (	0 (	) (	)	0 0	0		0600	0	0	0	1	3	4	2	0	0	0	0	0	(	0	30.3 -		6	60	2	20	0	0
0700	23	2	17	7 0	2	1 (	0 (	) (	)	0 0	0		0700	0	1	2	0	8	9	3	0	0	0	0	0	Č	0	29.5	35	12	52.17	3	13.04	0	0
0800	22	2	19	) 1	(	·	0 (	) (	)	0 0	0		0800	0	1	1	3	7	8	1	1	0	0	0	0	Č	0	29.1	34.8	10	45.45		9.091	0	0
0900	55	7	48		Č	) (	0 (	) (	)	0 0	0		0900	1	4	4	8	17	19	1	1	0	0	0	0		0	26.8	32.6	21	38.18		3.636	0	0
1000	52	2	45	_	2	1 (	n ,	1 (	)	0 0	0		1000	0	2	4	5	17	16	8	0	0	0	0	0		0	28.4	35.3	24	46.15		15.38	0	0
1100	49	3	42	-	4	1 (	o O (	· ) (	)	0 0	0		1100	1	2	4	8	12	16	5	1	0	0	0	0	(	0	27.9	35	22	44.9		12.24	0	0
1200	75	4	67	7 0	3		0	1 (	)	0 0	0		1200	0	6	8	10	17	29	5	0	0	0	0	0	(	0	27.3	33.6	34	45.33		6.667	0	0
1300	55	3	50	) 0	1	1 (	n ,	1 (	)	0 0	0		1300	3	5	1	5	22	15	3	1	0	0	0	0	(	0	26.9	34	19	34.55		7.273	0	0
1400	65	3	57	7 0		1 (	n ,	1 (	)	0 0	0		1400	1	2	1	9	23	26	3	0	0	0	0	0	(	0	28.2	33.3	29	44.62		4.615	0	0
1500	43	1	39	o 0	•	3 (	0 N (	· ·	)	0 0	0		1500	3	4	2	9	12	11	0	2	0	0	0	0	(	0	25.7	33.3	13	30.23		4.651	0	0
1600	37	4	32		1	1 (	0 (	) (	)	0 0	0		1600	2	1	2	11	10	8	2	1	0	0	0	0	(	0	26.1	33.5	11	29.73		8.108	0	0
1700	55	1	52		-	1 (	o (	)	)	0 0	0		1700	0	1	2	5	27	15	4	1	0	0	0	0	(	0	28.9	34.4	20	36.36		9.091	0	0
1800	31	1	29		1	1 (	0 (	o (	Ó	0 0	0		1800	0	2	2	7	10	9	1	0	0	0	0	0	C	0	26.6	31.7	10	32.26	1	3.226	0	0

1900	36	0	36	0	0	0	0	0	0	0	0	1900	2	1	1	5	8	15	3	1	0	0	0	0	0	0	28.2	34.7	19	52.78	4	11.11	0	0
2000	17	0	17	0	0	0	0	0	0	0	0	2000	1	3	0	2	5	6	0	0	0	0	0	0	0	0	24.6	32.9	6	35.29	0	0	0	0
2100	11	0	10	0	1	0	0	0	0	0	0	2100	0	0	0	0	4	4	2	1	0	0	0	0	0	0	32.4	38.4	7	63.64	3	27.27	0	0
2200	10	0	10	0	0	0	0	0	0	0	0	2200	0	0	0	1	3	4	0	2	0	0	0	0	0	0	30.9 -		6	60	2	20	0	0
2300	2	0	1	0	1	0	0	0	0	0	0	2300	0	0	0	0	0	1	1	0	0	0	0	0	0	0	34.9 -		2	100	1	50	0	0
07-19	562	33	497	2	26	0	4	0	0	0	0	07-19	11	31	33	80	182	181	36	8	0	0	0	0	0	0	27.5	33.9	225	40.04	44	7.829	0	0
06-22	636	33	570	2	27	0	4	0	0	0	0	06-22	14	35	34	88	202	210	43	10	0	0	0	0	0	0	27.6	33.9	263	41.35	53	8.333	0	0
06-00	648	33	581	2	28	0	4	0	0	0	0	06-00	14	35	34	89	205	215	44	12	0	0	0	0	0	0	27.7	34	271	41.82	56	8.642	0	0
00-00	667	33	599	2	29	0	4	0	0	0	0	00-00	14	37	34	90	213	219	48	12	0	0	0	0	0	0	27.7	34	279	41.83	60	8.996	0	0

Time	Total	Cls	Cls	Cls	Cls	Cls	Cl	s CI	S	Cls	Cls	Cls	Fix1	Time	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Mean	Vpp	JPSL 30	]PSL% 30	]SL1	]SL1%	]SL2	]SL2%
		1	2	3	4	5	О	/		8	9	10			10	10 15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 60	60 70	70 80	80 90	90 100		85	30		35 ACPO	35 ACPO	45 DFT	45 DFT
0000	2	0	1	0	,	1	0	0	0	0	0	0		0000	0	13	20	23	0	1	40	1	<b>30</b>	) (	) (	00	90	) 0	37	-	2	100	1	50	0	0
0100	2	0	2	0	(	0	0	0	0	0	0	0		0100	0	0	0	1	1	0	0		) (	) (	) 0	0	(	) 0	26		0	0	0	0	0	0
0200	2	0	2	0	(	0	0	0	0	0	0	0		0200	0	0	0	0	0	0	1	1	0	) (	) 0	0	(	) 0	40		2	100	2	100	0	0
0300	1	0	1	0	(	0	0	0	0	0	0	0		0300	0	0	0	0	0	1	0	C	) 0	) (	) 0	0	(	) 0	30.8	-	1	100	0	0	0	0
0400	5	0	4	0	,	1	0	0	0	0	0	0		0400	0	0	0	0	2	0	2	1	0	) (	) 0	0	(	) 0	33.2	-	3	60	3	60	0	0
0500	26	0	24	1		1	0	0	0	0	0	0		0500	1	0	1	1	2	13	5	3	3 0	) (	) 0	0	(	0	32.8	39.6	21	80.77	8	30.77	0	0
0600	40	1	32	2	ţ	5	0	0	0	0	0	0		0600	1	0	0	1	12	16	8	2	2 0	) (	0	0	(	0	31.6	36.6	26	65	10	25	0	0
0700	112	1	95	2	12	2	0	0	0	1	1	0		0700	0	4	5	17	46	35	5	C	) 0	) (	0	0	(	0	27.9	32.9	40	35.71	5	4.464	0	0
0800	133	1	111	0	14	4	0	5	0	1	0	1		0800	1	4	10	34	52	29	3	C	) 0	) (	0	0	(	0	26	31	32	24.06	3	2.256	0	0
0900	104	1	87	0	12	2	1	3	0	0	0	0		0900	2	4	4	8	36	35	13	2	2 0	) (	0	0	(	0	28.9	35	50	48.08	15	14.42	0	0
1000	77	0	54	1	14		1	6	1	0	0	0		1000	2	3	7	6	29	25	5	C	) 0	) (	0	0	(	0	27.5	32.7	30	38.96	5	6.494	0	0
1100	69	2	50	1	10	0	1	5	0	0	0	0		1100	0	3	4	13	17	23	8	1	0	) (	0	0	(	0	28.4	34.5	32	46.38	9	13.04	0	0
1200	90	1	74	2	10		0	3	0	0	0	0		1200	1	2	10	12	34	21	8	2	2 0	) (	) 0	0	(	) 0	27.7	34	31	34.44	10		0	0
1300	84	2	65	0	11	•	0	5	0	0	1	0		1300	1	1	4	13	26		13		) 0	) (	) 0	0	(	) 0	29	35	39	46.43	13	15.48	0	0
1400	85	0	66	0	13	3	0	5	1	0	0	0		1400	1	4	2	11	33	21	10		3 0	) (	) 0	0	(	) 0	28.6	35.7	34	40	13	15.29	0	0
1500	104	1	92	0	3	8	0	2	1	0	0	0		1500	0	3	3	11	38	33	15	0	) 1	(	) 0	0	(	) 0	29.3	35.1	49	47.12	16	15.38	1	0.962
1600	92	4	74	0	14	4	0	0	0	0	0	0		1600	0	2	6	9	36		11	1	0	) (	) (	0	(	) 0	28.9	34.7	39	42.39	12	13.04	0	0
1700	184	2	174	0	3	8	0	0	0	0	0	0		1700	0	3	30	_	56	55 25	9	3	3 0	) (	) 0	. 0	(	) 0	27.2 27.8	32.7	67 34	36.41	12		0	0
1800 1900	91 53	0	83 53	0		0	0	0	0	0	0	0		1800 1900	0	1	7	19	29 26	25 11	7	1	0	) (	) 0		(	) 0	28.7	33.9 35.1	19	37.36 35.85	9	9.89 15.09	0	0
2000	28	0	28	0	(	0	0	0	0	0	0	0		2000	1	1	0	3	12	10	1	1	) 0	) (	) 0		(	) 0	27.9	33.8	19	39.29	1	3.571	0	0
2100	16	0	16	0	(	0	0	0	0	0	0	0		2100	0	1	0	2	4	6	1	2	) 0	) (	) 0	0	(	) 0	29.7	39.2	9	56.25	3	18.75	0	0
2200	14	0	13	0	,	1	0	0	0	0	0	0		2200	1	0	0	3	4	3	1	2	. 0	) (	) 0	0	(	) 0	29.2	39.2	6	42.86	3	21.43	0	0
2300	6	0	4	0	2	2	0	0	0	0	0	0		2300	1	2	0	1	0	0	2	0	) (	) (	) 0	0	(	) 0	21.9	-	2	33.33	2	33.33	0	0
07-19	1225	18	1025	6	131	1	3	34	3	2	2	1		07-19	8	35	92	181	432	355	108	13	1		0	0	(	) 0	28	33.7	477	38.94	122	9.959	1	0.082
06-22	1362	19		8	136		3	34	3	2	2	1		06-22	10	38	95		486						0	0	(	0	28.1	33.8	542	39.79	144	10.57	1	0.073
06-00	1382	19	1171	8	139		3	34	3	2	2	1		06-00	12	40	95		490			20	) 1	(	0	0	(	0	28.1	33.9	550	39.8	149	10.78	1	0.072
00-00	1420	19	1205	9	142	2	3	34	3	2	2	1		00-00	13	40	96	197	495	416	136	26	5 1	(	0	0	(	0	28.2	33.9	579	40.77	163	11.48	1	0.07

### 17 October 2017

Tim	e Total	Cls	Fix1	Time	Vbin	Mean	Vpp	]PSL	]PSL%	]SL1	]SL1%	]SL2	SL2%																						
		1	2	3	4	5	6	7	8	9	10			0	10	15	20	25	30	35	40	45	50	60	70	80	90		85	30	30	35	35	45	45
														10	15	20	25	30	35	40	45	50	60	70	80	90	100					ACPO	ACPO	DFT	DFT
0000	5	0	3	3 0	)	2 (	) (	) (	) (	0	0		0000	0	0	0	0	3	1	1	0	0	) (	) (	0	0	0	30.2 -		2	40	1	20	0	0
0100	3	1	2	2 0	)	0 (	) (	) (	) (	0	0		0100	1	0	0	1	1	0	C	0	0	) (	) (	0	0	0	20.9 -		0	0	0	0	0	0
0200	1	0	1	0	)	0 (	) (	) (	) (	0	0		0200	0	0	0	0	0	0	1	0	0	) (	) (	0	0	0	35.2 -		1	100	1	100	0	0
0300	4	0	4	١ 0	)	0 (	) (	) (	) (	0	0		0300	0	1	0	0	1	0	1	1	0	) (	) (	0	0	0	29.5 -		2	50	2	50	0	0
0400	8	0	5	5 0	)	3 (	) (	) (	) (	0	0		0400	0	0	1	0	2	2	2	2 1	0	) (	) (	0	0	0	32.2 -		5	62.5	3	37.5	0	0
0500	23	0	19	) 1		3 (	) (	) (	) (	0	0		0500	0	0	0	1	7	8	4	. 3	3 0	) (	) (	0	0	0	33	39	15	65.22	7	30.43	0	0
0600	47	1	37	' 1		7 (	) 1	1 (	) (	0	0		0600	0	1	0	1	17	16	11	1	0	) (	) (	0	0	0	31.1	36	28	59.57	12	25.53	0	0
0700	126	2	106	3	1	4	1 (	) (	) (	0	0		0700	1	6	8	10	43	37	14	. 6	5 1	(	) (	0	0	0	29.2	35.9	58	46.03	21	16.67	1	0.794
0800	87	0	73	3 0	1	1 (	) 3	3 (	) (	0	0		0800	0	3	4	16	24	37	2	2 1	0	) (	) (	0	0	0	28	32.7	40	45.98	3	3.448	0	0
07-19	213	2	179	3	2	5	1 3	3 (	)	0	0		07-19	1	9	12	26	67	74	16	7	1		0	0	0	0	28.7	34	98	46.01	24	11.27	1	0.469
06-22	260	3	216	6 4	. 3	2	1 4	(	)	0	0		06-22	1	10	12	27	84	90	27	8	1		0	0	0	0	29.1	34.3	126	48.46	36	13.85	1	0.385
06-00	260	3	216	6 4	. 3	2 '	1 4	(	)	0	0		06-00	1	10	12	27	84	90	27	' 8	1		0	0	0	0	29.1	34.3	126	48.46	36	13.85	1	0.385
00-00	304	4	250	5	4	.0	1 4	1 (	) (	0	0		00-00	2	11	13	29	98	101	36	13	1		0	0	0	0	29.5	35.4	151	49.67	50	16.45	1	0.329

### Virtual Day (Partial days = 8.125)

Tim	e To	otal	Cls	Fix1	Time	Vbin	Mean	Vpp	]PSL	]PSL%	]SL1	]SL1%	]SL2	]SL2%																						
			1	2	3	4	5	6	7	8	9	10			0	10	15	20	25	30	35	40	45	50	60	70	80	90		85	30	30	35	35	45	45
															10	15	20	25	30	35	40	45	50	60	70	80	90	100					ACPO	ACPO	DFT	DFT
0000		3	0	2	0	1	1 0	) (	0	0	0	0		0000	0	0	0	0	1	1	1	0	0	0	0	0	0	0	30.2	-	2	48	1	28	0	0
0100		3	0	2	0	1	I C	) (	0	0	0	0	1	0100	0	0	0	0	1	1	0	0	0	0	0	0	0	0	26.6	-	1	34.78	1	17.39	0	0
0200		2	0	2	0	C	) (	) (	0	0	0	0		0200	0	0	0	0	0	0	1	0	0	0	0	0	0	0	28.6	-	1	53.85	1	38.46	0	0
0300		2	0	2	0	C	) (	) (	0	0	0	0	1	0300	0	0	0	0	1	0	1	0	0	0	0	0	0	0	31 -	-	1	50	1	35.71	0	0
0400		6	0	5	0	1	1 0	) (	0	0	0	0	1	0400	0	0	0	0	2	1	2	1	0	0	0	0	0	0	32.6	-	4	63.04	2	39.13	0	0
0500		20	0	17	1	3	3 0	) (	0	0	0	0	1	0500	0	0	0	0	3	7	6	2	0	0	0	0	0	0	33.4	38.9	15	77.85	8	41.14	0	0.633
0600		34	1	28	0	4	1 C	) C	0	0	0	0	1	0600	1	1	1	2	10	12	6	2	0	0	0	0	0	0	30.7	36.3	20	60	8	23.28	0	0

0700	102	1	85	2	12	0	1	0	1	0	0	0700	0	4	5	11	37	35	9	1	0	0	0	0	0	0	28.6	33.9	45	44.21	10	9.934	0	0.109
0800	105	1	91	1	11	0	1	0	0	0	0	0800	1	5	6	21	34	31	7	1	0	0	0	0	0	0	27.4	33.3	39	36.78	8	7.587	0	0
0900	88	3	73	1	9	0	1	0	0	0	0	0900	2	4	7	13	30	24	7	1	0	0	0	0	0	0	27.4	33.6	33	37.23	8	9.415	0	0.143
1000	79	1	63	1	11	1	2	0	0	0	0	1000	1	4	7	11	28	20	7	1	0	0	0	0	0	0	27.2	33.6	28	35.34	8	10.14	0	0.158
1100	82	2	63	1	12	1	2	0	0	0	0	1100	1	3	8	14	26	22	8	1	0	0	0	0	0	0	27.3	33.6	30	36.78	9	10.64	0	0
1200	92	1	77	1	11	1	1	0	0	0	0	1200	0	3	10	12	32	27	8	1	0	0	0	0	0	0	27.7	33.7	36	39.05	9	9.388	0	0
1300	87	3	71	0	10	0	2	0	0	0	0	1300	1	3	8	16	24	25	8	1	0	0	0	0	0	0	27.4	33.9	35	39.86	9	10.79	0	0.144
1400	89	3	71	0	12	0	3	0	0	0	0	1400	1	3	7	14	28	26	9	2	0	0	0	0	0	0	28.1	34.4	37	41.26	11	12.31	0	0.42
1500	90	1	77	0	10	1	2	0	0	0	0	1500	1	3	5	14	29	27	9	1	0	0	0	0	0	0	28.3	34.2	38	41.83	11	11.77	0	0.139
1600	100	3	87	0	10	0	0	0	0	0	0	1600	1	2	7	17	32	29	10	2	0	0	0	0	0	0	28.2	34.4	41	41.25	12	11.88	0	0
1700	166	3	153	1	9	0	0	0	0	0	0	1700	1	4	28	28	55	41	9	1	0	0	0	0	0	0	26.5	32.8	51	30.6	10	6.179	0	0
1800	76	2	70	0	4	0	0	0	0	0	0	1800	0	2	4	11	29	23	7	1	0	0	0	0	0	0	28.4	33.9	31	40	8	10.49	0	0.328
1900	60	0	57	0	2	0	0	0	0	0	0	1900	0	2	2	6	22	20	6	1	0	0	0	0	0	0	28.9	34.4	27	44.96	7	11.76	0	0.21
2000	22	0	22	0	1	0	0	0	0	0	0	2000	0	2	0	1	8	7	2	1	0	0	0	0	0	0	28.8	34.8	11	46.93	3	14.53	0	0.559
2100	14	0	13	0	2	0	0	0	0	0	0	2100	0	0	1	1	5	4	2	1	0	0	0	0	0	0	30	37.2	7	50.44	3	22.12	0	1.77
2200	12	0	11	0	1	0	0	0	0	0	0	2200	0	1	0	1	4	3	1	1	0	0	0	0	0	0	29.7	38.3	6	50	2	20.65	0	0
2300	7	0	5	0	2	0	0	0	0	0	0	2300	0	1	0	1	1	2	2	0	0	0	0	0	0	0	29.2 -		4	56.6	2	28.3	0	1.887

### Virtual Week (Partial weeks = 1.28571)

Time	Total	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Fix1	Time	Vbin	Mean	Vpp	]PSL	]PSL%	]SL1	]SL1%	]SL2	]SL2%													
		1	2	3	4	5	6	7	8	9	10			0	10	15	20	25	30	35	40	45	50	60	70	80	90		85	30	30	35	35	45	45
														10	15	20	25	30	35	40	45	50	60	70	80	90	100					ACPO	ACPO	DFT	DFT
Mon	1458	17	1241	11	153	4	27	2	3	1	1		Mon	14	44	125	236	496	396	124	22	2	0	0	0	0	0	27.7	33.7	543	37.26	147	10.09	2	0.103
Tue	913	15	770	8	105	-	12	-	1	0	0	)	Tue	9	34	76	149	297	251	79	17	3	0	0	0	0	0	27.7	33.9	349	38.19	98	10.74	3	0.274
Wed	1534	17	1314	8	174	8	5	1	4	2	1		Wed	9	44	117	223	490	470	164	17	0	0	0	0	0	0	28.2	33.9	651	42.44	181	11.8	0	0
Thu	1590	24	1360	7	176	9	9	0	3	1	1		Thu	7	56	125	214	529	473	157	24	3	2	0	0	0	0	28.2	34.2	659	41.45	186	11.7	5	0.314
Fri	1574	30	1328	12	158	4	34	1	3	1	3	3	Fri	5	53	135	220	504	470	159	27	1	0	0	0	0	0	28.1	34.3	657	41.74	187	11.88	1	0.064
Sat	851	22	748	6	65	3	4	1	2	0	0	)	Sat	9	49	38	86	277	259	116	15	2	0	0	0	0	0	28.7	35.1	392	46.06	133	15.63	2	0.235
Sun	667	33	599	2	29	0	4	0	0	0	0	)	Sun	14	37	34	90	213	219	48	12	0	0	0	0	0	0	27.7	34	279	41.83	60	8.996	0	0

### **Grand Total**

Time	Total	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Fix1	Time	Vbin	Mean	Vpp	]PSL	]PSL%	]SL1	]SL1%	]SL2	]SL2%													
		1	2	3	4	5	6	7	8	9	10			0	10	15	20	25	30	35	40	45	50	60	70	80	90		85	30	30	35	35	45	45
														10	15	20	25	30	35	40	45	50	60	70	80	90	100					ACPO	ACPO	DFT	DFT
	10956	190	9371	72	1116	37	132	? 7	18	6	7			89	395	850	1602	3599	3184	1048	173	14	. 2	0	0		0	28	34	4421	40.35	1237	11.29	16	0.146

```
Traffic Surveys UK
Globals
                  Report Id CustomList-99
                Descriptor Traffic Surveys UK
                Created by MetroCount Traffic Executive
       Creation Time (UTC) 2017-10-17T11:39:50
                     Legal Copyright (c)1997 - 2016 MetroCount
                   Graphic header.gif
                 Language English
                   Country United Kingdom
                     Time UTC + 60 min
            Create Version 5.0.1.0
                    Metric Non metric
                Speed Unit mph
               Length Unit ft
                 Mass Unit ton
Dataset
                 Site Name 15485-001
              Site Attribute Traffic Surveys UK
                 File Name Q:\15485 Hassocks, Sussex\15485-001 0 2017-10-17 0835.EC0
                 File Type Plus B
                 Algorithm Factory default axle
               Description Reeds Lane [30m]
                     Lane 0
                  Direction 8
             Direction Text 8 - East bound A]B, West bound B]A.
               Layout Text Axle sensors - Paired (Class/Speed/Count)
               Setup Time 2017-10-09T06:27:43
                Start Time 2017-10-09T06:27:43
               Finish Time 2017-10-17T08:35:43
                  Operator Traffic Surveys UK
             Configuration 40 MC5600 00 00 00 00 00 ? A810JFDF MC56-L5 [MC55] (c)Microcom 19Oct04
Profile
                    Name Traffic Surveys UK
                      Title Traffic Surveys UK
             Graphic Logo C:and SettingsDocuments3.21 on us logo cmyk 50.BMP
                   Header
                    Footer
               Percentile 1 85
               Percentile 2 95
                     Pace 12
                Filter Start 2017-10-09T06:28:00
                 Filter End 2017-10-17T08:35:43
             Class Scheme ARX
                         F Cls(1-10) Dir(W) Sp(0,120) Headway(]0) Span(0 - 328.084) Lane(0-16)
                Low Speed 0
               High Speed 120
              Posted Limit 30
              Speed Limits 35 45 30 30 30 0 0 0 0 30
                Separation 0.000
```

Separation Type Headway

Direction West

**Encoded Direction 8** 

# **Traffic Surveys UK**

Column	
Time	24-hour time (0000 - 2359)
Total	Number in time step
Cls 1	Class totals
Cls 2	Class totals
Cls 3	Class totals
Cls 4	Class totals
Cls 5	Class totals
Cls 6	Class totals
Cls 7	Class totals
Cls 8	Class totals
Cls 9	Class totals
Cls 10	Class totals
Fix1	User defined fixed text
Time	24-hour time (0000 - 2359)
Vbin 0 10	Speed bin totals
Vbin 10 15	Speed bin totals
Vbin 15 20	Speed bin totals
Vbin 20 25	Speed bin totals
Vbin 25 30	Speed bin totals
Vbin 30 35	Speed bin totals
Vbin 35 40	Speed bin totals
Vbin 40 45	Speed bin totals
Vbin 45 50	Speed bin totals
Vbin 50 60	Speed bin totals
Vbin 60 70	Speed bin totals
Vbin 70 80	Speed bin totals
Vbin 80 90	Speed bin totals
Vbin 90 100	Speed bin totals
Mean	Average speed
Vpp 85	Percentile speed
]PSL 30	Number exceeding Posted Speed Limit
]PSL% 30	Percent exceeding Posted Speed Limit
]SL1 35 ACPO	Number exceeding Speed Limit 1
]SL1% 35 ACPO	Percent exceeding Speed Limit 1
]SL2 45 DFT	Number exceeding Speed Limit 2
]SL2% 45 DFT	Percent exceeding Speed Limit 2

# Traffic Surveys UK

Report Id - CustomList-99 Site Name - 15485-001

**Description - Reeds Lane [30m]** 

Direction - West

### 09 October 2017

Time	Total	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Fix1	Time	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Mean	Vpp	]PSL	]PSL%	]SL1	]SL1%	]SL2	]SL2%
		1	2	3	4	э	В	- 1	0	9	10			10	15	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 60	60 70	70 80	80 90	90 100		85	30	30	35 ACPO	35 ACPO	45 DFT	45 DFT
0600	52	1	45	2	3	0	1	0	(	) 0	0		0600	0	2	3	6	19	19	3	0	0	0	0	0	0	0	28.1	33.2	22	42.31	3	5.769	0	0
0700	105	2	90	1	10	0	2	0	Č	) 0	0		0700	0	8	14	22	43	15	2	0	1	0	0	0	0	0	25.1	30.7	18	17.14	3	2.857	1	0.952
0800	219	3	196	2	12	2	3	1	Č	) 0	0		0800	0	15	38	85	55	22	4	0	0	0	0	0	0	0	23.5	29.4	26	11.87	4	1.826	0	0
0900	88	2	70	1	11	1	3	0	C	) 0	0		0900	0	14	16	23	26	8	1	0	0	0	0	0	0	0	22.4	28.9	9	10.23	1	1.136	0	0
1000	64	0	54	0	4	3	2	0	C	) 1	0		1000	3	6	14	23	13	4	0	1	0	0	0	0	0	0	21.8	28.4	5	7.813	1	1.563	0	0
1100	77	2	56	1	12	5	1	0	C	0	0		1100	1	7	12	30	18	6	3	0	0	0	0	0	0	0	22.8	28.5	9	11.69	3	3.896	0	0
1200	81	0	66	1	10	2	2	0	C	0	0		1200	0	10	7	25	33	4	2	0	0	0	0	0	0	0	23.4	27.9	6	7.407	2	2.469	0	0
1300	110	1	87	1	14	3	4	0	C	0	0		1300	1	4	13	48	38	3	3	0	0	0	0	0	0	0	23.8	27.9	6	5.455	3	2.727	0	0
1400	85	0	71	0	6	7	1	0	C	0	0		1400	0	1	15	32	30	5	2	0	0	0	0	0	0	0	24.1	28.3	7	8.235	2	2.353	0	0
1500	85	0	72	0	8	2	2	1	C	0	0		1500	0	7	16	33	21	7	1	0	0	0	0	0	0	0	23.1	29.1	8	9.412	1	1.176	0	0
1600	101	0	78	2	13	6	1	0	1	0	0		1600	0	7	16	24	41	12	1	0	0	0	0	0	0	0	24.7	29.8	13	12.87	1	0.99	0	0
1700	101	2	89	1	5	4	0	0	C	0	0		1700	1	11	20	23	32	10	3	1	0	0	0	0	0	0	23.6	29.8	14	13.86	4	3.96	0	0
1800	92	1	85	0	4	2	0	0	C	) 0	0		1800	0	8	11	14	32	23	4	0	0	0	0	0	0	0	25.8	32.1	27	29.35	4	4.348	0	0
1900	44	0	41	1	1	1	0	0	C	) 0	0		1900	0	3	2	9	13	11	5	0	1	0	0	0	0	0	27.7	34.6	17	38.64	6	13.64	1	2.273
2000	26	0	24	0	2	0	0	0	C	) 0	0		2000	0	1	1	4	8	8	3	1	0	0	0	0	0	0	29.3	35	12	46.15	4	15.38	0	0
2100	21	0	20	0	1	0	0	0	C	) 0	0		2100	0	1	1	3	11	4	1	0	0	0	0	0	0	0	27	32.5		23.81	1	4.762	0	0
2200	13	0	12	0	1	0	0	0	(	) 0	0		2200	0	1	0	1	6	4	1	0	0	0	0	0	0	0	28.5	34.6		38.46	1	7.692	0	0
2300	7	0	6	0	1	0	0	0	(	) 0	0		2300	0	0	0	1	1	2	3	0	0	0	0	0	0	0	32.6 -	20.5		71.43	3	42.86	0	0
07-19	1208	13	_	10	109	37			1	1	0		07-19	6	98	192	382	382	119	26	2	1	0	0	0	0	0	23.7	29.5	148	12.25	29	2.401	1	0.083
06-22	1351	14		13					1	1	0		06-22	6	105	199	404	433	161	38	3	2	0	0	0	0	0	24.2	30.1	204	15.1	43	3.183	2	0.148
06-00	1371	14	-	13	118	38 38			1	1	0		06-00	6	106	199	406	440	167	42	3	2	0	0	0	0	0	24.3	30.2	214	15.61	47	JU	2	0.146
00-00	1371	14	1162	13	118	30	22				U		00-00	0	106	199	406	440	167	42	3		U	U	U	U	U	24.3	30.2	214	15.61	4/	3.428		0.146

### 10 October 2017

Time	Total	Cls	Cls	Cls	Cls	Cls	Cls	Cls	;	Cls	Cls	Cls	Fix1	Time	Vbin		Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Mean	Vpp	]PSL	]PSL%	]SL1	]SL1%		]SL2%
		1	2	3	4	5	6	7		8	9	10			0 10	10	15 20	20 25	25 30	30 35	35 40	40 45	45 50	50 60	60 70	70 80	80 90	90 100		85	30	30	35 ACPO	35 ACPO	45 DFT	45 DFT
0000	2	0	2	0	1		0	0	0	0	0	0		0000	10	15	20	23	30	33	40	45	<b>50</b>	00	70	00	90	100	23.1 -		0	0	ACFU	ACFU	DEI	DFI
0100	<i>J</i>	0	1	0		)	0	0	0	0	0	0		0100	0	1	0	0	1	2	0	0	0	0	0	0	0	0	25.5 -		2	50	0	0	0	0
0200	1	0	0	0	1	, 	0	0	0	0	0	0		0200	0	0	0	0	1	0	0	0	0	0	0	0	0	0	28.1 -		0	0	0	0	0	0
0300	2	0	2	0		)	0	0	0	0	0	0		0300	0	0	0	0	0	2	0	0	0	0	0	0	0	0	33 -		2	100	0	0	0	0
0400	2	0	2	0	(	, )	0	0	0	0	0	0		0400	0	0	0	0	2	0	0	0	0	0	0	0	0	0	25.9 -		0	0	0	0	0	0
0500	14	0	11	0	3	3	0	0	0	0	0	0		0500	0	1	0	0	6	5	2	0	0	0	0	0	0	0	30.6	36.6	7	50	2	14.29	0	0
0600	72	2	63	0	6	6	1	0	0	0	0	0		0600	0	2	2	17	17	28	5	0	1	0	0	0	0	0	28.4	33.4	34	47.22	6		1	1.389
0700	107	1	95	0	7	,	3	1	0	0	0	0		0700	3	7	24	24	28	13	7	1	0	0	0	0	0	0	24.2	31.6	21	19.63	8		0	0
0800	208	3	187	2	11		1	4	0	0	0	0		0800	0	14	47	81	51	14	1	0	0	0	0	0	0	0	22.8	28.2	15	7.212	1	0.481	0	0
0900	96	2	72	0	16	6	4	2	0	0	0	0		0900	1	7	15	34	29	8	2	0	0	0	0	0	0	0	23.4	29.6	10	10.42	2	2.083	0	0
1000	90	1	69	3	13	3	3	1	0	0	0	0		1000	1	7	19	20	26	15	2	0	0	0	0	0	0	0	23.9	30.4	17	18.89	2	2.222	0	0
1100	79	2	64	1	7	,	1	3	0	0	0	1		1100	2	10	15	32	14	4	2	0	0	0	0	0	0	0	21.6	29.2	6	7.595	2	2.532	0	0
1200	93	1	77	2	9	)	1	2	0	0	1	0		1200	0	4	18	23	36	10	1	1	0	0	0	0	0	0	24.6	29.5	12	12.9	2	2.151	0	0
1300	85	2	64	0	16	6	0	3	0	0	0	0		1300	1	4	13	33	25	9	0	0	0	0	0	0	0	0	23.9	29.2	9	10.59	0	0	0	0
1400	95	1	75	1	15	5	1	2	0	0	0	0		1400	0	7	11	33	34	8	2	0	0	0	0	0	0	0	24.2	29.2	10	10.53	2	2.105	0	0
1500	81	2	61	0	13		1	2	2	0	0	0		1500	2	6	8	35	21	6	3	0	0	0	0	0	0	0	23.3	29.1	9	11.11	3		0	0
1600	104	0	85	1	15	5	3	0	0	0	0	0		1600	2	4	9	34	36	16	2	1	0	0	0	0	0	0	25.2	30.9	19	18.27	3		0	0
1700	113	2	97	0	10	)	3	0	0	1	0	0		1700	4	18	27	25	29	8	1	1	0	0	0	0	0	0	21.5	29.1	10	8.85	2		0	0
1800	79	1	72	0	5		1	0	0	0	0	0		1800	1	7	8	24	23	11	5	0	0	0	0	0	0	0	24.9	32.1	16	20.25	5		0	0
1900	46	0	41	1	4		0	0	0	0	0	0		1900	0	3	3	2	19	14	4	1	0	0	0	0	0	0	28	34.5	19	41.3	5	10.87	0	0
2000	25	0	23	0	1	,	1	0	0	0	0	0		2000	1	2	1	2	11	7	1	0	0	0	0	0	0	0	27.3	32.5	8	32	1	47.00	0	0
2100	28	0	25 9	0	4	<u>′</u>	1	0	0	0	0	0		2100	0	1	1	3	12	0	3	2	0	0	0	0	0	0	29.2	36.3 31.6	11	39.29	5		0	0
2200 2300	13	1	11	0	1		2	0	0	0	0	0		2200 2300	0	2	4	0	4	3	0	1	0	0	0	0	0	0	23.8 31.2	38.2	5	23.08 41.67	0	00.00	0	0
<b>07-19</b>	12 <b>1230</b>	18		1 <b>0</b>	137	, ,	2 2	. <b>0</b>	2	1	1	1		2300 <b>07-19</b>	1 <b>7</b>	95	<b>214</b>	398	352	122	28	1	0	0	0	0	0	0	23.5	29.5	1 <b>54</b>	12.52	4 <b>32</b>		0	0
06-22	1401	20		11	150			0	2	1	1	1		06-22	18	103	221	422	411	177	41	7	1	0	0	0	0	0	24.1	30.3	226	16.13	49		1	0.071
06-00	1426	21		11	152		7 2		2	1	1	1		06-00	18	105	225	422	422	181	44	8	1	0	0	0	0	0	24.2	30.4	234	16.41	53		1	0.07
00-00	1452	21		11	157		7 2		2	1	1	1		00-00	18	107	225	424	433	190	46	8	1	0	0	0	0	0	24.3	30.5	245	16.87	55		1	0.069

Time	Total	Cls	Fix1	Time	Vbin	Mean	Vpp	]PSL	]PSL%	]SL1	]SL1%	]SL2	]SL2%																						
		1	2	3	4	5	6	7	8	9	10			0	10	15	20	25	30	35	40	45	50	60	70	80	90		85	30	30	35	35	45	45
														10	15	20	25	30	35	40	45	50	60	70	80	90	100					ACPO	ACPO	DFT	DFT
0000	3	0	2	. 1	0	0	0	0	0	0	0		0000	0	0	0	1	0	2	0	0	0	0	0	0	0	0	28.4	-	2	66.67	0	0	0	0

0100	1	0	1	0	0	0	0	0	0	0	0	0100	0	0	0	1	0	0	0	0	0	0	0	0	0	0	23.7 -		0	0	0	0	0	0
0200	3	0	3	0	0	0	0	0	0	0	0	0200	0	0	0	0	2	1	0	0	0	0	0	0	0	0	29.2 -		1	33.33	0	0	0	0
0300	2	0	2	0	0	0	0	0	0	0	0	0300	0	0	0	0	1	0	1	0	0	0	0	0	0	0	31 -		1	50	1	50	0	0
0400	2	0	2	0	0	0	0	0	0	0	0	0400	0	0	0	0	1	1	0	0	0	0	0	0	0	0	29.5 -		1	50	0	0	0	0
0500	8	0	7	0	1	0	0	0	0	0	0	0500	0	0	0	1	2	4	0	1	0	0	0	0	0	0	31.1 -		5	62.5	1	12.5	0	0
0600	71	2	63	0	6	0	0	0	0	0	0	0600	0	0	5	7	36	20	3	0	0	0	0	0	0	0	28.2	33.1	23	32.39	3	4.225	0	0
0700	101	2	87	1	10	1	0	0	0	0	0	0700	0	10	18	22	32	16	3	0	0	0	0	0	0	0	24.2	31	19	18.81	3	2.97	0	0
0800	189	2	170	0	14	3	0	0	0	0	0	0800	0	13	38	68	51	18	1	0	0	0	0	0	0	0	23	28.8	19	10.05	1	0.529	0	0
0900	89	0	75	0	10	3	0	0	0	0	1	0900	1	7	14	31	22	11	2	1	0	0	0	0	0	0	23.7	30.8	14	15.73	3	3.371	0	0
1000	76	0	56	1	18	1	0	0	0	0	0	1000	0	3	3	14	30	24	2	0	0	0	0	0	0	0	27.4	32.3	26	34.21	2	2.632	0	0
1100	67	0	54	1	12	0	0	0	0	0	0	1100	0	4	6	15	24	15	1	1	1	0	0	0	0	0	26.3	31	18	26.87	3	4.478	1	1.493
1200	65	0	51	0	12	0	0	0	0	1	1	1200	0	2	9	11	24	14	5	0	0	0	0	0	0	0	26.4	33.3	19	29.23	5	7.692	0	0
1300	87	1	73	1	10	0	1	0	1	0	0	1300	0	3	4	28	34	16	2	0	0	0	0	0	0	0	26	30.7	18	20.69	2	2.299	0	0
1400	100	0	84	2	13	0	1	0	0	0	0	1400	2	2	7	25	33	23	7	1	0	0	0	0	0	0	27	33.6	31	31	8	8	0	0
1500	83	0	67	0	9	6	1	0	0	0	0	1500	0	6	15	28	29	5	0	0	0	0	0	0	0	0	23.3	27.7	5	6.024	0	0	0	0
1600	108	2	88	2	11	5	0	0	0	0	0	1600	0	10	19	27	36	11	3	2	0	0	0	0	0	0	23.9	29.9	16	14.81	5	4.63	0	0
1700	109	3	96	1	7	2	0	0	0	0	0	1700	0	12	19	19	35	21	3	0	0	0	0	0	0	0	24.4	30.9	24	22.02	3	2.752	0	0
1800	108	1	102	0	3	2	0	0	0	0	0	1800	0	10	6	29	36	23	3	1	0	0	0	0	0	0	25.7	31	27	25	4	3.704	0	0
1900	52	0	49	0	2	1	0	0	0	0	0	1900	0	2	4	6	20	15	3	2	0	0	0	0	0	0	28.2	34.3	20	38.46	5	9.615	0	0
2000	31	0	27	0	2	2	0	0	0	0	0	2000	0	2	2	8	12	6	1	0	0	0	0	0	0	0	26.7	33.3	7	22.58	1	3.226	0	0
2100	24	0	21	0	1	1	0	0	1	0	0	2100	0	1	2	4	10	5	2	0	0	0	0	0	0	0	27.3	32.5	7	29.17	2	8.333	0	0
2200	12	0	9	0	3	0	0	0	0	0	0	2200	0	0	0	3	4	4	1	0	0	0	0	0	0	0	28	31.9	5	41.67	1	8.333	0	0
2300	11	0	9	0	2	0	0	0	0	0	0	2300	0	0	0	2	6	2	0	1	0	0	0	0	0	0	28.8	35.2	3	27.27	1	9.091	0	0
07-19	1182	11	1003	9	129	23	3	0	1	1	2	07-19	3	82	158	317	386	197	32	6	1	0	0	0	0	0	24.8	30.9	236	19.97	39	3.299		0.085
06-22	1360	13	1163	9	140	27	3	0	2	1	2	06-22	3	87	171	342	464	243	41	8	1	0	0	0	0	0	25.2	31.1	293	21.54	50	3.676		0.074
06-00	1383	13	1181	9	145	27	3	0	2	1	2	06-00	3	87	171	347	474	249	42	9	1	0	0	0	0	0	25.3	31.1	301	21.76	52	3.76		0.072
00-00	1402	13	1198	10	146	27	3	0	2	1	2	00-00	3	87	171	350	480	257	43	10	1	0	0	0	0	0	25.4	31.2	311	22.18	54	3.852	1	0.071

Time	Total	Cls	Cls	Cls	Cls	s C	Cls	Cls	Cls	Cls	Cls	Cls	Fix1 Time	Vbin	Mean	Vpp	]PSL	]PSL%	]SL1	]SL1%	]SL2	]SL2%													
		1	2	3	4		5	6	7	8	9	10		0	10	15	20	25	30	35	40	45	50	60	70	80	90		85	30	30	35	35	45	45
														10	15	20	25	30	35	40	45	50	60	70	80	90	100					ACPO	ACPO	DFT	DFT
0000	7	0	6	6 (	)	1	0	0	0	(	0	0	0000	(	) (	0	2	2	1	2	0	0	0	C	0	0	0	29.9 -		3	42.86	2	28.57	0	0
0100	3	0	3	3 (	)	0	0	0	0	) (	0	0	0100	(	) (	0	1	2	0	0	0	0	0	C	0	0	0	25.8 -		0	0	0	0	0	0
0200	4	0	3	3 (	)	1	0	0	0	) (	0	0	0200	(	) (	0	0	3	1	0	0	0	0	C	0	0	0	28.2 -		1	25	0	0	0	0
0300	2	0	2	2 (	)	0	0	0	0	) (	0	0	0300	(	) (	0	1	1	0	0	0	0	0	C	0	0	0	23.7 -		0	0	0	0	0	0
0400	1	0	•	1 (	)	0	0	0	0	) (	0	0	0400	(	) (	0	0	1	0	0	0	0	0	C	0	0	0	28.7 -		0	0	0	0	0	0
0500	11	0	10	) (	)	1	0	0	0	) (	0	0	0500	(	) (	0	0	3	6	1	1	0	0	C	0	0	0	32.7	38.4	8	72.73	2	18.18	0	0
0600	70	1	62	2 ′		5	1	0	0	) (	0	0	0600	•	1 1	5	14	27	18	3	1	0	0	C	0	0	0	27.3	32.3	22	31.43	4	5.714	0	0
0700	115	2	101	1 (	)	9	1	2	0	) (	0	0	0700	(	) 7	7 20	26	45	15	2	0	0	0	C	0	0	0	24.5	30.1	17	14.78	2	1.739	0	0
0800	187	3	163	3 (	)	17	2	0	1	(	0	1	0800	2	2 15	37	63	58	10	2	0	0	0	C	0	0	0	22.8	27.7	12	6.417	2	1.07	0	0
0900	106	0	90	) (	)	13	2	1	0	) (	0	0	0900	(	) 5	5 18	34	33	11	5	0	0	0	C	0	0	0	24.5	30.1	16	15.09	5	4.717	0	0
1000	80	0	65	5 (	)	13	0	1	0	) (	0	1	1000	•	1 5	5 2	23	33	13	2	1	0	0	C	0	0	0	25.8	31.6	16	20	3	3.75	0	0
1100	80	0	60		)	15	3	1	0	1	0	0	1100	•	1 5	5 3	27	29	15	0	0	0	0	C	0	0	0	25	30.3	15	18.75	0	0	0	0
1200	91	2	75	5 ′		11	0	1	0	) (	0	1	1200	•	1 3	8	29	28	22	0	0	0	0	C	0	0	0	25.3	30.8	22	24.18	0	0	0	0
1300	98	2	78	3 ′		13	1	3	0	) (	0	0	1300	(	) (	5 12	26	39	13	2	0	0	0	C	0	0	0	24.8	30.5	15	15.31	2	2.041	0	0
1400	79	2	64	4 3	3	5	3	0	0	) 2	2 0	0	1400	(	) (	9	27	28	6	3	0	0	0	C	0	0	0	24.5	29.7	9	11.39	3	3.797	0	0
1500	100	1	83			8	6	1	0	) (	0	0	1500	(	) 3	9	27	36	21	4	0	0	0	C	0	0	0	26.1	31.7	25	25	4	4	0	0
1600	113	1	89		2	12	9	0	0	) (	0	0	1600	•	l 9	9 14	32	42	14	1	0	0	0	C	0	0	0	24.1	29.7	15	13.27	1	0.885	0	0
1700	103	2	92			7	1	0	0	) (	0	0	1700	(	) 7	7 7	11	45	28	4	1	0	0	C	0	0	0	27	32.4	33	32.04	5	4.854	0	0
1800	66	3	59		)	2	2	0	0	) (	0	0	1800	(	) 4	1 6	11	30	11	4	0	0	0	C	0	0	0	26	31.9	15	22.73	4	6.061	0	0
1900	43	1	41	•	)	1	0	0	0	) (	0	0	1900	(	) 5	5 3	7	16	7	4	1	0	0	C	0	0	0	26.4	33.2	12	27.91	5	11.63	0	0
2000	31	0	29		)	2	0	0	0	) (	0	0	2000	(	) 2	2 2	3	14	8	0	0	2	0	C	0	0	0	27.6	33.1	10	32.26	2	6.452	2	6.452
2100	25	0	23		)	2	0	0	0	) (	0	0	2100	(	) 2	2 2	2	11	6	2	0	0	0	C	0	0	0	27.2	34.7	8	32	2	8	0	0
2200	18	0	18	3 (	)	0	0	0	0	) (	0	0	2200	(	) 5	5 1	0	8	2	1	1	0	0	C	0	0	0	24.4	32.4	4	22.22	2	11.11	0	0
2300	14	1	10		)	3	0	0	0	(	) 0	0	2300	(	) 2	2 0	1	8	2	0	1	0	0	C	0	0	0	27.4	34.4	3	21.43	1	7.143	0	0
07-19	1218	18	1019			25	30	10	1	3	0	3	07-19	(	5 75		336	446	179	29	2	0	0	C	0	0	0	24.8	30.5	210	17.24	31		0	0
06-22	1387	20	1174			35	31	10	1	3	0	3	06-22		7 85					38	4	2	0	0	0	0	0	25.1	30.7	262	18.89	44	_	2	0.144
06-00	1419	21	1202			38	31	10	1	3	0	3	06-00		7 92		363	530	222	39	6	2	0	0	0	0	0	25.1	30.8	269	18.96	47		2	0.141
00-00	1447	21	1227	7 10	1	41	31	10	1	3	0	3	00-00		7 92	158	367	542	230	42	7	2	0	0	0	0	0	25.2	30.9	281	19.42	51	3.525	2	0.138

Tim	e Total	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Fix1	Time	Vbin	Mean	Vpp	]PSL	]PSL%	]SL1	]SL1%	]SL2	]SL2%													
		1	2	3	4	5	6	7	8	9	10			0	10	15	20	25	30	35	40	45	50	60	70	80	90		85	30	30	35	35	45	45
														10	15	20	25	30	35	40	45	50	60	70	80	90	100					ACPO	ACPO	DFT	DFT
0000	4	(	) 3	0		1 (	) (	)	0	0 0	0	)	0000	0	0	0	0	3	1	0	0	0	0	0	0	0	0	28.3	-	1	25	0	0	0	0
0100	2	(	) 2	0	(	0 (	) (	)	0	0 0	0	)	0100	0	0	0	0	1	1	0	0	0	0	0	0	0	0	29.1	-	1	50	0	0	0	0
0200	1	(	) 1	0	(	0 (	) (	)	0	0 0	0	)	0200	0	0	0	1	0	0	0	0	0	0	0	0	0	0	24.2	-	0	0	0	0	0	0
0300	C	(	) 0	0	(	0 (	) (	)	0	0 0	0	)	0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0
0400	C	(	) 0	0	(	0 (	) (	)	0	0 0	0	)	0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0
0500	7	(	) 5	0		1 (	) (	)	0	1 0	0	)	0500	0	0	1	1	2	1	2	0	0	0	0	0	0	0	28.6	-	3	42.86	2	28.57	0	0
0600	68	1	J 59	0	;	8 (	) (	)	0	0 0	0	)	0600	0	1	3	8	21	28	6	1	0	0	0	0	0	0	29.3	34.2	35	51.47	7	10.29	0	0
0700	89	4	1 76	0		4 :	3 <i>′</i>		1	0 0	0	)	0700	0	8	15	21	21	19	4	1	0	0	0	0	0	0	25	32.7	24	26.97	5	5.618	0	0
0800	196	3	3 177	1	1;	3 2	2 (	)	0	0 0	0	)	0800	0	11	41	59	68	16	1	0	0	0	0	0	0	0	23.5	28.9	17	8.673	1	0.51	0	0
0900	84	. (	76	0	(	6 '	1 ′		0	0 0	0	)	0900	0	4	20	17	33	8	2	0	0	0	0	0	0	0	23.9	29.3	10	11.9	2	2.381	0	0

1000	83	4	59	0	16	1	3	0	0	0	0	1000	0	3	11	32	22	13	2	0	0	0	0	0	0	0	25.1	31.5	15	18.07	2	2.41	0	0
1100	72	2	47	0	20	0	3	0	0	0	0	1100	0	3	5	21	28	14	1	0	0	0	0	0	0	0	25.7	31.1	15	20.83	1	1.389	0	0
1200	94	2	77	1	11	1	1	0	0	1	0	1200	0	3	6	31	26	22	5	1	0	0	0	0	0	0	26.5	32.4	28	29.79	6	6.383	0	0
1300	99	1	75	2	16	0	5	0	0	0	0	1300	1	4	7	27	40	17	2	1	0	0	0	0	0	0	25.7	30.9	20	20.2	3	3.03	0	0
1400	103	0	84	1	14	0	4	0	0	0	0	1400	0	5	7	33	33	23	2	0	0	0	0	0	0	0	25.7	32	25	24.27	2	1.942	0	0
1500	99	2	75	2	15	0	4	1	0	0	0	1500	0	4	7	29	37	19	3	0	0	0	0	0	0	0	25.8	30.9	22	22.22	3	3.03	0	0
1600	121	0	106	4	9	2	0	0	0	0	0	1600	0	4	9	29	49	25	5	0	0	0	0	0	0	0	26.5	31.7	30	24.79	5	4.132	0	0
1700	116	2	107	0	4	3	0	0	0	0	0	1700	0	11	16	21	34	28	4	2	0	0	0	0	0	0	25.5	31.4	34	29.31	6	5.172	0	0
1800	76	2	70	0	2	2	0	0	0	0	0	1800	0	5	6	9	33	20	3	0	0	0	0	0	0	0	26.6	32	23	30.26	3	3.947	0	0
1900	43	0	40	0	2	1	0	0	0	0	0	1900	0	4	2	9	21	7	0	0	0	0	0	0	0	0	25.5	30.6	7	16.28	0	0	0	0
2000	32	0	27	0	5	0	0	0	0	0	0	2000	0	2	2	4	17	6	1	0	0	0	0	0	0	0	26.9	32.1	7	21.88	1	3.125	0	0
2100	16	0	14	0	1	0	0	0	1	0	0	2100	0	2	1	3	4	1	4	1	0	0	0	0	0	0	27.1	35.6	6	37.5	5	31.25	0	0
2200	19	0	18	0	1	0	0	0	0	0	0	2200	0	2	0	5	6	5	1	0	0	0	0	0	0	0	26.3	33.6	6	31.58	1	5.263	0	0
2300	16	1	15	0	0	0	0	0	0	0	0	2300	0	3	1	4	3	3	0	2	0	0	0	0	0	0	25.8	37.2	5	31.25	2	12.5	0	0
07-19	1232	22	1029	11	130	15	22	2	0	1	0	07-19	1	65	150	329	424	224	34	5	0	0	0	0	0	0	25.3	31.3	263	21.35	39	3.166	0	0
06-22	1391	23	1169	11	146	16	22	2	1	1	0	06-22	1	74	158	353	487	266	45	7	0	0	0	0	0	0	25.6	31.4	318	22.86	52	3.738	0	0
06-00	1426	24	1202	11	147	16	22	2	1	1	0	06-00	1	79	159	362	496	274	46	9	0	0	0	0	0	0	25.6	31.4	329	23.07	55	3.857	0	0
00-00	1440	24	1213	11	149	16	22	2	2	1	0	00-00	1	79	160	364	502	277	48	9	0	0	0	0	0	0	25.6	31.4	334	23.19	57	3.958	0	0

Time	Total	Cls	Cls	Cls	Cls	Cls	s C	ls	Cls	Cls	Cls	Cls	Fix1	Time	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Vbin	Mean	Vpp	]PSL	]PSL%	]SL1	]SL1%	]SL2	]SL2%
		1	2	3	4	5	(	6	7	8	9	10			0	10	15	20	25	30	35	40	45	50	60	70	80	90		85	30	30	35	35	45	45
															10	15	20	25	30	35	40	45	50	60	70	80	90	100					ACPO		DFT	DFT
0000	6	0	5	0		1	0	0	0	(	0	C	)	0000	0	0	1	1	0	3	0	1	0	0	0	0	(	0	29 -		4	66.67	1	16.67	0	0
0100	6	0	5	0		1	0	0	0	(	) 0	C	)	0100	0	1	0	0	2	1	2	0	0	0	0	0	(	) 0	28.5 -		3	50	2	33.33	0	0
0200	5	0	5	0		0	0	0	0	(	) 0	C	)	0200	0	1	0	1	1	2	0	0	0	0	0	0	(	) 0	24.9 -		2	40	0	0	0	0
0300	2	0	2	0		0	0	0	0	(	) 0	C	)	0300	0	0	0	0	1	0	0	1	0	0	0	0	(	) 0	35.5 -		1	50	1	50	0	0
0400	4	0	1	0		2	1	0	0	(	) 0	(	)	0400	0	0	0	1	2	0	1	0	0	0	0	0	(	) 0	30 -		1	25	1	25	0	0
0500	6	0	5	0		1	0	0	0	(	) 0	C	)	0500	0	1	1	1	1	2	0	0	0	0	0	0	(	) 0	23.8 -		2	33.33	0	00.50	0	0
0600	34		30	0		3	1	0	0	(	) 0	(	)	0600	1	0	0	3	10	13	6	1	0	0	0	0	(	) 0	30.1	36.4	20	58.82	/	20.59	0	0 405
0700	32		27	0		4	0	0	1	(	) 0	(	)	0700	0	1	2	6	14	5	3	0	1	0	0	. 0	(	) 0	27.2	34.8 31.2	9	28.13	4	12.5	1	3.125
0800 0900	31 63		29 50	1		0 7	0	2	0	(	) 0		)	0800 0900	0	11	5 13	11	17	10	1	0	0	0	0	0	(	) 0	25.2 22.5	30.1	11	29.03 17.46	1	1.587	0	0
1000	58		51	0		<i>।</i> २	2	1	0		) 0 1 0		)	1000	1	6	12	12		6	2	0	0	0	0	0	(	) 0	23.4	30.1	ιι Ω	13.79	1	3.448	0	0
1100	61		48	2		5 5	2	١	0		) 0 1 0	0	)	1100	0	Ω	10	16	17	7	2	1	0	0	0	0	(	) 0	23.4	30.1	10	16.39	2	4.918	0	0
1200	55		49	0		Δ Δ	0	0	0	ì	) O		) )	1200	0	0	10	12	16	13	12	2	0	0	0	0	(	) 0	30.7	36.6	27	49.09	14	25.45	0	0
1300	52		48	0		4	0	0	0	ì	) O		) )	1300	1	3	2	1	21	15	5	4	0	0	0	0	(	) 0	29.5	35.8	24	46.15	0	17.31	0	0
1400	54		47	2		3	0	0	0		1 0	(	) )	1400	0	0	0	8	19	20	5	2	0	0	0	0	(	) 0	30.1	34.7	27	50	7	12.96	0	0
1500	46		41	0		4	1	0	0	(	0	Č	, )	1500	0	7	4	11	16	7	1	0	0	0	0	0	Ċ	) 0	24	30.5	8	17.39	. 1	2.174	0	0
1600	56		50	0		2	3	1	0	(	0	C	)	1600	1	3	3	16	_	9	1	0	0	0	0	0	(	) 0	25.3	30.5	10	17.86	1	1.786	0	0
1700	61		58	2		0	1	0	0	(	0	C	)	1700	1	7	6	19	24	3	1	0	0	0	0	0	Ċ	0	23.4	29.2	4	6.557	1	1.639	0	0
1800	46		43	1		1	0	0	0	(	0	C	)	1800	0	5	4	6	17	12	2	0	0	0	0	0	Ċ	0	26	32.6	14	30.43	2		0	0
1900	32	1	29	0		1	1	0	0	(	0 0	C	)	1900	1	3	3	5	11	8	1	0	0	0	0	0	(	0	25.1	32	9	28.13	1	3.125	0	0
2000	23		20	0		1	1	0	0		1 0	C	)	2000	0	1	0	6	10	6	0	0	0	0	0	0	(	0	26.8	30.5	6	26.09	0	0	0	0
2100	14	0	14	0		0	0	0	0	(	0 0	C	)	2100	0	0	0	3	6	3	1	1	0	0	0	0	(	0	29.4	35.6	5	35.71	2	14.29	0	0
2200	17	0	17	0		0	0	0	0	(	0 0	C	)	2200	0	1	1	1	10	2	2	0	0	0	0	0	(	0	27.4	32.4	4	23.53	2	11.76	0	0
2300	17	0	15	0		1	1	0	0	(	0 0	C	)	2300	0	3	1	1	10	2	0	0	0	0	0	0	(	0	24.7	30.2	2	11.76	0	0	0	0
07-19	615		541	8	3	7	12	4	1	•	1 0	0	)	07-19	4	53	61	124	212	116	35	9	1	0	0	0	C	0	25.8	32.5	161	26.18	45		1	0.163
06-22	718		634	8	4	2	15	4	1		2 0	0	)	06-22	6	57	64	141	249	146	43	11	1	0	0	0	C	0	26.1	32.5	201	27.99	55		1	0.139
06-00	752		666	8	4		16	4	1		2 0	0	)	06-00	6	61	66	143	269	150	45	11	1	0	0	0	C	0	26.1	32.5	207	27.53	57		1	0.133
00-00	781	12	689	8	4	8	17	4	1		2 0	0		00-00	6	64	68	147	276	158	48	13	1	0	0	0	(	0	26.1	32.5	220	28.17	62	7.939	1	0.128

Time	Total	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Fix1	Time	Vbin	Mean	Vpp	]PSL	]PSL%	]SL1	]SL1%	]SL2	]SL2%													
		1	2	3	4	5	6	1	8	9	10			40	10	15	20	25	30	35	40	45	50	60	70	80	90		85	30	30	35	35	45 DET	45 DET
0000													2000	10	15	20	25	30	35	40	45	50	60	70	80	90	100	27.0				ACPO		DFT	DFT
0000	9	0		3 0	1		0 (	) (	0	0 0	0		0000	0	2	0	0	3	2	1	1	0	0	0	0	(	) (	27.3 -		4	44.44	2	22.22	0	0
0100	2	0	2	2 0	C	)	0 (	) (	0	0 0	0		0100	0	1	0	1	0	0	0	0	0	0	0	0	(	) (	17.6 -		0	0	0	0	0	0
0200	1	0	1	0	C	)	0 (	) (	0	0 0	0		0200	0	0	0	0	0	1	0	0	0	0	0	0	(	) 0	30.2 -		1	100	0	0	0	0
0300	4	0	4	1 0	C	)	0 (	) (	0	0 0	0	C	0300	0	0	0	0	1	2	1	0	0	0	0	0	(	) 0	33.7 -		3	75	1	25	0	0
0400	1	0	1	0	C	)	0 (	) (	0	0 0	0	C	0400	0	0	0	0	0	0	1	0	0	0	0	0	(	) 0	38.1 -		1	100	1	100	0	0
0500	2	0	2	2 0	C	)	0 (	) (	0	0 0	0	C	0500	1	0	0	0	0	1	0	0	0	0	0	0	(	) 0	20.9 -		1	50	0	0	0	0
0600	20	0	19	0	1	l	0 (	) (	0	0 0	0	C	0600	0	1	0	1	9	6	3	0	0	0	0	0	(	0	29.3	36.2	9	45	3	15	0	0
0700	18	1	17	0	C	)	0 (	) (	0	0 0	0	C	0700	0	0	1	3	10	3	0	1	0	0	0	0	(	0	27.6	32.1	4	22.22	1	5.556	0	0
0800	8	0	6	0	1	l	1 (	) (	0	0 0	0	(	0080	0	2	0	3	2	1	0	0	0	0	0	0	(	0	22.9 -		1	12.5	0	0	0	0
0900	24	2	21	0	1	l	0 (	) (	0	0 0	0	C	0900	1	2	4	5	8	4	0	0	0	0	0	0	(	) 0	23.7	31	4	16.67	0	0	0	0
1000	49	1	45	5 0	2	2	1 (	) (	0	0 0	0	1	1000	1	2	4	18	17	6	1	0	0	0	0	0	(	) 0	24.7	30.4	7	14.29	1	2.041	0	0
1100	48	0	45	5 0	3	3	0 (	) (	0	0 0	0		1100	1	2	11	14	12	8	0	0	0	0	0	0	(	) 0	23.2	30.7	8	16.67	0	0	0	0
1200	58	4	49		1		3	1 (	0	0 0	0		1200	0	7	11	14	17	4	4	1	0	0	0	0	(	) 0	23.9	30.1	9	15.52	5	8.621	0	0
1300	39	2	31	0	2	· >	4 (	) (	0	0 0	0		1300	0	6	3	13	9	7	1	0	0	0	0	0	(	) (	23.6	30.6	8	20.51	1	2.564	0	0
1400	45	2	43	·	-	- )	0 (	) (	0	n 0	0		1400	1	6	0	14	20	4	0	0	0	0	0	0	Č	) (	24	29.6	4	8.889	0	0	0	0
1500	54	4	47	7 1	2	)	0 (	) (	0 n	o o	0		1500	1	8	8	10	11	5	1	1	0	0	0	0	(	) 0	22.5	28.9	7	12.96	2	3.704	0	0
1600	53	3	48	· ∩	1	- I	1 (	) (	n .	0 0	0		1600	0	6	1	13	23	6	1	0	0	0	. 0	0		) 0	24.4	29.9	7	13.21	1	1.887	0	0
1700	42	0	40			)	0 (	) (	0	0 0	0		1700	0	3	3	11	21	4	0	0	0	0	. 0	0		) 0	25.3	29.9	1	9.524	0	1.007	0	0
1800	42	1	36			<u>-</u>	1 (	) (	0	0 0	0		1800	0	2	2	7	10	0	2	0	0	0	. 0	0	(	, 0	27.3	32.8	12		0	7 1 1 2	0	0
1800	42		30	) 2		<u> </u>	1 (	) (	U	0	U	l	1000	U	2	2	/	19	9	3	U	U	U	0	U	(	, 0	21.3	32.0	12	20.57	3	7.143	U	U

1900	28	0	26	0	1	1	0	0	0	0	0	1900	0	4	1	2	11	9	1	0	0	0	0	0	0	0	26.3	30.7	10	35.71	1	3.571	0	0
2000	16	0	15	0	1	0	0	0	0	0	0	2000	0	3	0	1	6	5	1	0	0	0	0	0	0	0	27	34.9	6	37.5	1	6.25	0	0
2100	18	1	16	0	1	0	0	0	0	0	0	2100	0	2	0	4	4	7	1	0	0	0	0	0	0	0	27.7	32.8	8	44.44	1	5.556	0	0
2200	9	0	9	0	0	0	0	0	0	0	0	2200	0	0	2	2	3	1	0	1	0	0	0	0	0	0	25.9 -		2	22.22	1	11.11	0	0
2300	7	0	6	0	1	0	0	0	0	0	0	2300	0	0	0	2	3	2	0	0	0	0	0	0	0	0	28.7 -		2	28.57	0	0	0	0
07-19	480	20	428	3	17	11	1	0	0	0	0	07-19	5	46	51	134	169	61	11	3	0	0	0	0	0	0	24.3	30.2	75	15.63	14	2.917	0	0
06-22	562	21	504	3	21	12	1	0	0	0	0	06-22	5	56	52	142	199	88	17	3	0	0	0	0	0	0	24.8	30.9	108	19.22	20	3.559	0	0
06-00	578	21	519	3	22	12	1	0	0	0	0	06-00	5	56	54	146	205	91	17	4	0	0	0	0	0	0	24.9	31	112	19.38	21	3.633	0	0
00-00	597	21	537	3	23	12	1	0	0	0	0	00-00	6	59	54	147	209	97	20	5	0	0	0	0	0	0	24.9	31.2	122	20.44	25	4.188	0	0

Time	Total	Cls	Cls	Cls	Cls		Cls 5	Cls 6	Cls	Cls	CIs 9	Cls 10	Fix1 Tim	Vbin	Vbin	Vbin 15	Vbin 20	Vbin 25	Vbin 30	Vbin 35	Vbin 40	Vbin 45	Vbin 50	Vbin 60	Vbin 70	Vbin 80	Vbin 90	Mean	Vpp 85	]PSL 30	]PSL% 30	]SL1 35	]SL1% 35	]SL2 45	]SL2% 45
		•	2	3	-		3	0	,	8	9	10		10	10 15	20	25	30	35	40	45	50	60	70	80	90	100		65	30	30	ACPO	ACPO	DFT	DFT
0000	3	0	3	0		0	0	0	0	0	0	0	0000		) (	) (	) 1	1	0	0	0	1	0	0	0	0	0	32 -		1	33.33	1	33.33	1	33.33
0100	2	0	2	0		0	0	0	0	0	0	0	0100	(	) (	) (	) 1	0	0	1	0	0	0	0	0	0	0	30.9 -		1	50	1	50	0	0
0200	5	0	5	0		0	0	0	0	0	0	0	0200	(	) (	) (	0	2	0	2	0	1	0	0	0	0	0	35.5 -		3	60	3	60	1	20
0300	0	0	0	0		0	0	0	0	0	0	0	0300	(	) (	) (	0	0	0	0	0	0	0	0	0	0	0 -	-		0	0	0	0	0	0
0400	1	0	0	0		1	0	0	0	0	0	0	0400	(	) (	) (	) 1	0	0	0	0	0	0	0	0	0	0	24 -		0	0	0	0	0	0
0500	12	0	12	0		0	0	0	0	0	0	0	0500	(	) (	) (	) 2	2	5	2	1	0	0	0	0	0	0	31.3	37.7	8	66.67	3	25	0	0
0600	75	2	63	3		7	0	0	0	0	0	0	0600	(	) (	) 4	13	29	17	9	2	1	0	0	0	0	0	29.1	35.7	29	38.67	12	16	1	1.333
0700	98	4	87	0		5	1	1	0	0	0	0	0700	•	6	16				5	1	0	0	0	0	0	0	25.1	31.8	26	26.53	6		0	0
0800	208	2	185	0		12	4	4	1	0	0	0	0800	(	) 26	3 43				2	0	0	0	0	0	0	0	22.6	28.7	20	9.615	2	0.962	0	0
0900	96	0	74			16	0	5	0	0	1	0	0900	(	) (	5 9	22			3	0	0	0	0	0	0	0	25.9	31.8	21	21.88	3	3.125	0	0
1000	64	0	42	2		9	2	9	0	0	0	0	1000	2	2	2 6	12	24		2	1	0	0	0	0	0	0	26.1	32	18	28.13	3		0	0
1100	71	0	52	1		15	0	3	0	0	0	0	1100	(	) 5	5 4	8	31	19	3	1	0	0	0	0	0	0	27.1	32.8	23	32.39	4	5.634	0	0
1200	71	1	57	1		7	1	3	0	0	1	0	1200	(	) (	) 5	5 19	31	14	1	1	0	0	0	0	0	0	26.8	31.6	16	22.54	2	_	0	0
1300	82	1	68	0		8	0	5	0	0	0	0	1300			. 1	14	38	17	5	1	1	0	0	0	0	0	27.5	32.7	24	29.27	/	8.537	1	1.22
1400	89	1	73	1		8	2	4	0	0	0	0	1400	(	) 2	<u> </u>	18	41	16	/	0	0	0	0	0	0	0	27.3	32.9	23	25.84	/	7.865	0	0
1500	78 103	1	62 85	2		11 15	0	2	0	1	0	0	1500 1600	(	) 1	, ,	17 2 12	34 45	37	4	0	0	0	0	0	0	0	27.2 28.4	31.8 32.4	22 41	28.21 39.81	4	5.128 3.883	0	0
1600 1700	103 118	1	107	0		15 6	2	0	0	1	0	0	1700	(	, -	, (	. 12 3 14	35		3 7	1	0	0	0	0	0	0	28	32.4	54	45.76	4	3.603 7.627	0	0
1800	86	1	84	0		1	0	0	0	0	0	0	1800		11	(	) 14			1	0	0	0	0	0	0	0	24.8	31.1	18	20.93		4.651	0	0
1900	42	0	41	0		1	0	0	0	0	0	0	1900			) [	5 10		_	1	1	0	0	0	0	0	0	25.9	31.6	10	23.81		4.762	0	0
2000	26	0	26	0		0	0	0	0	0	0	0	2000	(	) 2		. 2	12	-	1	0	0	0	1	0	0	0	26.7	31.7	6	23.08	2		1	3.846
2100	16	0	15	0		1	0	0	0	0	0	0	2100	(	) 2		) 4	5	2	2	0	1	0	0	0	0	0	27.5	36.4	5	31.25	3		1	6.25
2200	12	0	11	0		1	0	0	0	0	0	0	2200	(	) 1	(	) 4	. 3	2	2	0	0	0	0	0	0	0	26.3	35.9	4	33.33	2		0	0
2300	7	0	5	0		2	0	0	0	0	0	0	2300		(	) 1	3	1	1	0	0	0	0	0	0	0	0	22 -		1	14.29	0	0	0	0
07-19	1164	13	976	9	1	113	12	36	1	2	2	0	07-19		73	112	230	438	251	46	8	1	0	0	0	0	0	26	31.8	306	26.29	55	4.725	1	0.086
06-22	1323	15	1121	12	1	122	12	36	1	2	2	0	06-22		79	125	259	498	282	59	11	3	0	1	0	0	0	26.2	32	356	26.91	74	5.593	4	0.302
06-00	1342	15	1137	12	1	125	12	36	1	2	2	0	06-00		80	126	266	502	285	61	11	3	0	1	0	0	0	26.2	32	361	26.9	76	5.663	4	0.298
00-00	1365	15	1159	12	1	126	12	36	1	2	2	0	00-00		' 80	126	271	507	290	66	12	5	0	1	0	0	0	26.3	32	374	27.4	84	6.154	6	0.44

### 17 October 2017

Time	Total	Cls 1	CIs 2	Cls 3	Cls 4	CIs 5	CIs 6	CIs 7	Cls 8	CIs 9	CIs 10	Fix1	Time	Vbin 0 10	Vbin 10 15	Vbin 15 20	Vbin 20 25	Vbin 25 30	Vbin 30 35	Vbin 35 40	Vbin 40 45	Vbin 45 50	Vbin 50 60	Vbin 60 70	Vbin 70 80	Vbin 80 90	Vbin 90 100	Mean	Vpp 85	]PSL 30	]PSL% 30	35	]SL1% 35 ACPO	JSL2 45 DFT	JSL2% 45 DFT
0000	2	0	2	0	C	) (	0	0	(	0 0	0		0000	0	0	0	0	0	2	0	0	0	0	0	0	0	0	33.7 -		2	100	0	0	0	0
0100	2	0	2	0	C	) (	0	0	(	0 0	0		0100	0	0	0	0	0	1	1	0	0	0	0	0	0	0	35.7 -		2	100	1	50	0	0
0200	2	0	2	0	C	) (	0	0	(	0 0	0		0200	0	0	0	1	0	0	1	0	0	0	0	0	0	0	31.1 -		1	50	1	50	0	0
0300	0	0	0	0	C	) (	) 0	0	(	0 0	0		0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0 -	-		0	0	0	0	0	0
0400	4	0	4	0	C	) (	) 0	0	(	0 0	0		0400	0	1	1	0	0	2	0	0	0	0	0	0	0	0	23.7 -		2	50	0	0	0	0
0500	10	0	9	0	1	1 (	) 0	0	(	0 0	0		0500	0	0	0	1	1	5	2	1	0	0	0	0	0	0	32.5 -		8	80	3	30	0	0
0600	58	2	52	0	4	1 (	) 0	0	(	0 0	0		0600	0	2	4	11	18	19	4	0	0	0	0	0	0	0	27.6	32.9	23	39.66	4	6.897	0	0
0700	112	3	96	0	9	) 2	2 1	1	(	0 0	0		0700	0	10	12	25	43	18	4	0	0	0	0	0	0	0	25	31.3	22	19.64	4	3.571	0	0
0800	91	0	78	0	11	(	) 2	0	(	0 0	0		0800	1	8	18	27	30	7	0	0	0	0	0	0	0	0	22.5	27.5	7	7.692	0	0	0	0
07-19	203	3	174	0	20	) 2	2 3	1		0	0		07-19	1	18	30	52	73	25	4	0	0	0	0	0	0	0	23.9	30	29	14.29	4	1.97	0	0
06-22	261	5	226	0	24	1 2	2 3	1		0	0		06-22	1	20	34	63	91	44	8	0	0	0	0	0	0	0	24.7	31.1	52	19.92	8	3.065	0	0
06-00	261	5	226	0	24	1 2	2 3	1		0	0		06-00	1	20	34	63	91	44	8	0	0	0	0	0	0	0	24.7	31.1	52	19.92	8	3.065	0	0
00-00	281	5	245	0	25	5 2	2 3	1		0	0		00-00	1	21	35	65	92	54	12	1	0	0	0	0	0	0	25.2	31.6	67	23.84	13	4.626	0	0

### Virtual Day (Partial days = 8.125)

Time	Total	Cls	Fix1	Time	Vbin	Mean	Vpp	]PSL	]PSL%	]SL1	]SL1%	]SL2	]SL2%																						
		1	2	3	4	5	6	7	8	9	10			0	10	15	20	25	30	35	40	45	50	60	70	80	90		85	30	30	35	35	45	45
														10	15	20	25	30	35	40	45	50	60	70	80	90	100					ACPO	ACPO	DFT	DFT
0000	5	0	4	0	1	0	C	0	0	0	0	0	0000	0	0	0	1	1	1	0	0	0	0	0	0	0	0	28.6	-	2	45.95	1	16.22	0	2.703
0100	3	0	3	0	0	0	C	0	0	0	0	0	0100	0	0	0	1	1	1	1	0	0	0	0	0	0	0	27.3	-	1	40.91	1	18.18	0	0
0200	3	0	3	0	0	0	C	0	0	0	0	0	0200	0	0	0	0	1	1	0	0	0	0	0	0	0	0	29.4	-	1	40.91	1	18.18	0	4.545
0300	2	0	2	0	0	0	C	0	0	0	0	0	0300	0	0	0	0	1	1	0	0	0	0	0	0	0	0	31.8	-	1	58.33	0	25	0	0
0400	2	0	1	0	0	0	C	0	0	0	0	0	0400	0	0	0	0	1	0	0	0	0	0	0	0	0	0	27.8	-	1	33.33	0	13.33	0	0
0500	9	0	8	0	1	0	C	0	0	0	0	0	0500	0	0	0	1	2	4	1	1	0	0	0	0	0	0	30.3	-	5	60	2	18.57	0	0
0600	58	1	51	1	5	0	C	0	0	0	0	0	0600	0	1	3	9	21	19	5	1	0	0	0	0	0	0	28.5	33.6	24	41.73	5	9.423	0	0.385

0700	86	2	75	0	6	1	1	0	0	0	0	0700	0	6	14	19	29	14	3	0	0	0	0	0	0	0	24.9	31.3	18	20.59	4	4.633	0	0.257
0800	149	2	132	1	10	2	1	0	0	0	0	0800	0	12	30	50	43	13	1	0	0	0	0	0	0	0	23.1	28.7	14	9.424	1	0.823	0	0
0900	81	1	66	0	10	2	2	0	0	0	0	0900	0	7	14	22	26	10	2	0	0	0	0	0	0	0	23.8	29.9	12	14.71	2	2.632	0	0
1000	71	1	55	1	10	2	2	0	0	0	0	1000	1	4	9	19	23	12	2	0	0	0	0	0	0	0	24.8	31.1	14	19.86	2	2.837	0	0
1100	69	1	53	1	11	2	1	0	0	0	0	1100	1	6	8	20	22	11	2	0	0	0	0	0	0	0	24.4	30.5	13	18.74	2	2.883	0	0.18
1200	76	2	63	1	8	1	1	0	0	1	0	1200	0	4	8	21	26	13	4	1	0	0	0	0	0	0	25.8	31.5	17	22.86	5	5.921	0	0
1300	82	1	66	1	10	1	3	0	0	0	0	1300	1	4	7	24	31	12	3	1	0	0	0	0	0	0	25.5	30.8	16	19.02	3	4.141	0	0.153
1400	81	1	68	1	8	2	2	0	0	0	0	1400	0	4	7	24	30	13	4	0	0	0	0	0	0	0	25.8	31.1	17	20.92	4	4.769	0	0
1500	78	1	64	1	9	2	2	1	0	0	0	1500	0	5	9	25	26	11	2	0	0	0	0	0	0	0	24.6	30.4	13	16.93	2	2.875	0	0
1600	95	1	79	2	10	4	0	0	0	0	0	1600	1	6	10	23	37	16	2	1	0	0	0	0	0	0	25.4	30.9	19	19.89	3	2.767	0	0
1700	95	2	86	1	5	2	0	0	0	0	0	1700	1	10	13	18	32	18	3	1	0	0	0	0	0	0	24.9	31.4	22	23.2	4	3.932	0	0
1800	74	1	69	0	3	1	0	0	0	0	0	1800	0	7	7	14	28	15	4	0	0	0	0	0	0	0	25.8	31.9	19	25.55	4	4.874	0	0
1900	41	0	39	0	2	1	0	0	0	0	0	1900	0	3	3	6	16	10	2	1	0	0	0	0	0	0	26.8	32.4	13	31.52	3	7.576	0	0.303
2000	26	0	24	0	2	1	0	0	0	0	0	2000	0	2	2	4	11	6	1	0	0	0	0	0	0	0	27.3	32.8	8	29.52	2	5.714	0	1.429
2100	20	0	19	0	1	0	0	0	0	0	0	2100	0	1	1	3	8	4	2	1	0	0	0	0	0	0	27.8	34.6	7	33.95	3	12.96	0	0.617
2200	14	0	13	0	1	0	0	0	0	0	0	2200	0	2	1	2	6	3	1	0	0	0	0	0	0	0	26.3	32.1	4	29.2	1	8.85	0	0
2300	11	0	10	0	1	0	0	0	0	0	0	2300	0	1	0	2	5	2	1	1	0	0	0	0	0	0	27.4	34	3	28.57	1	12.09	0	0

### Virtual Week (Partial weeks = 1.28571)

Time	Total	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Fix1	Time	Vbin	Mean	Vpp	]PSL	]PSL%	]SL1	]SL1%	]SL2	]SL2%													
		1	2	3	4	5	6	7	8	9	10			0	10	15	20	25	30	35	40	45	50	60	70	80	90		85	30	30	35	35	45	45
														10	15	20	25	30	35	40	45	50	60	70	80	90	100					ACPO	ACPO	DFT	DFT
Mon	1368	15	1161	13	122	25	29	2	2	2	0		Mon	7	93	163	339	474	229	54	8	4	0	1	0	0	0	25.3	31.3	294	21.49	66	4.788	4	0.292
Tue	867	13	728	6	91	15	12	2	1	1	1		Tue	10	64	130	245	263	122	29	5	1	0	0	0	0	0	24.4	30.7	156	18	34	3.924	1	0.058
Wed	1402	13	1198	10	146	27	3	0	2	1	2		Wed	3	87	171	350	480	257	43	10	1	0	0	0	0	0	25.4	31.2	311	22.18	54	3.852	1	0.071
Thu	1447	21	1227	10	141	31	10	1	3	0	3		Thu	7	92	158	367	542	230	42	7	2	0	0	0	0	0	25.2	30.9	281	19.42	51	3.525	2	0.138
Fri	1440	24	1213	11	149	16	22	2	2	1	0		Fri	1	79	160	364	502	277	48	9	0	0	0	0	0	0	25.6	31.4	334	23.19	57	3.958	0	0
Sat	781	12	689	8	48	17	4	1	2	0	0		Sat	6	64	68	147	276	158	48	13	1	0	0	0	0	0	26.1	32.5	220	28.17	62	7.939	1	0.128
Sun	597	21	537	3	23	12	1	0	0	0	0		Sun	6	59	54	147	209	97	20	5	0	0	0	0	0	0	24.9	31.2	122	20.44	25	4.188	0	0

### **Grand Total**

Ti	me	Total	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Fix1	Time	Vbin	Mean	Vpp	]PSL	]PSL%	]SL1	]SL1%	]SL2	]SL2%													
			1	2	3	4	5	6	7	8	9	10			0	10	15	20	25	30	35	40	45	50	60	70	80	90		85	30	30	35	35	45	45
															10	15	20	25	30	35	40	45	50	60	70	80	90	100					ACPO	ACPO	DFT	DFT
		10136	146	8641	78	933	182	121	10	13	6	6			55	695	1196	2541	3481	1720	367	68	12	0	1	0	0	0	25.2	31.3	2168	21.39	448	4.42	13	0.128



# 100



Burgess Hill - Henfield - Steyning -Storrington - Pulborough Pulborough - Billingshurst - Slinfold - Horsham

### Mondays to Friday RT - Click to give current Real Time of buses at this stop

Burgess Hill, Station	<u>RT</u>		0640	0740	0910	1010	1110	1210	1310	1425	1525	1625	1725	1805
Burgess Hill, Church Road	<u>RT</u>		0641	0741	0911	1011	1111	1211	1311	1426	1526	1626	1726	1806
Burgess Hill, Victoria Way	<u>RT</u>		0644	0744	0914	1014	1114	1214	1314	1429	1529	1629	1729	1809
Burgess Hill, Tesco	<u>RT</u>		0646	0746	0916	1016	1116	1216	1316	1431	1531	1631	1731	1811
Burgess Hill, The Triangle	<u>RT</u>		0650	0750	0920	1020	1120	1220	1320	1435	1535	1635	1735	1815
Hickstead, Little Chef	<u>RT</u>		0653	0753	0923	1023	1123	1223	1323	1438	1538	1638	1738	1818
Sayers Common, School	RT		0655	0755	0925	1025	1125	1225	1325	1440	1540	1640	1740	1820
Albourne, Henfield Road	RT		0657	0757	0927	1027	1127	1227	1327	1442	1542	1642	1742	1822
Muddleswood	RT		0700	0800	0930	1030	1130	1230	1330	1445	1545	1645	1745	1825
Woodmancote, Village Hall	RT		0704	0804	0934	1034	1134	1234	1334	1449	1549	1649	1749	1829
Henfield, High Street	<u>RT</u>		0708	8080	0938	1038	1138	1238	1338	1453	1553	1653	1753	1833
Henfield, Wantley Hill	RT		0712	0812	0942	1042	1142	1242	1342	1457	1557	1657	1757	1837
Henfield, High Street	RT		0714	0814	0944	1044	1144	1244	1344	1459	1559	1659	1759	1839
Small Dole, Post Office	RT		0719	0819	0949	1049	1149	1249	1349	1504	1604	1704	1804	1843
Upper Beeding, Rising Sun	RT		0723	0823	0953	1053	1153	1253	1353	1508	1608	1708	1808	1847
Bramber, Castle Hotel	RT		0726	0826	0955	1055	1155	1255	1355	1511	1611	1711	1811	1850
Steyning, Clock Tower	RT		0730	0830	1000	1100	1200	1300	1400	1515	1615	1715	1815	1854
Steyning, Leisure Centre	RT		0733	0833	1003	1103	1203	1303	1403	1518D	1618	1718	1818	1856
Buncton, Crossroads	RT		0737	0837	1007	1107	1207	1307	1407	1522D	1622	1722	1822	1900
Washington, Rec. Ground	RT	0700	0742	0842	1012	1112	1212	1312	1412	1527D	1627	1727	1827	1904
Storrington, Bus Stand	RT	0707	0750	0850	1020	1120	1220	1320	1420	1535D	1635	1735	1835	
Cootham, Village Hall	RT	0712	0755	0855	1025	1125	1225	1325	1425	1540D	1640	1740		
Pulborough Brooks RSPB	RT	0715	0758	0858	1028	1128	1228	1328	1428	1543D	1643	1743		
Pulborough, Station (arr)	RT	0720	0803	0903	1033	1133	1233	1333	1433	1548D	1648	1748		
Pulborough, Station (dep)	RT	0722	0808	0908	1038	1138	1238	1338	1438	1551	1651			
Pulborough, Spinney North	RT	0727	0813	0913	1043	1143	1243	1343	1443	1556	1656			
Brinsbury Campus, entrance.	RT	0732	0819	0919	1049	1149	1249	1349	1449	1602	1702			
Adversane, Blacksmiths Arms	RT	0734	0821	0921	1051	1151	1251	1351	1451	1604	1704			
Billingshurst, Parbrook	RT	0737	0824	0924	1054	1154	1254	1354	1454	1607	1707			
Billingshurst, Station	RT	0741	0828	0928	1058	1158	1258	1358	1458	1611	1711			
Billingshurst, Forge Way	RT	0744	0831	0931	1101	1201	1301	1401	1501	1614	1714			
Billingshurst, Jengers Mead	RT	0747	0834	0934	1104	1204	1304	1404	1504	1617	1717			
Five Oaks, Roundabout	RT	0751	0838	0938	1108	1208	1308	1408	1508	1621	1721			
Slinfold, Post Office	RT	0757	0844	0944	1114	1214	1314	1414	1514	1627	1727			
Broadbridge Hth, Shelley Arms	RT	0803	0850	0950	1120	1220		1420	1520	1632	1732			
Needles Est, Hills Farm Lane	RT	0809	0856	0956	1126	1226	1326	1426	1526					
Horsham, Bus Stn (arr)	RT	0816	0903	1003	1133			1433	1533	1639	1739			
Horsham, Bus Stn (dep)	RT	0820	0905	1005				1438		1645	1745			
Horsham, Carfax	RT	0823	0907	1007	1140	1240	1340	1440	1540	1647	1747			
Horsham, Station	RT	0826	0910	1010	1143	1243	1343	1443	1543	1652	1752			
Horsham, Hospital	RT	0827	0911	1011				1444		1654	1754			
, 1				•										

Additional journeys operate schooldays only from Pulborough Station to Brinsbury Campus at 0845 0855 0900 & 0905.

A: Service continues back to Horsham Bus Station

D: operates 3 minutes later on schooldays

N: not Saturdays

S: operates via Brinsbury Campus main building on schooldays only

Horsham - Slinfold - Billingshurst - Pulborough Pulborough - Storrington - Steyning - Henfield - Burgess Hill

### **Mondays to Friday**

### RT - Click to give current Real Time of buses at this stop

Horsham, Bus Station						0000	0000	4000	4.400	1000	4000	4.400	4=00	4045	47.45
Horsham, Hospital	•		••••	••••											
Norsham, Hospital															
Needles Est. Hills Farm Lane			••••	••••											
Broadbridge Hth, Shelley Arms   RT	•				0731										
Simfold, Post Office															
Five Oaks, Roundabout	-														
Billingshurst, High St	•	<u>RT</u>			-										-
Billingshurst, Forge Way															
Billingshurst, Station		<u>RT</u>			0752	0852	1010	1110	1210	1310	1410	1510	1610	1724	1824
Billingshurst, Parbrook		<u>RT</u>			0754	0854	1013	1113	1213	1313	1413				
Adversane, Blacksmiths Arms  RT	Billingshurst, Station	<u>RT</u>			0756	0856					1415	1515B	1615	1729	1829
Brinsbury Campus, entrance.   RT		<u>RT</u>			0759	0859	1018	1118	1218	1318		1518	1618	1732	1832
Pulborough, Spinney North	Adversane, Blacksmiths Arms	<u>RT</u>			0802	0902	1022	1122	1222	1322	1422	1522	1622	1735	1835
Pullborough, Station (arr)	Brinsbury Campus, entrance.	<u>RT</u>			0803	0903	1023	1123	1223	1323	1423	1523	1623	1736	1836
Pulborough, Station (dep) RT 0811 0920 1040 1140 1240 1340 1440 1540 1640 1745 1845 Pulborough Brooks RSPB RT 0815 0924 1044 1144 1244 1344 1444 1544 1644 1749 1849 Cootham, Village Hall RT 0818 0927 1047 1147 1247 1347 1447 1547 1647 1752 1852 Storrington, Bus Stand RT 0823 0932 1052 1152 1252 1352 1507a 1552 1652 1757 1857 Washington, Rec. Ground RT 0632 0727 0832 0941 1101 1201 1301 1401 1516 1601 1701 1805 1905 Buncton, Crossroads RT 0635 0730 0835 0944 1104 1204 1304 1404 1519 1604 1704 1808 Steyning, Leisure Centre RT 0639 0734 0839 0948 1108 1208 1308 1408 1523 1608 1708 1812 Steyning, Clock Tower RT 0642 0737 0842 0951 1111 1211 1311 1411 1526 1611 1711 1815 Bramber, Castle Hotel RT 0646 0741 0846 0955 1115 1215 1315 1415 1530 1615 1715 1819 Upper Beeding, Rising Sun RT 0649 0744 0849 0958 1118 1218 1318 1418 1533 1618 1718 1822 Small Dole, Post Office RT 0658 0753 0858 1007 1127 1227 1327 1427 1542 1627 1727 1831 Henfield, Wantley Hill RT 0702 0757 0902 1011 1131 1231 1331 1431 1546 1631 1731 1835 Henfield, Wantley Hill RT 0704 0759 0904 1013 1133 1233 1333 1433 1548 1633 1733 1837 Woodmancote, Village Hall RT 0716 0811 0916 1025 1145 1245 1345 1445 1600 1645 1745 1849 Muddleswood RT 0716 0811 0916 1025 1145 1245 1345 1445 1600 1645 1745 1849 Muddleswood RT 0716 0811 0916 1025 1145 1245 1345 1445 1600 1645 1745 1849 Burgess Hill, The Triangle RT 0728 0829 0928 1037 1147 1247 1347 1447 1602 1647 1747 1851 Burgess Hill, The Triangle RT 0728 0829 0928 1037 1147 1247 1340 1400 1500 1615 1700 1800 1904 Burgess Hill, Texco RT 0721 0821 0829 1034 1157 1257 1357 1457 1615 1700 1800 1904 Burgess Hill, Station Road RT 0731 0833 0931 1040 1200 1300 1400 1500 1615 1700 1800 1904	Pulborough, Spinney North	<u>RT</u>				0910	1030	1130	1230	1330	1430				
Pullborough Brooks RSPB         RT          0815         0924         1044         1144         1244         1344         1444         1544         1644         1749         1849           Cootham, Village Hall	Pulborough, Station (arr)	<u>RT</u>			0810	0915	1035	1135	1235	1335	1435	1535	1635	1745	1845
Pullborough Brooks RSPB         RT          0815         0924         1044         1144         1244         1344         1444         1544         1644         1749         1849           Cootham, Village Hall															
Cootham, Village Hall	Pulborough, Station (dep)	<u>RT</u>			0811	0920	1040	1140	1240	1340	1440	1540	1640	1745	1845
Storrington, Bus Stand         RT          0823         0932         1052         1152         1252         1552         1652         1757         1857           Washington, Rec. Ground	Pulborough Brooks RSPB	<u>RT</u>			0815	0924	1044	1144	1244	1344	1444	1544	1644	1749	1849
Washington, Rec. Ground         RT         0632         0727         0832         0941         1101         1201         1301         1401         1516         1601         1701         1805         1905           Buncton, Crossroads         RT         0635         0730         0835         0944         1104         1204         1304         1404         1519         1604         1704         1808            Steyning, Leisure Centre         RT         0639         0734         0839         0948         1108         1208         1308         1408         1523         1608         1704         1812            Steyning, Clock Tower         RT         0642         0737         0842         0951         1111         1211         1311         1411         1526         1611         1711         1815            Bramber, Castle Hotel	Cootham, Village Hall	<u>RT</u>			0818	0927	1047	1147	1247	1347	1447	1547	1647	1752	1852
Buncton, Crossroads	Storrington, Bus Stand	<u>RT</u>			0823	0932	1052	1152	1252	1352	1507a	1552	1652	1757	1857
Steyning, Leisure Centre         RT         0639         0734         0839         0948         1108         1208         1308         1408         1523         1608         1708         1812            Steyning, Clock Tower	Washington, Rec. Ground	RT	0632	0727	0832	0941	1101	1201	1301	1401	1516	1601	1701	1805	1905
Steyning, Clock Tower         RT         0642         0737         0842         0951         1111         1211         1311         1411         1526         1611         1711         1815            Bramber, Castle Hotel	Buncton, Crossroads	RT	0635	0730	0835	0944	1104	1204	1304	1404	1519	1604	1704	1808	
Bramber, Castle Hotel         RT         0646         0741         0846         0955         1115         1215         1315         1415         1530         1615         1715         1819            Upper Beeding, Rising Sun         RT         0649         0744         0849         0958         1118         1218         1318         1418         1533         1618         1715         1819            Small Dole, Post Office         RT         0654         0749         0854         1002         1122         1222         1322         1422         1537         1622         1722         1826            Henfield, High Street         RT         0702         0757         0902         1011         1131         1231         1331         1431         1546         1631         1731         1835            Henfield, Wantley Hill	Steyning, Leisure Centre	RT	0639	0734	0839	0948	1108	1208	1308	1408	1523	1608	1708	1812	
Upper Beeding, Rising Sun         RT         0649         0744         0849         0958         1118         1218         1318         1418         1533         1618         1718         1822            Small Dole, Post Office         RT         0654         0749         0854         1002         1122         1222         1322         1422         1537         1622         1722         1826            Henfield, High Street         RT         0658         0753         0858         1007         1127         1227         1327         1427         1542         1627         1727         1831            Henfield, Wantley Hill	Steyning, Clock Tower	RT	0642	0737	0842	0951	1111	1211	1311	1411	1526	1611	1711	1815	
Small Dole, Post Office         RT         0654         0749         0854         1002         1122         1222         1322         1422         1537         1622         1722         1826            Henfield, High Street	Bramber, Castle Hotel	RT	0646	0741	0846	0955	1115	1215	1315	1415	1530	1615	1715	1819	
Small Dole, Post Office         RT         0654         0749         0854         1002         1122         1222         1322         1422         1537         1622         1722         1826            Henfield, High Street	Upper Beeding, Rising Sun	RT	0649	0744	0849	0958	1118	1218	1318	1418	1533	1618	1718	1822	
Henfield, High Street		RT	0654	0749	0854	1002	1122	1222	1322	1422	1537	1622	1722	1826	
Henfield, High Street		RT	0658	0753	0858	1007	1127	1227	1327	1427	1542	1627	1727	1831	
Henfield, High Street	Henfield, Wantley Hill	RT	0702	0757	0902	1011	1131	1231	1331	1431	1546	1631	1731	1835	
Muddleswood	-	RT	0704	0759	0904	1013	1133	1233	1333	1433	1548	1633	1733	1837	
Muddleswood	Woodmancote, Village Hall	RT	0707	0802	0907	1016	1136	1236	1336	1436	1551	1636	1736	1840	
Albourne, Traffic Lights	-	RT	0711	0806	0911	1020	1140	1240	1340	1440	1555	1640	1740	1844	
Sayers Common, School       RT       0716       0811       0916       1025       1145       1245       1345       1445       1600       1645       1745       1849          Hickstead, opp Shell Garage.       RT       0718       0813       0918       1027       1147       1247       1347       1447       1602       1647       1747       1851          Burgess Hill, The Triangle       RT       0721       0821       0921       1030       1150       1250       1350       1450       1605       1650       1750       1854          Burgess Hill, Tesco       RT       0725       0825       0925       1034       1154       1254       1354       1454       1609       1654       1754       1858          Burgess Hill, Victoria Way       RT       0728       0829       0928       1037       1157       1257       1357       1457       1612       1657       1757       1901          Burgess Hill, Station Road       RT       0731       0833       0931       1040       1200       1300       1400       1500       1615       1700       1800       1904	Albourne, Traffic Lights	RT	0714	0809	0914	1023					1558	1643	1743	1847	
Hickstead, opp Shell Garage.       RT       0718       0813       0918       1027       1147       1247       1347       1447       1602       1647       1747       1851          Burgess Hill, The Triangle       RT       0721       0821       0921       1030       1150       1250       1350       1450       1605       1650       1750       1854          Burgess Hill, Tesco       RT       0725       0825       0925       1034       1154       1254       1354       1454       1609       1654       1754       1858          Burgess Hill, Victoria Way       RT       0728       0829       0928       1037       1157       1257       1357       1457       1612       1657       1757       1901          Burgess Hill, Station Road       RT       0731       0833       0931       1040       1200       1300       1400       1500       1615       1700       1800       1904	_		0716	0811	0916	1025	1145	1245	1345	1445	1600				
Burgess Hill, The Triangle       RT       0721       0821       0921       1030       1150       1250       1350       1450       1605       1650       1750       1854          Burgess Hill, Tesco       RT       0725       0825       0925       1034       1154       1254       1354       1454       1609       1654       1754       1858          Burgess Hill, Victoria Way       RT       0728       0829       0928       1037       1157       1257       1357       1457       1612       1657       1757       1901          Burgess Hill, Station Road       RT       0731       0833       0931       1040       1200       1300       1400       1500       1615       1700       1800       1904	-			0813	0918	1027	1147	1247	1347	1447	1602				
Burgess Hill, Tesco       RT       0725       0825       0925       1034       1154       1254       1354       1454       1609       1654       1754       1858          Burgess Hill, Victoria Way       RT       0728       0829       0928       1037       1157       1257       1357       1457       1612       1657       1757       1901          Burgess Hill, Station Road       RT       0731       0833       0931       1040       1200       1300       1400       1500       1615       1700       1800       1904				0821	0921	1030	1150	1250	1350	1450	1605	1650	1750	1854	
Burgess Hill, Victoria Way       RT       0728       0829       0928       1037       1157       1257       1357       1457       1612       1657       1757       1901          Burgess Hill, Station Road       RT       0731       0833       0931       1040       1200       1300       1400       1500       1615       1700       1800       1904															
Burgess Hill, Station Road RT 0731 0833 0931 1040 1200 1300 1400 1500 1615 1700 1800 1904	-						-	-		-					
	•														
	Burgess Hill, Church Road	RT	0732	0835	0932	1041					1616	1701			

Additional journeys operate schooldays only from Brinsbury Campus to Pulborough Station at 1430 1625 & 1640

Timetable effective from 5th September 2016

a: arrives at 1452

B: on schooldays operates via Stane Street and Weald School lay-by, instead of the station

N: not Saturdays

# 100 © COMPASS BUS

Burgess Hill - Henfield - Steyning -Storrington - Pulborough Pulborough - Billingshurst - Slinfold - Horsham

### Saturday RT - Click to give current Real Time of buses at this stop

Burgess Hill, Station	<u>RT</u>			0740	0910	1010	1110	1210	1310	1425	1525	1625	1725	1805
Burgess Hill, Church Road	<u>RT</u>			0741	0911	1011	1111	1211	1311	1426	1526	1626	1726	1806
Burgess Hill, Victoria Way	<u>RT</u>			0744	0914	1014	1114	1214	1314	1429	1529	1629	1729	1809
Burgess Hill, Tesco	<u>RT</u>			0746	0916	1016	1116	1216	1316	1431	1531	1631	1731	1811
Burgess Hill, The Triangle	<u>RT</u>			0750	0920	1020	1120	1220	1320	1435	1535	1635	1735	1815
Hickstead, Little Chef	RT			0753	0923	1023	1123	1223	1323	1438	1538	1638	1738	1818
Sayers Common, School	<u>RT</u>			0755	0925	1025	1125	1225	1325	1440	1540	1640	1740	1820
Albourne, Henfield Road	<u>RT</u>			0757	0927	1027	1127	1227	1327	1442	1542	1642	1742	1822
Muddleswood	<u>RT</u>			0800	0930	1030	1130	1230	1330	1445	1545	1645	1745	1825
Woodmancote, Village Hall	<u>RT</u>			0804	0934	1034	1134	1234	1334	1449	1549	1649	1749	1829
Henfield, High Street	<u>RT</u>			0808	0938	1038	1138	1238	1338	1453	1553	1653	1753	1833
Henfield, Wantley Hill	<u>RT</u>			0812	0942	1042	1142	1242	1342	1457	1557	1657	1757	1837
Henfield, High Street	<u>RT</u>			0814	0944	1044	1144	1244	1344	1459	1559	1659	1759	1839
Small Dole, Post Office	<u>RT</u>			0819	0949	1049	1149	1249	1349	1504	1604	1704	1804	1843
Upper Beeding, Rising Sun	RT			0823	0953	1053	1153	1253	1353	1508	1608	1708	1808	1847
Bramber, Castle Hotel	RT			0826	0955	1055	1155	1255	1355	1511	1611	1711	1811	1850
Steyning, Clock Tower	RT			0830	1000	1100	1200	1300	1400	1515	1615	1715	1815	1854
Steyning, Leisure Centre	RT			0833	1003	1103	1203	1303	1403	1518	1618	1718	1818	1856
Buncton, Crossroads	RT			0837	1007	1107	1207	1307	1407	1522	1622	1722	1822	1900
Washington, Rec. Ground	RT	0700	0742	0842	1012	1112	1212	1312	1412	1527	1627	1727	1827	1904
Storrington, Bus Stand	RT	0707	0750	0850	1020	1120	1220	1320	1420	1535	1635	1735	1835	
Cootham, Village Hall	RT	0712	0755	0855	1025	1125	1225	1325	1425	1540	1640	1740		
Pulborough Brooks RSPB	RT	0715	0758	0858	1028	1128	1228	1328	1428	1543	1643	1743		
Pulborough, Station (arr)	RT	0720	0803	0903	1033	1133	1233	1333	1433	1548	1648	1748		
<b>G</b> , , ,	<u></u>													
Pulborough, Station (dep)	RT	0722	0808	0908	1038	1138	1238	1338	1438	1551	1651			
Pulborough, Spinney North	RT	0727	0813	0913	1043	1143	1243	1343	1443	1556	1656			
Brinsbury Campus, entrance.	RT	0732	0819	0919	1049	1149	1249	1349	1449	1602	1702			
Adversane, Blacksmiths Arms	RT	0734	0821	0921	1051	1151	1251	1351	1451	1604	1704			
Billingshurst, Parbrook	RT	0737	0824	0924	1054	1154	1254	1354	1454	1607	1707			
Billingshurst, Station	RT	0741	0828	0928	1058	1158	1258	1358	1458	1611	1711			
Billingshurst, Forge Way	RT	0744	0831	0931	1101	1201	1301	1401	1501	1614	1714			
Billingshurst, Jengers Mead	RT	0747	0834	0934	1104	1204	1304	1404	1504	1617	1717			
Five Oaks, Roundabout	RT	0751	0838	0938	1108	1208	1308	1408	1508	1621	1721			
Slinfold, Post Office	RT	0757	0844	0944	1114	1214	1314	1414	1514	1627	1727			
Broadbridge Hth, Shelley Arms	RT	0803	0850	0950	1120	1220	1320	1420	1520	1632	1732			
Needles Est, Hills Farm Lane	RT	0809	0856	0956	1126	1226			1526					
Horsham, Bus Stn (arr)	RT	0816	0903	1003		1233			1533	1639	1739			
Horsham, Bus Stn (dep)	RT	0820	0905	1005				1438		1650	1750			
Horsham, Carfax	RT	0823	0907	1007	1140		1340		1540	1652	1752			
Horsham, Station	RT	0826	0910	1010	1143	1243	1343	1443	1543	1655	1755			
Horsham, Hospital	RT	0827	0911	1011				1444		1656	1756			
,														

A: Service continues back to Horsham Bus Station

Horsham - Slinfold - Billingshurst - Pulborough Pulborough - Storrington - Steyning - Henfield - Burgess Hill

### **Saturday**

### RT - Click to give current Real Time of buses at this stop

Horsham, Bus Station	RT			0820	0938	1038	1138	1238	1338	1438	1538	1650	1750
Horsham, Carfax	RT			0823	0940			1240		1440		1652	
Horsham, Station	RT			0826	0943	1043	1143	1243	1343	1443	1543	1655	1755
Horsham, Hospital	RT			0827	0944	1044	1144	1244	1344	1444		1656	
Needles Est. Hills Farm Lane	RT			0834	0951	1051	1151	1251	1351	1451	1551	1703	
Broadbridge Hth, Shelley Arms	RT			0839	0955	1055	1155	1255	1355	1455	1555	1707	1807
Slinfold, Post Office	RT			0844	1000	1100		1300		1500		1712	
Five Oaks, Roundabout	RT			0848	1005	1105	1205	1305	1405	1505	1605	1718	1818
Billingshurst, High St	RT			0852	1010	1110	1210	1310	1410	1510	1610	1724	1824
Billingshurst, Forge Way	RT			0854	1013	1113	1213	1313	1413	1513	1613	1727	1827
Billingshurst, Station	RT			0856	1015	1115	1215	1315	1415	1515	1615	1729	1829
Billingshurst, Parbrook	RT			0859	1018	1118	1218	1318	1418	1518	1618	1732	1832
Adversane, Blacksmiths Arms	RT			0902	1022	1122	1222	1322	1422	1522	1622	1735	1835
Brinsbury Campus, entrance.	RT			0903	1023	1123	1223	1323	1423	1523	1623	1736	1836
Pulborough, Spinney North	<u>RT</u>			0910	1030	1130	1230	1330	1430	1530	1630	1741	1841
Pulborough, Station (arr)	<u>RT</u>			0915	1035	1135	1235	1335	1435	1535	1635	1745	1845
Pulborough, Station (dep)	<u>RT</u>		0811	0920	1040	1140	1240	1340	1440	1540	1640	1745	1845
Pulborough Brooks RSPB	<u>RT</u>		0815	0924	1044				1444	1544			1849
Cootham, Village Hall	<u>RT</u>		0818	0927	1047	1147	1247	1347	1447	1547		1752	
Storrington, Bus Stand	<u>RT</u>		0823	0932	1052	1152				1552		1757	
Washington, Rec. Ground	<u>RT</u>	0732	0832	0941	1101	1201		1401		1601		1805	1905
Buncton, Crossroads	<u>RT</u>	0735	0835	0944	1104	1204		1404		1604	1704		
Steyning, Leisure Centre	<u>RT</u>	0739	0839	0948	1108	1208	1308	1408	1508	1608		1812	
Steyning, Clock Tower	<u>RT</u>	0742	0842	0951	1111	1211	1311	1411	1511	1611	1711		
Bramber, Castle Hotel	<u>RT</u>	0746	0846	0955	1115	1215	1315	1415	1515	1615	1715		
Upper Beeding, Rising Sun	RT	0749	0849	0958		1218				1618	1718		
Small Dole, Post Office	<u>RT</u>	0754	0854	1002			-	1422	-	1622	1722		
Henfield, High Street	RT	0758	0858	1007				1427		1627	1727		
Henfield, Wantley Hill	<u>RT</u>	0802	0902	1011				1431		1631		1835	
Henfield, High Street	<u>RT</u>	0804	0904	1013		1233				1633		1837	
Woodmancote, Village Hall	<u>RT</u>	0807	0907	1016	1136			1436		1636		1840	
Muddleswood	<u>RT</u>	0811	0911	1020	1140		1340		1540	1640		1844	
Albourne, Traffic Lights	<u>RT</u>	0814	0914	1023	-	-		1443		1643	1743	-	••••
Sayers Common, School	<u>RT</u>	0816	0916	1025		1245				1645	1745		
Hickstead, opp Shell Garage.	<u>RT</u>	0818	0918	1027		1247				1647	1747		
Burgess Hill, The Triangle	<u>RT</u>	0821	0921	1030	1150			1450		1650		1854	
Burgess Hill, Tesco	<u>RT</u>	0825	0925	1034	-	1254		-	1554	1654	1754	1858	
Burgess Hill, Victoria Way	<u>RT</u>	0828	0928	1037		1257		1457		1657	1757		
Burgess Hill, Station Road	<u>RT</u>	0831	0931	1040	1200	1300	1400		1600	1700		1904	
Burgess Hill, Church Road	<u>RT</u>	0832	0932	1041	1201	1301	1401	1501	1601	1701	1801	1905	

Additional journeys operate schooldays only from Brinsbury Campus to Pulborough Station at 1430 1625 & 1640

Timetable effective from 5th September 2016

a: arrives at 1452

B: on schooldays operates via Stane Street and Weald School lay-by, instead of the station

N: not Saturdays



**Mondays to Saturdays** 

from 29th April 2017

# Crawley - Handcross - Burgess Hill - Hassocks - Brighton

Hurstpierpoint Bolney Hickstead

# **Mondays to Fridays**

Code						SDO	NSD							
Service		271	271	271	273	271	271	273	271	273	271	273	271	271
Crawley Bus Station, Stop F 🤤	<b>04</b> 53	<b>05</b> 03	<b>05</b> 43	<b>06</b> 39	<b>07</b> 18	<b>07</b> 49	<b>0800</b>	<b>09</b> 18	<b>09</b> 53	<b>11</b> 18	<b>11</b> 53	<b>12</b> 53	<b>13</b> 53	<b>16</b> 00
Brighton Road Wakehurst Drive	<b>04</b> 56	<b>05</b> 07	<b>05</b> 47	<b>06</b> 43	<b>07</b> 23	<b>07</b> 55	<b>08</b> 05	<b>09</b> 23	<b>09</b> 57	<b>11</b> 22	<b>11</b> 57	<b>12</b> 57	<b>13</b> 57	<b>16</b> 04
Pease Pottage Black Swan	<b>05</b> 01	<b>05</b> 12	<b>05</b> 52	<b>06</b> 49	<b>07</b> 29	<b>08</b> 03	<b>08</b> 11	<b>09</b> 29	<b>10</b> 03	<b>11</b> 28	<b>12</b> 03	<b>13</b> 03	<b>14</b> 03	<b>16</b> 10
Handcross Red Lion & Nymans		<b>05</b> 17	<b>05</b> 57	<b>06</b> 55	<b>07</b> 34	<b>08</b> 11	<b>08</b> 17	<b>09</b> 35	<b>10</b> 09	<b>11</b> 34	<b>12</b> 09	<b>13</b> 09	<b>14</b> 09	<b>16</b> 17
Staplefield Jolly Tanners	ļ	<b>05</b> 20	<b>06</b> 00	<b>06</b> 58	Ļ	<b>08</b> 14	<b>08</b> 20	į.	<b>10</b> 12	↓	<b>12</b> 12	Ļ	<b>14</b> 12	<b>16</b> 20
Warninglid Five Cross Roads	<b>05</b> 09	į.	į.	į.	<b>07</b> 37	<b>↓</b>	↓	<b>09</b> 38	<b>↓</b>	<b>11</b> 37	<b>↓</b>	<b>13</b> 12	<b>↓</b>	į.
Bolney Ryecroft Road	<b>05</b> 12	ļ.	<b>↓</b>	<b>↓</b>	<b>07</b> 40	<b>↓</b>	<b>↓</b>	<b>09</b> 42	<b>+</b>	<b>11</b> 41	<b>↓</b>	<b>13</b> 16	<b>↓</b>	<b>↓</b>
Hickstead The Castle	<b>05</b> 16	<b>↓</b>	1	1	<b>07</b> 46	1	↓	<b>09</b> 46	<b>↓</b>	<b>11</b> 45	1	<b>13</b> 20	1	<b>↓</b>
Sayers Common School	<b>05</b> 19	<b>↓</b>	1	1	<b>07</b> 49	1	↓	<b>09</b> 49	1	<b>11</b> 48	1	<b>13</b> 23	1	<b>↓</b>
Albourne Traffic Lights	<b>05</b> 21	↓	<b>↓</b>	<b>↓</b>	<b>07</b> 52	<b>↓</b>	1	<b>09</b> 52	<b>1</b>	<b>11</b> 51	<b>↓</b>	<b>13</b> 26	ļ	<b>↓</b>
Hurstpierpoint Church		<b>↓</b>	<b>↓</b>	<b>↓</b>	<b>07</b> 58	Į.	↓	<b>09</b> 57	<b>↓</b>	<b>11</b> 56	<b>↓</b>	<b>13</b> 31	ļ	Į.
Cuckfield High Street	ļ	<b>05</b> 27	<b>06</b> 07	<b>07</b> 05	į.	<b>08</b> 23	<b>08</b> 28	↓	<b>10</b> 20	Į.	<b>12</b> 20	į.	<b>14</b> 20	<b>16</b> 28
Warden Park School Grounds	Į.	<b>↓</b>	<b>↓</b>	<b>↓</b>	<b>↓</b>	<b>08</b> 27	<b>1</b>	<b>+</b>	<b>+</b>	<b>↓</b>	<b>+</b>	ļ.	<b></b>	<b>↓</b>
Haywards Hth. Perrymount Rd. € (arr)	Ļ	<b>05</b> 35	<b>06</b> 15	<b>07</b> 13	<b>↓</b>	<b>08</b> 37	<b>08</b> 36	<b>↓</b>	<b>10</b> 28	<b>↓</b>	<b>12</b> 28	Ļ	<b>14</b> 28	<b>16</b> 36
<b>Haywards Hth.</b> Perrymount Rd. <b>②</b> (dep)	1	<b>05</b> 36	<b>06</b> 16	<b>07</b> 15	<b>↓</b>	<b>08</b> 39	<b>08</b> 39	<b>↓</b>	<b>10</b> 30	↓	<b>12</b> 30	<b>↓</b>	<b>14</b> 30	<b>16</b> 38
Haywards Heath South Road	ļ.	<b>05</b> 39	<b>06</b> 19	<b>07</b> 19	ļ	<b>08</b> 43	<b>08</b> 43	<b>→</b>	<b>10</b> 35	<b>↓</b>	<b>12</b> 35	ļ.	<b>14</b> 35	<b>16</b> 43
Haywards Heath Princess Royal Hosp	Ļ	<b>05</b> 43	<b>06</b> 23	<b>07</b> 23	į.	<b>08</b> 51	<b>08</b> 51	<b>↓</b>	<b>10</b> 40	į.	<b>12</b> 40	Ļ	<b>14</b> 40	<b>16</b> 49
Wivelsfield Ote Hall Chapel	1	<b>05</b> 48	<b>06</b> 28	<b>07</b> 28	<b>↓</b>	<b>08</b> 56	<b>08</b> 56	<b></b>	<b>10</b> 45	<b>↓</b>	<b>12</b> 45	1	<b>14</b> 45	<b>16</b> 54
World's End Janes Lane	<b>↓</b>	<b>05</b> 53	<b>06</b> 33	<b>07</b> 33	<b>↓</b>	<b>09</b> 01	<b>09</b> 01	<b>→</b>	<b>10</b> 50	<b>↓</b>	<b>12</b> 50	Į.	<b>14</b> 50	<b>16</b> 59
Burgess Hill Rail Station 😂	1	<b>05</b> 56	<b>06</b> 36	<b>07</b> 38	<b>↓</b>	<b>09</b> 05	<b>09</b> 05	<b>↓</b>	<b>10</b> 54	<b>↓</b>	<b>12</b> 54	1	<b>14</b> 54	<b>17</b> 04
Burgess Hill Church Road	1	<b>05</b> 58	<b>06</b> 38	<b>07</b> 41	<b>↓</b>	<b>09</b> 08	<b>09</b> 08	<b>↓</b>	<b>10</b> 57	<b>↓</b>	<b>12</b> 57	1	<b>14</b> 57	<b>17</b> 07
Hassocks Stone Pound	<b>05</b> 29	<b>06</b> 06	<b>06</b> 47	<b>07</b> 51	<b>08</b> 05	<b>09</b> 17	<b>09</b> 17	<b>10</b> 03	<b>11</b> 06	<b>12</b> 01	<b>13</b> 06	<b>13</b> 36	<b>15</b> 07	<b>17</b> 19
Pyecombe Garage	<b>05</b> 33	<b>06</b> 10	<b>06</b> 51	<b>07</b> 56	<b>08</b> 10	<b>09</b> 22	<b>09</b> 22	<b>10</b> 07	<b>11</b> 10	<b>12</b> 05	<b>13</b> 10	<b>13</b> 40	<b>15</b> 11	<b>17</b> 24
Patcham Black Lion	<b>05</b> 37	<b>06</b> 14	<b>06</b> 55	0800	<b>08</b> 14	<b>09</b> 26	<b>09</b> 26	<b>10</b> 11	<b>11</b> 14	<b>12</b> 09	<b>13</b> 14	<b>13</b> 44	<b>15</b> 15	<b>17</b> 28
Preston Road Harrington Road	<b>05</b> 40	<b>06</b> 17	<b>06</b> 59	<b>08</b> 05	<b>08</b> 20	<b>09</b> 30	<b>09</b> 30	<b>10</b> 15	<b>11</b> 18	<b>12</b> 13	<b>13</b> 18	<b>13</b> 48	<b>15</b> 19	<b>17</b> 32
Brighton Old Steine		<b>06</b> 26	<b>07</b> 09	<b>08</b> 20	<b>08</b> 36	<b>09</b> 43	<b>09</b> 43	<b>10</b> 28	<b>11</b> 31	<b>12</b> 26	<b>13</b> 31	<b>14</b> 01	<b>15</b> 32	<b>17</b> 47
Brighton Churchill Square		ļ	1	1	<b>08</b> 41	1	↓	<b>10</b> 33	1	<b>12</b> 31	<b></b>	<b>14</b> 06	ļ	<b>↓</b>
Royal Sussex County Hospital		<b>06</b> 32	<b>07</b> 15	<b>08</b> 28		<b>09</b> 50	<b>09</b> 50		<b>11</b> 38		<b>13</b> 38		<b>15</b> 40	<b>17</b> 55

### **Mondays to Fridays cont...**

Service	273	273	271
Crawley Bus Station, Stop F 🤤	<b>16</b> 15	<b>17</b> 30	<b>18</b> 40
<b>Brighton Road</b> Wakehurst Drive	<b>16</b> 20	<b>17</b> 34	<b>18</b> 44
Pease Pottage Black Swan	<b>16</b> 26	<b>17</b> 45	<b>18</b> 50
Handcross Red Lion & Nymans	<b>16</b> 32	<b>17</b> 51	<b>18</b> 56
Staplefield Jolly Tanners	1	1	<b>18</b> 59
Warninglid Five Cross Roads	<b>16</b> 35	<b>17</b> 54	ļ
Bolney Ryecroft Road	<b>16</b> 39	<b>17</b> 58	1
Hickstead The Castle	<b>16</b> 43	<b>18</b> 03	<b>↓</b>
Sayers Common School	<b>16</b> 46	<b>18</b> 06	1
Albourne Traffic Lights	<b>16</b> 49	<b>18</b> 09	<b>1</b>
Hurstpierpoint Church	<b>16</b> 54	<b>18</b> 13	1
Cuckfield High Street	<b>↓</b>	<b>↓</b>	<b>19</b> 06
<b>Haywards Hth.</b> Perrymount Rd. <b>♦</b> (arr)	<b>↓</b>	<b>↓</b>	<b>19</b> 14
<b>Haywards Hth.</b> Perrymount Rd. <b>♦</b> (dep)	<b>↓</b>	1	<b>19</b> 16
Haywards Heath South Road	1	1	<b>19</b> 20
Haywards Heath Princess Royal Hosp	1	1	<b>19</b> 25
Wivelsfield Ote Hall Chapel	1	1	<b>19</b> 30
World's End Janes Lane	<b>↓</b>	<u> </u>	<b>19</b> 35
Burgess Hill Rail Station 😂	1	1	<b>19</b> 38
Burgess Hill Church Road	1	1	<b>19</b> 41
Hassocks Stone Pound	<b>17</b> 00	<b>18</b> 19	<b>19</b> 49
Pyecombe Garage	<b>17</b> 04	<b>18</b> 24	<b>19</b> 53
Patcham Black Lion	<b>17</b> 08	<b>18</b> 28	<b>19</b> 57
Preston Road Harrington Road	<b>17</b> 12	<b>18</b> 32	<b>20</b> 01
Brighton Old Steine	<b>17</b> 26	<b>18</b> 46	<b>20</b> 12
Brighton Churchill Square	<b>17</b> 31	<b>18</b> 51	ļ
Royal Sussex County Hospital	••••	****	<b>20</b> 18

### CODE:

Rail Station nearby. **SDO** Schooldays only. **NSD** Non-Schooldays.

**273** 

# Crawley - Handcross - Burgess Hill - Hassocks - Brighton

Crawley cross efield

Crawley crawley cross Bolue Hickstead

Cuckfield And Staple Burgers Pyecopatch Brighton

And Staple Bolue Hickstead

Cuckfield And Wive Burgers Pyecopatch Brighton

Daily 273

**273** 

Mondays to Saturdays from 29th April 2017

# Saturdays

Service	273	271	273	271	273	271	273	271	273	271	273
Crawley Bus Station, Stop F 😂	<b>07</b> 35	<b>08</b> 02	<b>09</b> 18	<b>09</b> 53	<b>11</b> 18	<b>11</b> 53	<b>13</b> 18	<b>13</b> 53	<b>15</b> 18	<b>15</b> 53	<b>17</b> 30
Brighton Road Wakehurst Drive 0	<b>07</b> 39	<b>08</b> 06	<b>09</b> 22	<b>09</b> 57	1122	<b>11</b> 57	<b>13</b> 22	<b>13</b> 57	<b>15</b> 22	<b>15</b> 57	<b>17</b> 34
Pease Pottage Black Swan 0	<b>)7</b> 44	<b>08</b> 12	<b>09</b> 28	<b>10</b> 03	<b>11</b> 28	<b>12</b> 03	<b>13</b> 28	<b>14</b> 03	<b>15</b> 28	<b>16</b> 03	<b>17</b> 39
Handcross Red Lion & Nymans 0	<b>)7</b> 49	<b>08</b> 17	<b>09</b> 34	<b>10</b> 09	<b>11</b> 34	<b>12</b> 09	<b>13</b> 34	<b>14</b> 09	<b>15</b> 34	<b>16</b> 09	<b>17</b> 45
Staplefield Jolly Tanners	1	<b>08</b> 20	1	<b>10</b> 12	1	<b>12</b> 12	ļ	<b>14</b> 12	ļ	<b>16</b> 12	<b>↓</b>
Warninglid Five Cross Roads	<b>07</b> 52	Į.	<b>09</b> 37	<b>↓</b>	<b>11</b> 37	1	<b>13</b> 37	<b>↓</b>	<b>15</b> 37	↓	<b>17</b> 48
Bolney Ryecroft Road 0	<b>07</b> 55	↓ ·	<b>09</b> 41	<b>1</b>	<b>11</b> 41	<b>1</b>	<b>13</b> 41	<b></b>	<b>15</b> 41	<b>↓</b>	<b>17</b> 52
	<b>07</b> 59	Į.	<b>09</b> 45	Į.	<b>11</b> 45	<b>↓</b>	<b>13</b> 45	<b>↓</b>	<b>15</b> 45	↓	<b>17</b> 56
Sayers Common School 0	<b>08</b> 02	ļ	<b>09</b> 48	<b>↓</b>	<b>11</b> 48	<b>↓</b>	<b>13</b> 48	<b>↓</b>	<b>15</b> 48	<b>↓</b>	<b>17</b> 59
	<b>08</b> 05	<b>+</b>	<b>09</b> 51	<b>+</b>	<b>11</b> 51	<b>1</b>	<b>13</b> 51	<b>↓</b>	<b>15</b> 51	<b>+</b>	<b>18</b> 02
Hurstpierpoint Church 0	<b>08</b> 09	<b>↓</b>	<b>09</b> 56	<b>↓</b>	<b>11</b> 56	1	<b>13</b> 56	<b>↓</b>	<b>15</b> 56	<b>↓</b>	<b>18</b> 06
Cuckfield High Street	<b>↓</b>	<b>08</b> 28	<b>1</b>	<b>10</b> 20	<b>1</b>	<b>12</b> 20	Į.	<b>14</b> 20	↓ ·	<b>16</b> 20	
Haywards Hth. Perrymount Rd. € (arr)	<b>↓</b>	<b>08</b> 36	<b>↓</b>	<b>10</b> 28	<b>1</b>	<b>12</b> 28	Ļ	<b>14</b> 28	Ļ	<b>16</b> 28	<b>↓</b>
<b>Haywards Hth.</b> Perrymount Rd. �� (dep)	1	<b>08</b> 38	1	<b>10</b> 30	1	<b>12</b> 30	ļ	<b>14</b> 30	ļ	<b>16</b> 30	<b>↓</b>
Haywards Heath South Road	<b>↓</b>	<b>08</b> 41	Į.	<b>10</b> 35	<b>↓</b>	<b>12</b> 35	Ļ	<b>14</b> 35	Ļ	<b>16</b> 34	<b></b>
Haywards Heath Princess Royal Hosp	↓	<b>08</b> 45	Į.	<b>10</b> 40	↓	<b>12</b> 40	Ļ	<b>14</b> 40	į.	<b>16</b> 39	ļ
Wivelsfield Ote Hall Chapel	1	<b>08</b> 50	1	<b>10</b> 45	1	<b>12</b> 45	↓	<b>14</b> 45	ļ	<b>16</b> 44	1
World's End Janes Lane	<b>↓</b>	<b>08</b> 55	<b>1</b>	<b>10</b> 50	<b>↓</b>	<b>12</b> 50	↓	<b>14</b> 50	<b>↓</b>	<b>16</b> 49	<b>1</b>
Burgess Hill Rail Station €	1	<b>08</b> 58	1	<b>10</b> 54	1	<b>12</b> 54	<b>↓</b>	<b>14</b> 54	<b>↓</b>	<b>16</b> 53	1
Burgess Hill Church Road	1	<b>09</b> 01	1	<b>10</b> 57	1	<b>12</b> 57	↓	<b>14</b> 57	ļ	<b>16</b> 56	1
Hassocks Stone Pound	<b>08</b> 14	<b>09</b> 10	<b>10</b> 01	1106	<b>12</b> 01	<b>13</b> 06	<b>14</b> 01	<b>15</b> 06	<b>16</b> 01	<b>17</b> 05	<b>18</b> 11
Pyecombe Garage0	<b>08</b> 18	<b>09</b> 14	<b>10</b> 05	<b>11</b> 10	<b>12</b> 05	<b>13</b> 10	<b>14</b> 05	<b>15</b> 10	<b>16</b> 05	<b>17</b> 09	<b>18</b> 15
Patcham Black Lion 0	<b>08</b> 22	<b>09</b> 18	<b>10</b> 09	<b>11</b> 14	<b>12</b> 09	<b>13</b> 14	<b>14</b> 09	<b>15</b> 14	<b>16</b> 09	<b>17</b> 13	<b>18</b> 19
Preston Road Harrington Road 0	<b>08</b> 26	<b>09</b> 22	<b>10</b> 13	<b>11</b> 18	<b>12</b> 13	<b>13</b> 18	<b>14</b> 13	<b>15</b> 18	<b>16</b> 13	<b>17</b> 17	<b>18</b> 23
Brighton Old Steine		<b>09</b> 33	<b>10</b> 26	<b>11</b> 31	<b>12</b> 26	<b>13</b> 31	<b>14</b> 26	<b>15</b> 31	<b>16</b> 26	<b>17</b> 29	<b>18</b> 35
Brighton Churchill Square	<b>08</b> 41	Į.	<b>10</b> 31	Į.	<b>12</b> 31	<b>↓</b>	<b>14</b> 31	<b>↓</b>	<b>16</b> 31	ļ	<b>18</b> 40
		<b>09</b> 40		<b>11</b> 38		<b>13</b> 38		<b>15</b> 38		<b>17</b> 36	

# **Sundays and Public Holidays**

Service	271	271	271	271
<b>Crawley</b> Bus Station, Stop F €	<b>08</b> 50	<b>10</b> 50	<b>13</b> 20	<b>15</b> 20
<b>Brighton Road</b> Wakehurst Drive	<b>08</b> 54	<b>10</b> 54	<b>13</b> 24	<b>15</b> 24
Pease Pottage Black Swan	<b>08</b> 59	<b>10</b> 59	<b>13</b> 29	<b>15</b> 29
Handcross Red Lion & Nymans		<b>11</b> 05	<b>13</b> 35	<b>15</b> 35
Staplefield Jolly Tanners	<b>09</b> 08	<b>11</b> 08	<b>13</b> 38	<b>15</b> 38
Cuckfield High Street	<b>09</b> 15	<b>11</b> 15	<b>13</b> 45	<b>15</b> 45
<b>Haywards Hth.</b> Perrymount Rd. �� (arr)	<b>09</b> 23	<b>11</b> 23	<b>13</b> 53	<b>15</b> 53
<b>Haywards Hth.</b> Perrymount Rd. ♦ (dep)	<b>09</b> 25	<b>11</b> 25	<b>13</b> 55	<b>15</b> 55
Haywards Heath South Road	<b>09</b> 28	<b>11</b> 28	<b>13</b> 58	<b>15</b> 58
<b>Haywards Heath</b> Princess Royal Hosp	<b>09</b> 33	<b>11</b> 33	<b>14</b> 03	<b>16</b> 03
Wivelsfield Ote Hall Chapel	<b>09</b> 38	<b>11</b> 38	<b>14</b> 08	<b>16</b> 08
World's End Janes Lane	<b>09</b> 43	<b>11</b> 43	<b>14</b> 13	<b>16</b> 13
Burgess Hill Rail Station 😂		<b>11</b> 47	<b>14</b> 17	<b>16</b> 17
Burgess Hill Church Road	<b>09</b> 49	<b>11</b> 49	<b>14</b> 19	<b>16</b> 19
Hassocks Stone Pound	<b>09</b> 58	<b>11</b> 58	<b>14</b> 28	<b>16</b> 28
Pyecombe Garage	<b>10</b> 02	<b>12</b> 02	<b>14</b> 32	<b>16</b> 32
Patcham Black Lion	<b>10</b> 06	<b>12</b> 06	<b>14</b> 36	<b>16</b> 36
<b>Preston Road</b> Harrington Road	<b>10</b> 10	<b>12</b> 10	<b>14</b> 40	<b>16</b> 40
Brighton Old Steine		<b>12</b> 22	<b>14</b> 52	<b>16</b> 51
Royal Sussex County Hospital	<b>10</b> 28	<b>12</b> 29	<b>14</b> 59	<b>16</b> 58

**CODE:** ② Rail Station nearby.



# Brighton - Hassocks - Burgess Hill - Handcross - Crawley

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**273** 

Mondays to Saturdays from 29th April 2017

<b>Mondays to Fridays</b>	Monc	lays t	to Fri	days
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Code										SDO	NSD	SDO	NSD	
Service	271	273	271	271	273	271	273	271	273	271	271	273	273	271
Royal Sussex County Hospital			<b>07</b> 35	<b>08</b> 40		<b>10</b> 00		<b>11</b> 50		<b>14</b> 05	<b>14</b> 05			<b>16</b> 05
Brighton Churchill Square, Stop F	1		1	1	<b>08</b> 54	1	<b>10</b> 54	ļ	<b>12</b> 58	<b>↓</b>	↓	<b>14</b> 25	<b>14</b> 25	<b>↓</b>
Brighton Old Steine, Stop D	<b>06</b> 03	<b>07</b> 26	<b>07</b> 44	<b>08</b> 49	<b>08</b> 59	<b>10</b> 08	<b>10</b> 59	<b>11</b> 58	<b>13</b> 03	<b>14</b> 13	<b>14</b> 13	<b>14</b> 30	<b>14</b> 30	<b>16</b> 14
Preston Road Harrington Road	<b>06</b> 09	<b>07</b> 35	<b>07</b> 55	<b>08</b> 59	<b>09</b> 08	<b>10</b> 17	<b>11</b> 08	<b>12</b> 07	<b>13</b> 12	<b>14</b> 22	<b>14</b> 22	<b>14</b> 39	<b>14</b> 39	<b>16</b> 25
Patcham Black Lion	<b>06</b> 15	<b>07</b> 45	<b>08</b> 05	<b>09</b> 07	<b>09</b> 17	<b>10</b> 24	<b>11</b> 15	<b>12</b> 14	<b>13</b> 19	<b>14</b> 29	<b>14</b> 29	<b>14</b> 46	<b>14</b> 46	<b>16</b> 34
Pyecombe Garage	<b>06</b> 19	<b>07</b> 49	<b>08</b> 10	<b>09</b> 11	<b>09</b> 21	<b>10</b> 28	<b>11</b> 19	<b>12</b> 18	<b>13</b> 23	<b>14</b> 33	<b>14</b> 33	<b>14</b> 50	<b>14</b> 50	<b>16</b> 38
Hassocks Stone Pound		<b>07</b> 55	<b>08</b> 17	<b>09</b> 16	<b>09</b> 26	<b>10</b> 33	<b>11</b> 23	<b>12</b> 23	<b>13</b> 27	<b>14</b> 38	<b>14</b> 38	<b>14</b> 54	<b>14</b> 54	<b>16</b> 43
Burgess Hill Church Road	<b>06</b> 30	Į.	<b>08</b> 27	<b>09</b> 26	į.	<b>10</b> 43	1	<b>12</b> 33	<b>↓</b>	<b>14</b> 48	<b>14</b> 48	↓	↓	<b>16</b> 54
Burgess Hill Rail Station 😂	<b>06</b> 31	<b>↓</b>	<b>08</b> 28	<b>09</b> 27	Į.	<b>10</b> 44	<b>↓</b>	<b>12</b> 34	<b>↓</b>	<b>14</b> 49	<b>14</b> 49	↓	↓ ↓	<b>16</b> 55
World's End Janes Lane	<b>06</b> 35	Į.	<b>08</b> 34	<b>09</b> 32	Ļ	<b>10</b> 49	<b>↓</b>	<b>12</b> 39	↓	<b>14</b> 54	<b>14</b> 54	↓	<b>↓</b>	<b>17</b> 00
Wivelsfield Ote Hall Chapel	<b>06</b> 39	<b>↓</b>	<b>08</b> 38	<b>09</b> 36	↓	<b>10</b> 53	<b>↓</b>	<b>12</b> 43	<b>↓</b>	<b>14</b> 58	<b>14</b> 58	↓	↓ ↓	<b>17</b> 04
Haywards Heath Princess Royal Hosp	<b>06</b> 46	Į.	<b>08</b> 47	<b>09</b> 44	į.	<b>11</b> 00	<b>↓</b>	<b>12</b> 50	<b>↓</b>	<b>15</b> 05	<b>15</b> 05	į.	↓ ↓	<b>17</b> 13
Haywards Heath South Road	<b>06</b> 48	<b>↓</b>	<b>08</b> 51	<b>09</b> 48	<b>↓</b>	<b>11</b> 03	1	<b>12</b> 53	<b>↓</b>	<b>15</b> 09	<b>15</b> 09	<b>↓</b>	<b>↓</b>	<b>17</b> 17
Haywards Hth. Perrymount Rd. € (arr)	<b>06</b> 51	<b>↓</b>	<b>08</b> 55	<b>09</b> 52	Ļ	<b>11</b> 07	ļ	<b>12</b> 57	<b>↓</b>	<b>15</b> 14	<b>15</b> 14	↓	↓ ↓	<b>17</b> 22
<b>Haywards Hth.</b> Perrymount Rd. <i>€</i> (dep)	<b>06</b> 53	<b>↓</b>	<b>08</b> 58	<b>09</b> 54	<b>↓</b>	<b>11</b> 09	1	<b>12</b> 59	<b>↓</b>	<b>15</b> 16	<b>15</b> 16	<b>↓</b>	↓ ↓	<b>17</b> 25
Warden Park School Grounds	į.	į.	<b>↓</b>	<b>+</b>	Ļ	Ļ	<b>↓</b>	į.	↓	<b>15</b> 29	<b>↓</b>	↓	į.	<b>—</b>
Cuckfield High Street	<b>07</b> 01	↓	<b>09</b> 06	<b>10</b> 02	<b>↓</b>	<b>11</b> 17	1	<b>13</b> 07	<b>↓</b>	<b>15</b> 32	<b>15</b> 24	↓	↓ ↓	<b>17</b> 34
Hurstpierpoint Church	↓	<b>08</b> 00	ļ	<b>↓</b>	<b>09</b> 31	Ļ	<b>11</b> 28	į.	<b>13</b> 32	<b>↓</b>	↓	<b>14</b> 59	<b>14</b> 59	<b>↓</b>
Albourne Traffic Lights		<b>08</b> 04	<b>↓</b>	<b>↓</b>	<b>09</b> 35	<b>↓</b>	<b>11</b> 32	↓	<b>13</b> 36	<b>↓</b>	<b>↓</b>	<b>15</b> 03	<b>15</b> 03	<b>+</b>
Sayers Common School	↓	<b>08</b> 07	ļ	ļ	<b>09</b> 38	ļ	<b>11</b> 35	į.	<b>13</b> 39	<b>↓</b>	↓ ↓	<b>15</b> 06	<b>15</b> 06	į.
Hickstead The Castle	1	<b>08</b> 10	1	1	<b>09</b> 41	1	<b>11</b> 38	<b>↓</b>	<b>13</b> 42	<b>↓</b>	↓	<b>15</b> 09	<b>15</b> 09	<b>↓</b>
Bolney Ryecroft Road		<b>08</b> 14	į.	<b>↓</b>	<b>09</b> 45	Ļ	<b>11</b> 42	į.	<b>13</b> 46	<b>↓</b>	<b>↓</b>	<b>15</b> 13	<b>15</b> 13	<b>+</b>
Warninglid Five Cross Roads	1	<b>08</b> 17	1	1	<b>09</b> 48	1	<b>11</b> 45	<b>↓</b>	<b>13</b> 49	<b>↓</b>	↓	<b>15</b> 16	<b>15</b> 16	<b>↓</b>
Staplefield Jolly Tanners	<b>07</b> 09	<b>↓</b>	<b>09</b> 14	<b>10</b> 10	Ļ	<b>11</b> 25	<b>↓</b>	<b>13</b> 15	<b>↓</b>	<b>15</b> 41	<b>15</b> 32	<b>↓</b>	↓ ↓	<b>17</b> 44
Handcross Truggers	1	<b>08</b> 21	<b>↓</b>	1	<b>09</b> 52	<b>↓</b>	<b>11</b> 49	↓	<b>13</b> 53	<b>↓</b>	<b>↓</b>	<b>15</b> 20	<b>15</b> 20	<b>→</b>
Handcross Red Lion & Nymans		<b>↓</b>	<b>09</b> 17	<b>10</b> 13	Į.	<b>11</b> 28	<b>↓</b>	<b>13</b> 18	<b>↓</b>	<b>15</b> 44	<b>15</b> 35	Į.	↓	<b>17</b> 47
Pease Pottage Black Swan	<b>07</b> 18	<b>08</b> 28	<b>09</b> 23	<b>10</b> 19	<b>09</b> 58	<b>11</b> 34	<b>11</b> 55	<b>13</b> 24	<b>13</b> 59	<b>15</b> 52	<b>15</b> 41	<b>15</b> 26s	<b>15</b> 26	<b>17</b> 53
Brighton Road Wakehurst Drive		<b>08</b> 36	<b>09</b> 28	<b>10</b> 24	<b>10</b> 03	<b>11</b> 39	<b>12</b> 00	<b>13</b> 29	<b>14</b> 04	<b>15</b> 57	<b>15</b> 47	Į.	<b>15</b> 31	<b>18</b> 00
Crawley Bus Station @	<b>07</b> 28	<b>08</b> 41	<b>09</b> 33	<b>10</b> 29	<b>10</b> 08	<b>11</b> 44	<b>12</b> 05	<b>13</b> 34	<b>14</b> 09	<b>16</b> 02	<b>15</b> 52	<b>15</b> 54	<b>15</b> 36	<b>18</b> 06
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### Mondays to Fridays cont...

Service		273	271	273	271	<u> 271</u>
Royal Sussex County Hospital	<b>16</b> 50		<b>18</b> 08		<b>19</b> 25	<b>22</b> 25
<b>Brighton</b> Churchill Square, Stop F	ļ	<b>17</b> 47	<b>↓</b>	<b>19</b> 06	ļ	ļ
Brighton Old Steine, Stop D		<b>17</b> 53	<b>18</b> 16	<b>19</b> 11	<b>19</b> 32	<b>22</b> 31
<b>Preston Road</b> Harrington Road	<b>17</b> 10	<b>18</b> 05	<b>18</b> 25	<b>19</b> 19	<b>19</b> 40	<b>22</b> 38
Patcham Black Lion	<b>17</b> 19	<b>18</b> 13	<b>18</b> 33	<b>19</b> 25	<b>19</b> 46	<b>22</b> 43
Pyecombe Garage	<b>17</b> 23	<b>18</b> 17	<b>18</b> 37	<b>19</b> 29	<b>19</b> 50	<b>22</b> 46
Hassocks Stone Pound	<b>17</b> 28	<b>18</b> 21	<b>18</b> 42	<b>19</b> 33	<b>19</b> 54	<b>22</b> 49
Burgess Hill Church Road		↓	<b>18</b> 52	↓	<b>20</b> 04	<b>22</b> 56
Burgess Hill Rail Station €	<b>17</b> 40	1	<b>18</b> 53	<b>↓</b>	<b>20</b> 05	<b>22</b> 57
World's End Janes Lane		<b>↓</b>	<b>18</b> 58	<b>↓</b>	<b>20</b> 09	<b>23</b> 01
Wivelsfield Ote Hall Chapel	<b>17</b> 49	<b>↓</b>	<b>19</b> 02	<b>↓</b>	<b>20</b> 13	<b>23</b> 05
Haywards Heath Princess Royal Hosp	<b>17</b> 58	<b>↓</b>	<b>19</b> 09	<b>↓</b>	<b>20</b> 19	<b>23</b> 11
Haywards Heath South Road	<b>18</b> 01	<b>↓</b>	<b>19</b> 11	<b>↓</b>	<b>20</b> 21	<b>23</b> 13
<b>Haywards Hth.</b> Perrymount Rd. <i>€</i> (arr)	<b>18</b> 05	<b>↓</b>	<b>19</b> 14	<b>↓</b>	<b>20</b> 24	<b>23</b> 16
Havenarde Hth Dorrymount Dd (don)	<b>19</b> 07		<b>19</b> 16	<b>↓</b>	<b>20</b> 25	<b>23</b> 17
<b>Haywards Hth.</b> Perrymount Rd. <b>②</b> (dep)	100/	+	1310	*	2023	231/
Cuckfield High Street	<b>18</b> 15	<del>-</del>	<b>19</b> 24	<del>-</del>	<b>20</b> 32	<b>23</b> 24
Cuckfield High Street Hurstpierpoint Church	<b>18</b> 15 ↓	<b>18</b> 26				
Cuckfield High Street	<b>18</b> 15 ↓	1 <b>8</b> 26 1 <b>8</b> 30		1		
Cuckfield High Street Hurstpierpoint Church	<b>18</b> 15 ↓ ↓			↓ <b>19</b> 38		
Cuckfield High Street Hurstpierpoint Church Albourne Traffic Lights	<b>18</b> 15 ↓ ↓	<b>18</b> 30		↓ <b>19</b> 38 <b>19</b> 42		
Cuckfield High Street	<b>18</b> 15 ↓ ↓ ↓ ↓	<b>18</b> 30 <b>18</b> 33		1938 1942 1945		
Cuckfield High Street	<b>18</b> 15 ↓ ↓ ↓ ↓	<b>18</b> 30 <b>18</b> 33 <b>18</b> 36		1938 1942 1945 1948		
Cuckfield High Street	<b>18</b> 15 ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	<b>18</b> 30 <b>18</b> 33 <b>18</b> 36 <b>18</b> 40	<b>19</b> 24 ↓ ↓ ↓	1938 1942 1945 1948 1952		
Cuckfield High Street	<b>18</b> 15 ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	1830 1833 1836 1840 1843	1924 ↓ ↓ ↓ ↓	1938 1942 1945 1948 1952 1955	<b>20</b> 32	<b>23</b> 24  ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓
Cuckfield High Street	<b>18</b> 15 ↓ ↓ ↓ ↓ <b>18</b> 23 ↓	<b>18</b> 30 <b>18</b> 33 <b>18</b> 36 <b>18</b> 40 <b>18</b> 43 ↓	<b>19</b> 24 ↓ ↓ ↓ ↓ ↓ <b>19</b> 31	↓ 1938 1942 1945 1948 1952 1955 ↓	2032 ↓ ↓ ↓ ↓ 2039 ↓ 2042	<b>23</b> 24  ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓
Cuckfield High Street	<b>18</b> 15 ↓ ↓ ↓ ↓ <b>18</b> 23 ↓	1830 1833 1836 1840 1843 ↓ 1847	<b>19</b> 24 ↓ ↓ ↓ ↓ <b>19</b> 31	↓ 1938 1942 1945 1948 1952 1955 ↓ 1959	<b>20</b> 32 ↓ ↓ ↓ ↓ ↓ <b>20</b> 39	2324 ↓ ↓ ↓ ↓ 2331 ↓
Cuckfield High Street	<b>18</b> 15 ↓ ↓ ↓ <b>18</b> 23 ↓ <b>18</b> 26 <b>18</b> 32 <b>18</b> 37	1830 1833 1836 1840 1843 ↓ 1847	<b>19</b> 24 ↓ ↓ ↓ ↓ <b>19</b> 31 ↓ <b>19</b> 34	↓ 1938 1942 1945 1948 1952 1955 ↓ 1959	2032 ↓ ↓ ↓ ↓ 2039 ↓ 2042	2324 ↓ ↓ ↓ 2331 ↓ 2334

**CODE:** © Rail Station nearby.

**SDO** Schooldays only.

**NSD** Non-Schooldays.)

S On schooldays operates via Holy Trinity School at 1537, then Thomas Bennett School at 1542 and Furnace Green Charcoal Burner at 1548.

# Brighton - Hassocks - Burgess Hill - Handcross - Crawley

olney Handcross Handcross

**273** 

Mondays to Saturdays from 29th April 2017

Daily

### Saturdays

Brighton Patcham

Pyecombe

Service	273	273	271	273	271	273	271	273	271	273	271	271	273
Royal Sussex County Hospital			<b>09</b> 50		<b>11</b> 50		<b>13</b> 50		<b>15</b> 50			<b>17</b> 50	
<b>Brighton</b> Churchill Square, Stop F		<b>08</b> 59	<b>↓</b>	<b>10</b> 58	<b>↓</b>	<b>12</b> 58	ļ	<b>14</b> 58	ļ	<b>16</b> 58		Ļ	<b>18</b> 58
Brighton Old Steine, Stop D		<b>09</b> 04	<b>09</b> 58	<b>11</b> 03	<b>11</b> 58	<b>13</b> 03	<b>13</b> 58	<b>15</b> 03	<b>15</b> 58	<b>17</b> 03		<b>17</b> 58	<b>19</b> 02
Preston Road Harrington Road		<b>09</b> 13	<b>10</b> 07	<b>11</b> 12	<b>12</b> 07	<b>13</b> 12	<b>14</b> 07	<b>15</b> 12	<b>16</b> 07	<b>17</b> 12		<b>18</b> 07	<b>19</b> 11
Patcham Black Lion		<b>09</b> 19	<b>10</b> 13	<b>11</b> 19	<b>12</b> 14	<b>13</b> 19	<b>14</b> 14	<b>15</b> 19	<b>16</b> 14	<b>17</b> 19		<b>18</b> 14	<b>19</b> 16
Pyecombe Garage		<b>09</b> 23	<b>10</b> 17	<b>11</b> 23	<b>12</b> 18	<b>13</b> 23	<b>14</b> 18	<b>15</b> 23	<b>16</b> 18	<b>17</b> 23		<b>18</b> 18	<b>19</b> 20
Hassocks Stone Pound		<b>09</b> 27	<b>10</b> 21	<b>11</b> 27	<b>12</b> 23	<b>13</b> 27	<b>14</b> 23	<b>15</b> 27	<b>16</b> 23	<b>17</b> 27		<b>18</b> 22	<b>19</b> 24
Burgess Hill Church Road		<b>↓</b>	<b>10</b> 31	ļ	<b>12</b> 33	1	<b>14</b> 33	1	<b>16</b> 33	1		<b>18</b> 32	↓
Burgess Hill Rail Station 😂		<b>↓</b>	<b>10</b> 32	ļ	<b>12</b> 34	<b>↓</b>	<b>14</b> 34	<b>↓</b>	<b>16</b> 34	<b>↓</b>		<b>18</b> 33	Ļ
World's End Janes Lane		Į.	<b>10</b> 37	Į.	<b>12</b> 39	<b>↓</b>	<b>14</b> 39	<b>↓</b>	<b>16</b> 39	<b>↓</b>		<b>18</b> 38	
Wivelsfield Ote Hall Chapel		<b>↓</b>	<b>10</b> 41	ļ	<b>12</b> 43	<b>↓</b>	<b>14</b> 43	<b>↓</b>	<b>16</b> 43	<b>↓</b>		<b>18</b> 42	Ļ
Haywards Heath Princess Royal Hosp		<b>↓</b>	<b>10</b> 48	Į.	<b>12</b> 50	<b>↓</b>	<b>14</b> 50	<b>↓</b>	<b>16</b> 50	<b>↓</b>	<b>18</b> 08	<b>18</b> 49	<b>↓</b>
Haywards Heath South Road		<b>↓</b>	<b>10</b> 51	1	<b>12</b> 53	1	<b>14</b> 53	1	<b>16</b> 53	1	<b>18</b> 11	<b>18</b> 51	<b>↓</b>
Haywards Hth. Perrymount Rd. € (arr)		<b>↓</b>	<b>10</b> 55	1	<b>12</b> 57	1	<b>14</b> 57	1	<b>16</b> 57	<b>↓</b>	<b>18</b> 15	<b>18</b> 54	<b>↓</b>
<b>Haywards Hth.</b> Perrymount Rd. �� (dep)		<b>↓</b>	<b>10</b> 57	ļ	<b>12</b> 59	1	<b>14</b> 59	<b>↓</b>	<b>16</b> 59	1	<b>18</b> 15	<b>18</b> 56	<b>↓</b>
Cuckfield High Street		Į.	<b>11</b> 05	ļ	<b>13</b> 07	<b>↓</b>	<b>15</b> 07	<b>↓</b>	<b>17</b> 07	<b>↓</b>	<b>18</b> 23	<b>19</b> 04	Ļ
Hurstpierpoint Church		<b>09</b> 32	1	<b>11</b> 32	1	<b>13</b> 32	1	<b>15</b> 32	1	<b>17</b> 32	1	<b>↓</b>	<b>19</b> 29
Albourne Traffic Lights		<b>09</b> 36	1	<b>11</b> 36	<b>↓</b>	<b>13</b> 36	Ļ	<b>15</b> 36	Ļ	<b>17</b> 36	<b>↓</b>	ļ	<b>19</b> 32
Sayers Common School		<b>09</b> 39	1	<b>11</b> 39	ļ	<b>13</b> 39	Ļ	<b>15</b> 39	Ļ	<b>17</b> 39	ļ	Ļ	<b>19</b> 35
Hickstead The Castle		<b>09</b> 42	ļ	<b>11</b> 42	<b>↓</b>	<b>13</b> 42	Ļ	<b>15</b> 42	Ļ	<b>17</b> 42	Į.	Ļ	<b>19</b> 37
Bolney Ryecroft Road	<b>08</b> 31	<b>09</b> 46	1	<b>11</b> 46	<b>↓</b>	<b>13</b> 46	<b>↓</b>	<b>15</b> 46	<b>↓</b>	<b>17</b> 46	1	<b>↓</b>	<b>19</b> 41
Warninglid Five Cross Roads	<b>08</b> 34	<b>09</b> 49	1	<b>11</b> 49	1	<b>13</b> 49	1	<b>15</b> 49	1	<b>17</b> 49	1	<b>↓</b>	<b>19</b> 44
Staplefield Jolly Tanners	<b>↓</b>	<b>↓</b>	<b>11</b> 13	1	<b>13</b> 15	1	<b>15</b> 15	1	<b>17</b> 15	1	<b>18</b> 31	<b>19</b> 12	<b>↓</b>
Handcross Truggers	<b>08</b> 38	<b>09</b> 53	<b>1</b>	<b>11</b> 53	↓	<b>13</b> 53	ļ	<b>15</b> 53	ļ	<b>17</b> 53	↓	Ļ	<b>19</b> 47
Handcross Red Lion & Nymans	į.	į.	<b>11</b> 16	ļ	<b>13</b> 18	ļ	<b>15</b> 18	Ļ	<b>17</b> 18	Ļ	<b>18</b> 34	<b>19</b> 15	Ļ
Pease Pottage Black Swan	<b>08</b> 44	<b>09</b> 59	<b>11</b> 22	<b>11</b> 59	<b>13</b> 24	<b>13</b> 59	<b>15</b> 24	<b>15</b> 59	<b>17</b> 24	<b>17</b> 59	<b>18</b> 39	<b>19</b> 20	<b>19</b> 52
Brighton Road Wakehurst Drive		<b>10</b> 04	<b>11</b> 27	<b>12</b> 04	<b>13</b> 29	<b>14</b> 04	<b>15</b> 29	<b>16</b> 04	<b>17</b> 29	<b>18</b> 04	<b>18</b> 43	<b>19</b> 24	<b>19</b> 56
Crawley Bus Station 😂	<b>08</b> 53	<b>10</b> 09	<b>11</b> 32	<b>12</b> 09	<b>13</b> 34	<b>14</b> 09	<b>15</b> 34	<b>16</b> 09	<b>17</b> 34	<b>18</b> 09	<b>18</b> 47	<b>19</b> 28	<b>20</b> 00

# **Sundays and Public Holidays**

Service	271	271	271	271
Royal Sussex County Hospital	<b>10</b> 44	<b>12</b> 43	<b>15</b> 18	<b>17</b> 18
Brighton Old Steine		<b>12</b> 50	<b>15</b> 25	<b>17</b> 25
Preston Road Harrington Road	<b>11</b> 00	<b>12</b> 59	<b>15</b> 34	<b>17</b> 34
Patcham Black Lion	<b>11</b> 06	<b>13</b> 06	<b>15</b> 41	<b>17</b> 41
Pyecombe Garage	<b>11</b> 10	<b>13</b> 10	<b>15</b> 45	<b>17</b> 45
Hassocks Stone Pound		<b>13</b> 14	<b>15</b> 49	<b>17</b> 49
Burgess Hill Church Road	<b>11</b> 23	<b>13</b> 23	<b>15</b> 58	<b>17</b> 58
Burgess Hill Rail Station €	<b>11</b> 24	<b>13</b> 24	<b>15</b> 59	<b>17</b> 59
World's End Janes Lane		<b>13</b> 29	<b>16</b> 04	<b>18</b> 04
Wivelsfield Ote Hall Chapel	<b>11</b> 33	<b>13</b> 33	<b>16</b> 08	<b>18</b> 08
Haywards Heath Princess Royal Hosp	<b>11</b> 39	<b>13</b> 39	<b>16</b> 14	<b>18</b> 14
Haywards Heath South Road	<b>11</b> 41	<b>13</b> 41	<b>16</b> 16	<b>18</b> 16
<b>Haywards Hth.</b> Perrymount Rd.�(arr)	<b>11</b> 45	<b>13</b> 45	<b>16</b> 20	<b>18</b> 20
<b>Haywards Hth.</b> Perrymount Rd. �� (dep)	<b>11</b> 47	<b>13</b> 47	<b>16</b> 22	<b>18</b> 22
Cuckfield High Street	<b>11</b> 55	<b>13</b> 55	<b>16</b> 30	<b>18</b> 30
Staplefield Jolly Tanners	<b>12</b> 02	<b>14</b> 02	<b>16</b> 37	<b>18</b> 37
Handcross Red Lion & Nymans	<b>12</b> 05	<b>14</b> 05	<b>16</b> 40	<b>18</b> 40
Pease Pottage Black Swan	<b>12</b> 10	<b>14</b> 10	<b>16</b> 45	<b>18</b> 45
Brighton Road Wakehurst Drive	<b>12</b> 14	<b>14</b> 14	<b>16</b> 49	<b>18</b> 49
Crawley Bus Station 😂	<b>12</b> 18	<b>14</b> 18	<b>16</b> 53	<b>18</b> 53

CODE: © Rail Station nearby.

### HURSTPIERPOINT - Hassocks - Burgess Hill - Haywards Heath - CRAWLEY

Including school route 331 from Sayers Common to Downlands School

33

Mondays to Fridays (except Public Holidays)

					331	( )					
		Sch	Sch		Sch	Sch					
HURSTPIERPOINT, Willow Way	0646			0746	В	0815	0846	0946	1046	1146	1246
Hurstpierpoint Church	0649			0750	0812	0821	0850	0950	1050	1150	1250
Hassocks, Stone Pound	0654			0756	0819	0828	0856	0956	1056	1156	1256
Hassocks, Post Office	0656			0758	0821	0830	0858	0958	1058	1158	1258
Grand Avenue, Thatched Inn	0659			0801	D	D	0901	1001	1101	1201	1301
Burgess Hill Station	0704		0735	0807			0907	1007	1107	1207	1307
BURGESS HILL, Church Road, stop A	0706		0737	0809			0909	1009	1109	1209	1309
Maple Drive, Petworth Drive	0710		0745 <b>A</b>	0813			0913	1013	1113	1213	1313
Wivelsfield Station	0714	0745	0750	0817			0917	1017	1117	1217	1317
Wivelsfield Green, Ote Hall Chapel	0720	0751	▼	0823			0923	1023	1123	1223	1323
Ashenground Estate, Sheppeys	0725	0756	0758	0828			0928	1028	1128	1228	1328
Princess Royal Hospital	0729	▼	▼	0833			0933	1033	1133	1233	1333
HAYWARDS HEATH, South Road	0732	0801	0803	0836			0936	1036	1136	1236	1336
Perrymount Road	0735	▼	0808	0840			0940	1040	1140	1240	1340
Haywards Heath Sainsburys	▼	▼	▼	0842			0942	1042	1142	1242	1342
Cuckfield, Warden Park School	0745S	0810	0818				•		•		▼
Cuckfield, Broad Street							0950		1150		1350
Cuckfield, Longacre Crescent							0953		1153		1353
Whitemans Green, Post Office							0956		1156		1356
Balcombe Station							1002		1202		1402
Balcombe, Half Moon							1004		1204		1404
Cowdray Arms, Balcombe Road							1007		1207		
Pound Hill, Worth Road Parade							1011		1211		
Three Bridges Station							1014		1214		
CRAWLEY, Bus Station, Bay E							1022		1222		
		$\bigcup$	$\overline{}$		$\overline{}$	$\overline{}$					

		9
HURSTPIERPOINT, Willow Way	1346	
Hurstpierpoint Church	1350	
Hassocks, Stone Pound	1356	
Hassocks, Post Office	1358	
Grand Avenue, Thatched Inn	1401	
Burgess Hill Station	1407	
BURGESS HILL, Church Road	1409	
Maple Drive, Petworth Drive	1413	
Wivelsfield Station	1417	
Wivelsfield Green, Ote Hall Chapel	1423	
Ashenground Estate, Sheppeys	1428	
Princess Royal Hospital	1433	
Haywards Heath, South Road	1436	
Perrymount Road	1440	
HAYWARDS HEATH Sainsburys	1442	
Cuckfield, Warden Park School		1
Cuckfield, Broad Street		1
Cuckfield, Longacre Crescent		
Whitemans Green, Post Office		1
Balcombe Station		1
Balcombe, Half Moon		1
Cowdray Arms, Balcombe Road		1

Sch )	Sch	( H )				
	1446	1446	1546	1646	1746	
	1450	1450	1550	1650	1750	
	1456	1456	1556	1656	1756	
	1458	1458	1558	1658	1758	
	1501	1501	1601	1701	1801	
		1507	1607	1707	1807	
		1509	1609	1709	1809	
		1513	1613	1713		
		1517	1617	1717		
		1523	1623	1723		
		1528	1628	1728		
		1533	1633	1733		
		1536	1636	1736		
		1540	1640	1740		
			1642	1742		
1520						
1523						
▼						
1527						
1533						
1536						
1541						

**Sch** - operates on schooldays only

**S** - serves this point on schooldays only

A - operates via Lower Church Road, London Road and Leylands Road in Burgess Hill

**B** - operates from Sayers Common at 0800

**D** - continues to Downlands School

**H** - operates in school holidays only

### Mondays to Fridays (except Public Holidays)

	Sch	Sch	(H)							Sch	Sch	
CRAWLEY, Bus Station, Bay E							1110		1310			
Three Bridges Station							1117		1317			
Pound Hill, Worth Road Parade							1120		1320			
Cowdray Arms, Balcombe Road	0810						1124		1324			
Balcombe, Half Moon	0815				0927C		1127		1327			
Balcombe Station	0818				0929C		1129		1329			
Whitemans Green, Post Office	0824				0935		1135		1335			
Cuckfield, Longacre Crescent	▼				0938		1138		1338			
Cuckfield, High Street	0828				0941		1141		1341			
Cuckfield, Warden Park School	0831				•		•		•			
HAYWARDS HEATH Sainsburys	0839			0848	0948	1048	1148	1248	1348			1448
Perrymount Road	0841		0750	0850	0950	1050	1150	1250	1350			1450
Haywards Heath, South Road			0754	0854	0954	1054	1154	1254	1354			1454
Princess Royal Hospital			0757	0857	0957	1057	1157	1257	1357			1457
Ashenground Estate, Sheppeys			0802	0902	1002	1102	1202	1302	1402			1502
Wivelsfield Green, Ote Hall Chapel			0807	0907	1007	1107	1207	1307	1407			1507
Wivelsfield Station			0813	0913	1013	1113	1213	1313	1413			1513
Maple Drive, Petworth Drive			0817	0917	1017	1117	1217	1317	1417			1517
BURGESS HILL, Church Road			0821	0921	1021	1121	1221	1321	1421			1521
Burgess Hill Station			0823	0923	1023	1123	1223	1323	1423			1523
Grand Avenue, Thatched Inn		0829	0829	0929	1029	1129	1229	1329	1429			▼
Keymer Library		▼	▼	•	•	•	•	•	•	1518 <b>t</b>	1518 <b>t</b>	1529
Hassocks, Post Office		0832	0832	0932	1032	1132	1232	1332	1432	1520	1520	1532
Hassocks, Stone Pound		0834	0834	0934	1034	1134	1234	1334	1434	1522	1522	1534
Hurstpierpoint Church		0840	0840	0940	1040	1140	1240	1340	1440	1528	1528	1540
HURSTPIERPOINT, Willow Way		0844	0844	0944	1044	1144	1244	1344	1444	1532	1532	1544

	Sch	Sch	( H		
Cuckfield, Warden Park School	1525	1530			
HAYWARDS HEATH Sainsburys	1531	1538		1648	1748
Perrymount Road	1532	1540	1540	1650	1750
Haywards Heath, South Road	1536	1544	1544	1654	1754
Princess Royal Hospital	▼	▼	▼	1657	1757
Ashenground Estate, Sheppeys	1541 <b>B</b>	1549	1549	1702	1802
Wivelsfield Green, Ote Hall Chapel		1554	1554	1707	1807
Wivelsfield Station		1600	1600	1713	1813
Maple Drive, Petworth Drive		1604	1604	1717	1817
BURGESS HILL, Church Road		1611 <b>A</b>	1611 <b>A</b>	1721	1821
Burgess Hill Station		1613	1613	1723	1823
Grand Avenue, Thatched Inn		1619	1619	1729	1829
Keymer Library		▼	▼	•	•
Hassocks, Post Office		1622	1622	1732	1832
Hassocks, Stone Pound		1624	1624	1734	1834
Hurstpierpoint Church		1630	1630	1740	1840
HURSTPIERPOINT, Willow Way		1634	1634	1744	1844

**Sch** - operates on schooldays only

t - time at Orion Parade

A - operates via Lower Church Road, London Road and Leylands Road in Burgess Hill

**B** - Continues to Bolding Way, Burchetts Close, arriving at 1543

C - West Sussex concessionary passes are valid on this journey from 0927

H - operates during school holidays only



#### Saturdays

HURSTPIERPOINT, Willow Way	0746	0846	0946	1046	1146	1246	1346	1446	1546	1646
Hurstpierpoint Church	0750	0850	0950	1050	1150	1250	1350	1450	1550	1650
Hassocks, Stone Pound	0756	0856	0956	1056	1156	1256	1356	1456	1556	1656
Hassocks, Post Office	0758	0858	0958	1058	1158	1258	1358	1458	1558	1658
Grand Avenue, Thatched Inn	0801	0901	1001	1101	1201	1301	1401	1501	1601	1701
Burgess Hill Station	0807	0907	1007	1107	1207	1307	1407	1507	1607	1707
BURGESS HILL, Church Road	0809	0909	1009	1109	1209	1309	1409	1509	1609	1709
Maple Drive, Petworth Drive	0813	0913	1013	1113	1213	1313				
Wivelsfield Station	0817	0917	1017	1117	1217	1317				
Wivelsfield Green, Ote Hall Chapel	0823	0923	1023	1123	1223	1323				
Ashenground Estate, Sheppeys	0828	0928	1028	1128	1228	1328				
Princess Royal Hospital	0833	0933	1033	1133	1233	1333				
Haywards Heath, South Road	0836	0936	1036	1136	1236	1336				
Perrymount Road	0840	0940	1040	1140	1240	1340				
HAYWARDS HEATH Sainsburys	0842	0942	1042	1142	1242	1342				
HAYWARDS HEATH Sainsburys	0848	0948	1048	1148	1248					
Perrymount Road	0850	0950	1050	1150	1250					
Haywards Heath, South Road	0854	0954	1054	1154	1254					
Princess Royal Hospital	0857	0957	1057	1157	1257					
Ashenground Estate, Sheppeys	0902	1002	1102	1202	1302					
Wivelsfield Green, Ote Hall Chapel	0907	1007	1107	1207	1307					
Wivelsfield Station	0913	1013	1113	1213	1313					
Maple Drive, Petworth Drive	0917	1017	1117	1217	1317					
BURGESS HILL, Church Road	0921	1021	1121	1221	1321	1421	1521	1621	1721	
Burgess Hill Station	0923	1023	1123	1223	1323	1423	1523	1623	1723	
Grand Avenue, Thatched Inn	0929	1029	1129	1229	1329	1429	1529	1629	1729	
Hassocks, Post Office							1532			
Hassocks, Stone Pound	0934	1034	1134	1234	1334	1434	1534	1634	1734	
Hurstpierpoint Church	0940	1040	1140	1240	1340	1440	1540	1640	1740	
HURSTPIERPOINT, Willow Way	0944	1044	1144	1244	1344	1444	1544	1644	1744	

## Job opportunities...

#### Join the **COMPASS TEAM**

We are a friendly, expanding, independent company looking to recruit well-presented, professional drivers who hold a PCV licence, enjoy dealing with the public and possess a courteous and helpful attitude. We have depots at Worthing, Lewes and Dunsfold (Surrey).

Call Ann or Ananda on:

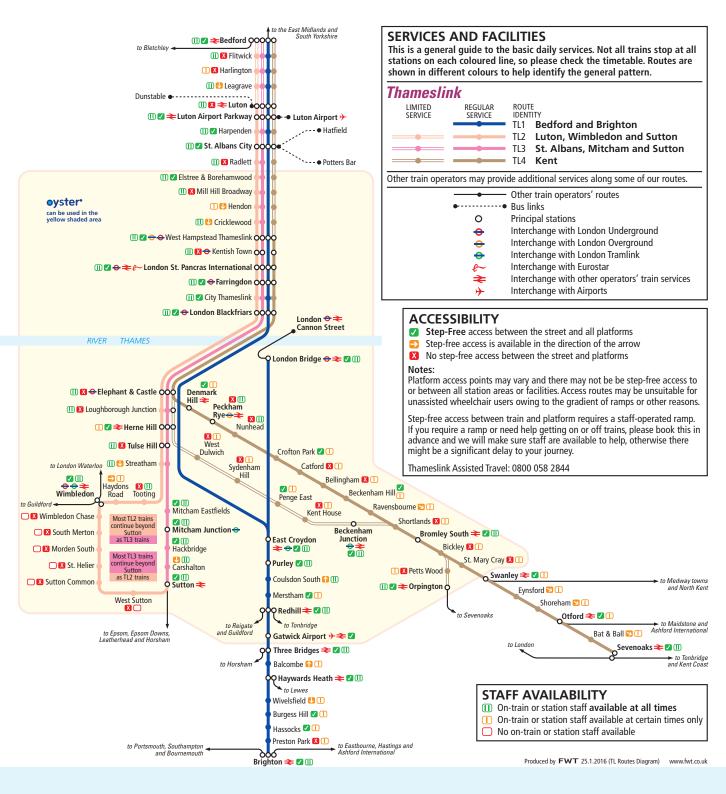
### 01903 690025

or if you know anyone who fits the bill and could be interested then please let them know!









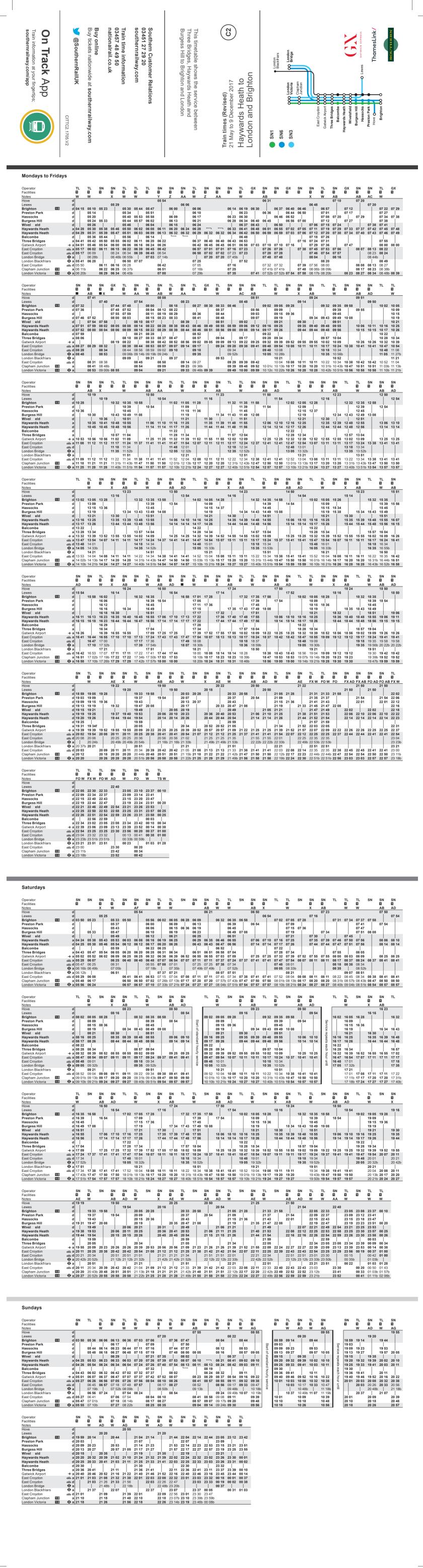
19 46 | 19 49 | 19 49 | 19 50 | 19 55 | 19 59 | 19 55 | 19 59 | 19 55 | 19 59 | 19 55 | 20 10 | 19 55 | 20 10 | 19 35 | 19 57 | 20 01 | 20 09 | 20 00 | 20 07 | 19 46 | 20 11 Three Bridges
Balcombe
Haywards Heath
Haywards Heath
Wivel eld
Burgess Hill
Hassocks
Preston Park
Brighton
Lewes
Hove 10 49 10 53 10 55 10 58 11 05 11 09 10 24 Operator Facilities Notes London Victoria London Victoria
Clapham Junction
East Croydon
London Blackfriars
London Bridge
East Croydon
East Croydon
Gatwick Airport
Three Bridges
Balcombe 10 Balcombe Haywards Heath Haywards Heath Wivel eld Burgess Hill Hassocks a 20 29 20 29 d 20 33 20 36 d d d 20 48 a 20 48 20 51 20 58 21 03 20 55 | | 20 35 20 57 21 03 21 09 21 00 | 21 07 | 20 47 21 11 21 14 Operator
Facilities
Notes
London Victoria
Clapham Junction
East Croydon
London Blackfriars
London Bridge
East Croydon
East Croydon
Gatwick Airport
Three Bridges
Balcombe
Hawwards Heath SN TL SN TL 0 SN TL 0 SN Balcombe
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Haywards Heath
Wivel eld
Burgess Hill
Hassocks
Preston Park
Brighton
Lewes 10

Sundays TL. SN SN SN SN SN SN TL SN SN TL TL 0 SN SN SN TL 0 SN TL 0 SN TL O SN SN 
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 06 36b 07 26

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 O d | 04 09
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 06 09
 Notes London Victoria London Bridge East Croydon East Croydon Three Bridges Balcombe Haywards Heath Haywards Heath Wivel eld Burgess Hill Hassocks Preston Park Brighton Hove SN SN SN TL SN TL SN SN SN A V A U 20 32b 20 47 21 02b 21 17 21 27 20 39b 20 53 21 08b 21 23 21 33 20 48 21 02 21 17 21 32 21 42 20 22 20 22 20 524 A Q
22 02b 22 17 22 27
22 08b 22 23 22 32
22 18 22 32 22 42
21 52
22 04b
22 20
22 08 22 33 22 42 Notes London Victoria A U 20 02b 20 17 20 27 22 53 23 10b 23 23 23 38 23 02 23 21 23 37 23 52 22 52 | Clapham Junction East Croydon ∰ a ⊕ d ⊕ d London Blackfriars Service London Bridge East Croydon repeats East Croydon Three Bridges each Haywards Heath **Haywards Heath** hou Wivel eld Burgess Hill unti Hassocks **Preston Park** Brighton Hove



SN1705.C02 copyV2.indd 2 26/04/2017 10:58

#### Notes & Symbols

This timetable shows train services between London and Brighton to Lewes and Eastbourne from 21 May to 9 December 2017.

Information correct at time of printing (March 2017). Southern accepts no liability for inaccuracy in the information contained in this timetable.

#### Bicycle policy

Restrictions apply in the peak hours for carrying non-folding bikes. Details at southernrailway.com/cyclepolicy

**National Rail Enquiries** 

For up to the minute travel information for the Nationa Rail network and information on all other train operating companies 24 hours a day. Phone: 03457 48 49 50 Online: nationalrail.co.uk

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(7 days a week, 0700 to 2200, except Christmas Day)

myjourney@southernrailway.com

Phone: 03451 27 29 20
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Customer relations

information 0871 200 22 33 Phone

0800 40 50 40

btp.police.uk

Brighton Line Commuters, brightonlinecom

Online **British Transport Police** 

Phone:

Online:

Other websites London public transport information, **tfl.gov.uk** Through tickets for train and bus, **plusbus.info** 

Information on taxis serving rail stations, traintaxi.co.uk National Cycle Network information, sustrans.org.uk Independent passenger groups Transport Focus, transportfocus.org.uk London TravelWatch, londontravelwatch.org.uk

Direct train

Connecting train
First Class accommodation available
London Underground interchange
Croydon Tramlink interchange Light G

Airport interchange

Eurostar interchange

Restricted access. Unsuitable for scooters and large wheelchairs Continued in later column Continued from earlier column

SN Service operated by Southern

Arrival time

Change at Eastbourne
Change at Eastbourne & Hastings
Departure time

Change at Lewes

Change at Haywards Heath Change at Hampden Park Change at East Croydon & Haywards Heath

Change at East Croydon

Change at Hastings
Change at Hastings & Hampden Park
Change at Haywards Heath & East Croydon

Stops to set down only

To Seaford

To Hastings & Littlehampton.
Train divides at Haywards Heath
To Eastbourne & Littlehampton. Train divides at Haywards Heath

To Ore & Littlehampton Train divides at Haywards Heath To Hastings & Brighton.

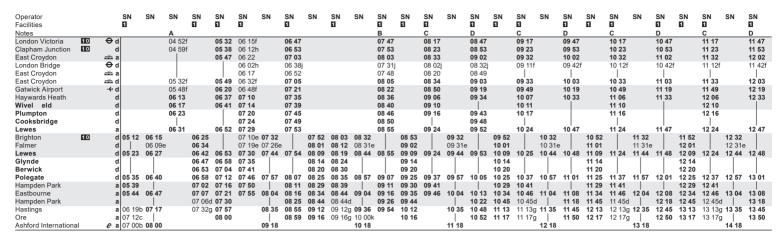
Train divides at Haywards Heath
To Ore & Seaford. Train divides at Lewes
To Eastbourne & Bognor Regis.

Train divides at Haywards Heath To Hastings & Worthing. Train divides at Haywards Heath To Eastbourne & Worthing. Train divides at Haywards Heath

Service operates Fridays only Service operates Mondays to Thursdays only Service operates Tuesday to Saturday

mornings only

#### Mondays to Fridays

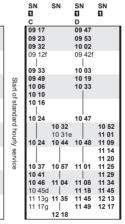


Operator Facilities			SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN
Notes				С		D		С		D		С		D		С		D		С			E						F	
London Victoria	10	O d		12 17		12 47		13 17		13 47		14 17		14 47		15 17		15 47		16 17			16 47		17 18f	17 27			17 57	18 17f
Clapham Junction	10	d		12 23		12 53		13 23		13 53		14 23		14 53		15 23		15 53		16 23			16 53		17 24f	17 33			18 04	18 23f
East Croydon		a a		12 32		13 02		13 32		14 02		14 32		15 02		15 32		16 02		16 32			17 02			17 43			18 13	
London Bridge		<b>⊖</b> d		12 12f		12 42f	F	13 12f		13 42f		14 12	f	14 421		15 12f		15 42f	f	16 12f			16 42f		17 23				17 49j	18 23
East Croydon		a a																							17 38				18 05	18 38
East Croydon		a d		12 33		13 03		13 33		14 03		14 33		15 03		15 33		16 03		16 33			17 03		17 39	17 44			18 15	18 39
Gatwick Airport		-+ d		12 49		13 19		13 49		14 19		14 49		15 19		15 49		16 19		16 49			17 19		17 51f	17 59			18 31	18 47f
Haywards Heath		d		13 06		13 33		14 06		14 33		15 06		15 33		16 06		16 33		17 06			17 36			18 12			18 46	
Wivel eld		d		13 10				14 10				15 10				16 10				17 10			17 40		18 13	18 16			18 51	19 11
Plumpton		d		13 16				14 16				15 16				16 16		16 42					17 47			18 22			18 58	19 18
Cooksbridge		d																16 47					17 52			18 27				
Lewes		а		13 24		13 47		14 24		14,47		15 24		15 47		16 24		16 51		17 21			17 56			18 31			19 08	
3	10		12 52		13 32		13 52		14 32		14 52		15 32		15 52		16 32		16 52			17 30		e 17 52	18 02e		18 32			19 08e
Falmer			13 01		13 31€		14 01		14 31€		15 01		15 31€		16 01		16 31		17 01					e 18 01	18 11e			19 00		19 17e
Lewes			13 09	13 24	13 44	13 48		14 24	14 44	14 48	15 09	15 24	15 44	15 48	16 09	16 24	16 44	16 52		17 22	17 37	17 44	17 57		18 25	18 32	18 45	19 07		
Glynde			13 14				14 14				15 14				16 14				17 14					18 13	18 30				19 21	19 34
Berwick			13 20				14 20				15 20				16 20			17 01	17 20	17 31		_		18 19	18 36				19 27	19 40
Polegate			13 25	13 37	13 57	14 01	14 25	14 37	14 57	15 01	15 25	15 37	15 57	16 01	16 25	16 37	16 57	17 06		17 36		17 57	18 09	18 24		18 46	18 58	19 19		
Hampden Park				13 41			14 29					15 41			16 29					17 40								19 24		
Eastbourne					14 04	14 08		14 46		15 08		15 46		16 08			17 04					18 04	18 18				19 05	19 29		19 56
Hampden Park				13 45d		14 18		14 450		15 18		15 45			16 45			17 24					18 29		18 49d				19 55	
Hastings			14 13	14 13g					15 35				g <b>16</b> 34					17 53		18 14g			19 01						20 21	20 21g
Ore			14 17	14 17g		14 50	15 17	15 17g		15 53	16 17	16 17			17 17	17 17g		17 58	18 18	18 18g		19 02k		19 21	19 21g	19 37			20 27	20 25g
Ashford International		€ a			15 18				16 18				17 18	17 53	(		18 18					19 18					20 18			

Operator Facilities Notes			SN	SN 11 D	SN	SN 11 C	SN	SN 11 D	SN 11 C	SN	SN 11 D	SN 11 G	SN	SN 11 FOB	SN 11 FX B	SN	SN	SN 11 FOH	SN 11 FX H	SN 11 TS J
London Victoria	10	<del>O</del> d		18 46		19 17		19 47	20 17		20 47	21 17		21 47	21 47			22 47	22 47	00 05
Clapham Junction	10	d		18 53		19 23		19 53	20 23		20 53	21 23		21 53	21 53			22 53	22 53	00 12
East Croydon		a a		19 03		19 32		20 03	20 32		21 02	21 32		22 02	22 02			23 02	23 02	00 26
London Bridge		<b>⊖</b> d		18 43f		19 12f		19 42f	20 12f		20 42f	21 08j		21 38j	21 38j			22 39j	22 39j	23 42j
East Croydon		a a										21 26		21 56	21 56			22 56	22 56	00 12
East Croydon		a d		19 04		19 33		20 04	20 33		21 03	21 33		22 03	22 03			23 03	23 03	00 27
Gatwick Airport		- <b>⊬</b> d		19 22		19 49		20 19	20 49		21 19	21 49		22 19	22 20			23 19	23 21	00 45
Haywards Heath		d		19 36		20 06		20 34	21 06		21 33	22 06		22 33	22 35			23 34	23 37	01 06
Wivel eld		d		19 40		20 10			21 10			22 10		22 37	22 39			23 38	23 41	
Plumpton		d		19 46				20 43			21 42			22 43	22 45			23 44	23 47	
Cooksbridge		d		19 50				20 48			21 47			22 47	22 49			23 48		
Lewes		a		19 55		20 21		20 52	21 21		21 51	22 21		22 52	22 54			23 53	23 54	01 20
Brighton	10		19 32		19 53		20 30		21 04e			22 04e			22 34e		23 28		23 36e	
Falmer			19 32e		20 02		20 19e		21 13e			22 13e			22 43e				23 45e	
Lewes		d	19 44	19 55	20 09	20 22	20 44	20 53	21 23	21 44	21 52	22 23	22 42	22 53	22 55	23 22	23 39	23 55	23 55	01 21
Glynde		d			20 14	20 27			21 28			22 28				23 27			_ l	
Berwick		d			20 20	20 33	_	_	21 34			22 34			_	23 33	_	00 04	00 04	
Polegate		d	19 57	20 08	20 25	20 38	20 57	21 05	21 39	21 57	22 04	22 39	22 54	23 06	23 07	23 38	23 52	00 09	00 09	01 33s
Hampden Park		а		00 4 5	20 29	20 42			21 43			22 43		23 10	23 11	23 42		00 13	00 13	01 37s
Eastbourne			20 04	20 15	20 34	20 48	21 04	21 12	21 49	22 04	22 12	22 49	23 03	23 15	23 16	23 47	23 59	00 18	00 18	01 42
Hampden Park		а		20 24			24 24	21 22		20.04	22 24			23 24	23 25			00.50	00.50	
Hastings		-	20 34	20 49			21 34	21 48		22 34	22 51			23 51	23 52			00 50	00 50	
Ore Ashford Internationa		a	24 40	20 55			21 37 22 18	21 52												
Ashrord Internationa	ı	₽ a	21 18				22 18													

# Saturdays

Operator			SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN
Facilities			1	1		1	1		1	1		1	1	1		1	1
Notes												D		С		D	
London Victoria	10	θd		05 02f					06 32h			07 47		08 17		08 47	
Clapham Junction	10	d		05 09f					06 38h			07 53		08 23		08 53	
East Croydon		a a							06 47			08 02		08 32		09 02	
London Bridge		θd							06 29h			07 27j		08 12f		08 42f	
East Croydon		a a							06 59			07 45					
East Croydon		a d		05 32f					07 04f			08 03		08 33		09 03	
Gatwick Airport		+ d		06 12					07 20f			08 19		08 49		09 19	
Haywards Heath		d		06 26					07 37			08 33		09 06		09 33	
Wivel eld		d		06 30					07 41					09 10			
Plumpton		d												09 16			
Cooksbridge		d															
Lewes		а		06 41					07 52			08 47		09 24		09 47	
Brighton	10	d	05 10		06 32		06 52	07 32		07 52	08 32		08 52		09 32		09 52
Falmer		d			06 19e		07 01	07 31€		08 01	08 31e		09 01		09 31€		10 01
Lewes		d	05 21	06 53	06 45	06 53	07 09	07 44	07 53	08 09	08 44	08 48	09 09	09 24	09 44	09 48	10 09
Glynde		d		_			07 14			08 14			09 14				10 14
Berwick		d			_	07 02	07 20		_	08 20	_		09 20				10 20
Polegate			05 33		06 58	07 07	07 25	07 57	08 05	08 25	08 57	09 01	09 25	09 37	09 57	10 01	10 25
Hampden Park			05 37			07 11	07 29			08 29			09 29	09 41			10 29
Eastbourne			05 42		07 05	07 17	07 34	08 05	08 13	08 34	09 04	09 08	09 34	09 46	10 04	10 08	10 34
Hampden Park		a				07 25	07 44		08 22	08 44		09 18	09 45	09 450		10 18	10 45
Hastings			06 17b		07 35	07 51	08 12	08 35	08 50	09 12	09 35	09 45	10 13		10 35	10 45	11 13
Ore			06 32b			07 55	08 16		08 54	09 16		09 49	10 17	10 17g		10 49	11 17
Ashford International		0 2	07 00h		08 18			09 18			10 18				11 18		



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	С				D				С				D	
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	16	23			16	53			17	23			17	53
	16	32			17	02			17	32			18	02
		12f				42f				12f				42f
	16	33			17	03			17	33			18	03
Š	16	49			17	19			17	49			18	19
ž	17	06			17	33			18	06			18	33
5	17								18	10				
Service repeats each hour until	17	16							18	16				
2	17	24								24			18	47
D			17	32			17	52			18	32		
5			17	31e			18	01			18	31e		
2	17	24	17	44	17	48	18	09	18	24	18	44	18	48
Ĭ							18	14						
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	17	41					18	29	18	41				
	17	46	18	04	18	80	18	34	18	46	19	04	19	80
	17	45d			18	18	18	45	18	45d			19	18
	18	13g	18	35	18	45	19	13	19	13g	19	35	19	45
	18	17g			18	49	19	17	19	17g			19	49
				18								18		

Operator			SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN
Facilities			1	0		0	1	0		0	0		0	0		0	1		0	П
Notes	10	θа		C 40.47		D 47		B		D 47	C		D 47	G 21 17		B 04 47			H	J
London Victoria	10			18 17		18 47		19 17		19 47 19 53	20 17 20 23		20 47 20 53	21 17		21 47			22 47	00 05 00 12
Clapham Junction	10	d		18 23 18 32		18 53 19 02		19 23 19 32		19 53	20 23		20 53	21 23		21 53 22 02			22 53 23 02	00 12
East Croydon		a ⊕ a		18 12f		18 42f		19 32 19 12f			20 32 20 12f									
London Bridge East Croydon				10 121		10 421		19 121		19 421	20 121		20 27j 20 45	21 22		21 27j 21 45			22 27j 22 45	23 42j 00 12
East Croydon		a a a⇔ d		18 33		19 03		19 33		20 03	20 33		21 03	21 33		22 03			23 03	00 12
Gatwick Airport		-+ d		18 49		19 19		19 49		20 19	20 49		21 19	21 49		22 19			23 19	00 46
Haywards Heath		- t u		19 06		19 33		20 06		20 13	21 06		21 33	22 09		22 33			23 33	01 06
Wivel eld		d		19 10		13 33		20 10		20 33	21 10		21 33	22 13		22 37			23 37	0100
Plumpton		d		19 16				20 16			21 16			22 19		22 43			23 43	
Cooksbridge		d						20.0											20,40	
Lewes		a		19 24		19 47		20 24		20 47	21 24		21 47	22 26		22 50			23 50	01 20
Brighton	10	d	18 52		19 32		19 52		20 32			21 32			22 28		23 06	23 28	23 366	
Falmer		d	19 01		19 31e		20 01		20 19€		21 13e	1		22 13e	.	22 456	23 15	1	23 456	.
Lewes		d	19 09	19 24	19 44	19 48	20 09	20 24	20 44	20 48	21 24	21 44	21 48	22 27	22 39	22 55	23 22	23 39	23 55	01 21
Glynde		d	19 14				20 14	20 30			21 30			22 32			23 27			
Berwick		d	19 20				20 20	20 35			21 35			22 38			23 33		00 04	
Polegate		d	19 25	19 37	19 57	20 01	20 25	20 40	20 57	21 01	21 41	21 57	22 01	22 43	22 52	23 07	23 38	23 52	00 09	01 33s
Hampden Park			19 29	19 41			20 29	20 44			21 45			22 47			23 42		00 13	01 37s
Eastbourne		а	19 34		20 04	20 08	20 34	20 49	21 04	21 08	21 50	22 04	22 08	22 52	23 03	23 15	23 47	23 59	00 18	01 42
Hampden Park		а	19 45	19 45d		20 18				21 18			22 18			23 24				
Hastings			20 13	20 13g	20 35	20 45		21 24		21 45		22 33	22 45		23 34	23 51			00 51	
Ore			20 17	20 17g		20 49			21 37	21 49			22 49							
Ashford Internation:	al	e a	I		21 18				22 18											

# Sundays

Operator Facilities Notes			SN 1	SN 0	SN	SN 1	SN	SN 1	SN	
London Victoria Clapham Junction East Croydon	10 10	⊖d d ⇔a						08 47 08 54 09 06		
London Bridge East Croydon		O d       A a						08 34j 08 54		
East Croydon Gatwick Airport Haywards Heath Wivel eld		d ⇔ d d d						09 06 09 22 09 33 09 37		Starto
Plumpton Cooksbridge Lewes		d d						09 43   09 51		Start of standard hourly
Brighton Falmer Lewes	10	d	07 09 07 18 07 25	07 43 07 52 07 59	08 12 07 58e 08 23	08 43 08 52 08 59	09 12 08 58e 09 23	09 17e	10 12 09 56e 10 23	rd hourly
Glynde Berwick Polegate		d	07 30 07 36 07 41	08 11	08 29 08 35 08 40	09 11	09 29 09 35 09 40	10 04	10 29 10 35 10 40	/ service
Hampden Park Eastbourne Hampden Park		a	07 45 07 51 07 52d	08 19	08 45 08 50	09 19 09 30	09 45 09 50	10 11 10 21	10 45	w
Hastings Ore Ashford Internationa		a	08 14g	08 56 09 00	09 19	09 56 10 00	10 18	10 47 10 51	11 18	
Ashiora internationa	1	€ a	08 56g		10 00		11 00		12 00	

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Southern Customer Relations 03451 27 29 20 southernrailway.com

This timetable shows train services between London and Brighton to Lewes and Eastbourne

(9<u>0</u>)

**Train times (Revised)** 21 May to 9 December 2017

Eastbourne and Lewes to London and Brighton

O London Bridge Hampden Park O Ashford International O Eastbourne Polegate Berwick O Hastings Glynde O Ore O Victoria
O Clapham
Junction oo Lewes East Croydon Gatwick Airport Haywards Heath Wivelsfield Plumpton Cooksbridge **Brighton O** Falmer SN7

#### Mondays to Fridays

Operator		SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN
Facilities		1		1	1		1	1	1	1		1	1	1		1	1	1		1	1	1		1		1		1	1
Notes																													
Ashford International	€d										06 14				07 15				08 33				09 33				10 33		
Ore	d									1 06 39k					08 04	08 22	g <b>08 22</b>	08 50				09 49k	:	10 22g	10 22	10 55		11 22g	11 22
Hastings	d			05 08		g <b>05 58</b>				06 47	07 12			07 38	08 09			08 54	09 14			09 58	10 14			10 58	11 14		11 26
Hampden Park	а			05 47						07 13		07 46		08 06		08 52						10 24				11 24			
Eastbourne					06 21	06 37	06 43	06 54		07 31	07 47	07 57	08 04	08 18	08 45	08 53	09 03	09 31	09 47	09 55	10 03	10 35	10 47	10 55		11 35	11 47	11 55	12 03
Hampden Park				05 47	06 25		06 47		07 17			08 01	80 80			08 57	09 07			09 59	10 07			10 59	11 07			11 59	12 07
Polegate	d	05 16	05 38	05 51	06 30	06 44	06 51	07 03	07 22	07 38	07 54	08 05	08 12	08 25	08 52	09 01	09 11	09 37	09 54	10 03	10 11	10 41	10 54	11 03		11 41	11 54	12 03	12 11
Berwick	d			05 57	06 36		06 56			07 44		08 11	08 18	08 30			09 17			10 09	10 17				11 17				12 17
Glynde	d				06 42		07 03		07 34			08 16	08 23	08 36			09 22				10 22				11 22				12 22
Lewes			05 50		06 48	06 57	07 08		07 39	07 53		08 22	08 29	08 42	09 07	09 13	09 28	09 49	10 07	10 18	10 28	10 53		11 15	11 28	11 53	12 07	12 15	12 28
Falmer			05 58	06 16€	'					08 05e		•			9 20e	•	09 35		10 20€	•	10 35		11 20e	٠		12 05e		•	12 35
Brighton 10			06 09	06 25€		07 16	07 28			08 14e	08 20		08 46		09 20		09 44	10 146	10 20		10 44	11 14e	11 20		11 45	12 14e	12 20		12 44
Lewes	a	05 29		06 06	06 48				07 40			08 23		08 48		09 14		09 50		10 19		10 54		11 16		11 54		12 16	
Cooksbridge	a	05.07		00.44	06 54				07 45			08 28				09 19 09 24		09 55		10 24 10 29				11 24				40.04	
Plumpton Wivel eld	a	05 37		06 14	06 59 07 06			07 31 07 38	07 51 07 58			08 33 08 39		09 02		09 24		10 00		10 29				11 24				12 24 12 30	
Haywards Heath	a	05 46		06 24	07 06				08 02			08 43		09 02		09 30		10 11		10 36		11 10		11 30		12 10		12 30	
Gatwick Airport		06 00			07 11				08 02 08 19f			08 56		09 00		09 55		10 11		10 56		11 25		11 55		12 10		12 55	
East Croydon	⊸ a				07 45				08 32			09 14		09 38		10 11		10 41		11 12		11 41		12 11		12 41		13 11	
East Croydon	a d				07 46				08 34			05 14		09 30		10,11		1041		11,12		11,41		12 11		12 41		13 11	
London Bridge		06 46i			08 04					09 14i		09 35f		10 05f		10 35	F	11 05f		11 35f		12 05f		12 35f		13 05f		13 35f	
East Croydon	æ d				07 56				08 38			09 14		09 39		10 11		10 42		11 12		11 41		12 11		12 41		13 11	
Clapham Junction 10		06 25			08 06j				08 48i			09 23		09 48		10 20		10 51		11 21		11 50		12 20		12 50		13 20	
London Victoria 10		06 34			08 17j				08 55f			09 33		10 00		10 28		10 58		11 28		11 57		12 27		12 57		13 27	

Operator		SN	SN	S	N	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN	SN
Facilities		1		1		1	1		1	1	1		1	1	1		1	1	1		1	1	1		1	1	1		1	1
Notes																														
Ashford International		€ d	11					12 33				13 33				14 33				15 33				16 33				17 33		
Ore		d 11 5	5	12	2 22g	12 22	12 55			13 22				14 22			15 20g	15 20	15 52		16 22g	16 22	16 53		17 22g	17 22	17 50		18 22	g <b>18 22</b>
Hastings		d 11 5				12 26		13 14		13 26		14 14		14 26		15 14		15 24			16 26g			17 14			17 55	18 14		g <b>18 26</b>
Hampden Park		a 12 2	4	12	2 52	12 52	13 24		13 52	13 52	14 24		14 52	14 52	15 24		15 52	15 52	16 24	16 49	16 52	16 52	17 22		17 52	17 52	18 21		18 52	18 53
Eastbourne		d 12 3	5 12			13 03	13 35	13 47	13 55	14 03	14 35	14 47	14 53	15 03	15 35	15 47	15 53	16 03	16 35		16 53	17 03	17 33	17 45	17 55	18 01	18 31	18 49	18 59	19 05
Hampden Park		d		12	2 59	13 07			13 59	14 07			14 57	15 07			15 57	16 07		16 49	16 57	17 07			17 59	18 05			19 03	19 09
Polegate		d 12 4	1 12	54 13	3 03	13 11	13 41	13 54	14 03	14 11	14 41	14 54	15 01	15 11	15 41	15 54	16 01	16 11	16 41	16 54	17 01	17 11	17 39	17 52	18 03	18 11	18 37	18 57	19 07	19 13
Berwick		d				13 17				14 17				15 17				16 17				17 17				18 17				19 19
Glynde		d				13 22				14 22				15 22				16 22				17 22				18 22				19 24
Lewes		a 12 5	3 13	07 13	3 15	13 28	13 53	14 07	14 15	14 28	14 53	15 07	15 13	15 28	15 53	16 07	16 13	16 28	16 53	17 07	17 13	17 28	17 51	18 05	18 15	18 28	18 49	19 09	19 20	19 30
Falmer		a 13 0	5e 13	20e		13 35	14 05e	14 20e		14 35	15 05e	15 20€	•	15 35	16 05€	e 16 20€	•	16 35	17 05€	17 20€	17 29e	17 35	18 04€	18 20€	.	18 35	19 04e	19 22e		19 37
Brighton	10	a 13 1	4e 13			13 44	14 14e	14 20		14 44	15 14e	15 20		15 44	16 14€	16 20		16 44		17 20	17 38e	17 44	18 13e	18 20		18 44	19 15e	19 22		19 46
Lewes		d 12 5	4	13	3 16		13 54		14 16		14 54		15 14		15 54		16 14		16 54		17 14		17 52		18 16		18 50		19 20	
Cooksbridge		d											15 19				16 19				17 19				18 21				19 25	
Plumpton		d		13	3 24				14 24				15 24				16 24				17 24		18 00		18 26		18 58		19 30	
Wivel eld		d		13	3 30				14 30				15 30				16 30				17 32				18 32		19 06			
Haywards Heath		a 13 1		13	3 35		14 10		14 35		15 10		15 35		16 11		16 35		17 10		17 36		18 10		18 36		19 11		19 40	
Gatwick Airport		-← a 13 2			3 55		14 25		14 55		15 25		15 55		16 26		16 55		17 25		17 55		18 25		18 56		19 26		19 55	
East Croydon		🚎 a 13 4	11	14	4 11		14 41		15 11		15 41		16 11		16 41		17 10		17 43		18 13		18 42		19 12		19 41		20 11	
East Croydon		i d iii d																									19 58		20 25	
London Bridge		\varTheta a 14 0	)5f	14	4 35f		15 05f		15 35f		16 05f		16 35f		17 10f		17 39f		18 07f		18 36f		19 05f		19 35f		20 22j		20 49	İ
East Croydon		🗯 d 13 4	11	14	4 11		14 41		15 11		15 41		16 11		16 42		17 11		17 44		18 14		18 43		19 12		19 42		20 11	
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London Victoria	10	O a 13 5	7	14	4 27		14 57		15 27		15 59		16 28		16 58		17 29		18 00		18 31		19 00		19 30		19 59		20 28	

Operator Facilities Notes			SN 1	SN	SN 1	SN 1	SN	SN	SN 1	SN 11 FO	SN 11 FX	SN	SN 1	SN	SN	SN	SN 1
Ashford Internationa	al	e d		18 33				19 33		19 59k	19 59k	20 33			21 33		22 34k
Ore		d	18 50				19 51		20 22	20 52	20 52			21 22		22 22	23 15k
Hastings		d	18 55	19 14	19 27g	19 27	19 55	20 14	20 26	20 56	20 56	21 14		21 30	22 15	22 26	23 22
Hampden Park		а	19 21		19 53	19 53	20 21		20 51	21 21	21 21			21 55		22 53	23 47
Eastbourne		d	19 31	19 48	19 55	20 03	20 31	20 45	21 03	21 31	21 31	21 45	22 04	22 16	22 45	23 03	23 56
Hampden Park		d			19 59	20 07			21 07				22 08	22 20		23 07	00 01
Polegate		d	19 37	19 55	20 03	20 11	20 37	20 52	21 11	21 37	21 37	21 52	22 12	22 24	22 52	23 11	00 05
Berwick		d				20 17			21 17				22 18	22 29		23 16	
Glynde		d				20 22			21 22				22 23			23 22	
Lewes		а		20 07	20 16	20 28	20 49	21 08	21 28	21 49	21 49	22 07	22 29	22 38	23 07	23 27	00 17
Falmer			20 04e			20 35	21 00			22 00e				22 49e			00 25
Brighton	10		20 13e	20 20		20 44		e <b>21 21</b>	21 44		22 09e	22 20	22 45	22 58e	23 20	23 45	00 34
Lewes			19 50		20 18		20 50			21 50	21 50			22 40			
Cooksbridge		d					_							_			
Plumpton		d			20 26		20 58							22 48			
Wivel eld		d	20 05				21 05			22 02	22 02			22 54			
Haywards Heath			20 10		20 36		21 10			22 06	22 06			22 58			
Gatwick Airport			20 25		20 57		21 25			22 25	22 26			23 13			
East Croydon			20 41		21 12		21 41			22 41	22 44			23 30			
East Croydon			20 56		21 25		21 55										
London Bridge			21 16j		21 49j		22 22j			20 44	20.45			22.20			
East Croydon	MO.		20 42		21 13		21 41			22 41	22 45 22 54			23 30			
Clapham Junction	10		20 51		21 22		21 50			22 50				23 42			
London Victoria	10	<del>♥</del> a	20 58		21 29		21 58			22 57	23 03			23 52			

### Saturdays

Operator Facilities			SN 0	SN	SN 1	SN	SN 1	SN	SN 1	SN	SN 1	SN	SN	l
Notes		- 1								00.45				
Ashford Internationa	ı	e d					00.00			06 15	07.00			
Ore		d					06 22g		06 55	07 10	07 22g		07	
Hastings		d					06 26g		06 58	07 14	07 26g		07	
Hampden Park		а					06 52	06 52	07 24			07 52	80	
Eastbourne			05 03	05 48	06 28	06 38	06 55	07 03	07 35	07 47	07 55	08 03	08	35
Hampden Park			05 07	05 52	06 32		06 59	07 07			07 59	08 07		
Polegate		d	05 11	05 57	06 36	06 45	07 03	07 11	07 41	07 54	08 03	08 11	08	41
Berwick		d			06 42			07 17				08 17		
Glynde		d			06 47			07 22				08 22		
Lewes			05 24	06 10	06 53	06 57	07 15	07 28	07 53	08 07	08 15	08 28	80	
Falmer			05 35e			07 05		07 35	08 05e			08 35		05e
Brighton	10	а	05 44e	06 27		07 18		07 44	08 14e	08 20		08 44	09	14e
Lewes		d	05 25		06 54		07 16		07 54		08 16		08	54
Cooksbridge		d												
Plumpton		d					07 24				08 24			
Wivel eld		d					07 30				08 30			
Haywards Heath		а	05 43		07 10		07 35		08 10		08 35		09	10
Gatwick Airport		- <b>←</b> a	06 02		07 25		07 55		08 25		08 55		09	25
East Croydon		a a	06 25f		07 41		08 11		08 41		09 11		09	41
East Croydon		a∰ d	06 31											
London Bridge		O a	07 05q		08 05f		08 35f		09 05f		09 35f		10	05f
East Croydon		a⇔ d			07 41		08 11		08 41		09 11		09	41
Clapham Junction	10	а	06 50f		07 50		08 20		08 50		09 20		09	50
London Victoria	10	<b>⊖</b> a	06 57f		07 57		08 27		08 57		09 27		09	57

	SN	SN	SN	SN	
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		18 24			19 52 <b>19 5</b> 2
17 47	17 55 18 03	18 35 18 47	18 55 19 03	19 35 19 47	19 55 20 0
	17 59 18 07		18 59 19 07		19 59 20 0
17 54		18 41 18 54		19 41 19 54	
	18 17		19 17		20 1
	18 22		19 22		20 2
18 07				19 53 20 07	
18 20e <b>18 20</b>				20 05e 20 20e 20 14e <b>20 20</b>	
	18 16	18 54		19 54	
	10 10	10 54	19 16	19 54	20 16
	18 24		19 24		20 24
	18 30		19 30	20 06	20 31
	18 35	19 10	19 35	20 11	20 36
	18 55	19 25	19 55	20 26	20 56
	19 11	19 41	20 11	20 42	21 12
			20 21	20 51	21 21
	19 35f	20 05f	20 42j	21 12j	21 42j
	19 11	19 41	20 11	20 42	21 12
	19 20	19 50	20 20	20 51	21 21

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Operator Facilities Notes			SN 1	SN	SN	SN 1	SN	SN 1	SN 1	SN	SN 1	SN 1
Ashford International	e	, q		19 33			20 33			21 33		22 34k
Ore		d	19 55		20 22	20 55		21 22			22 22	23 19
Hastings		d	19 58	20 14	20 26	20 58	21 14	21 26	21 42	22 15	22 26	23 23
Hampden Park			20 24		20 52	21 24		21 51	22 07		22 53	23 48
Eastbourne		d	20 35	20 47	21 03	21 35	21 47	22 03	22 18	22 47	23 03	23 57
Hampden Park		d			21 07			22 07			23 07	00 01
Polegate		-	20 41	20 54	21 11	21 41	21 54	22 11	22 25	22 54	23 11	00 05
Berwick		d			21 17			22 17			23 16	
Glynde		d			21 22			22 22			23 22	
Lewes			20 53	21 07	21 28	21 53	22 07	22 28	22 38	23 07	23 27	00 17
Falmer			21 05e				22 20e			23 20e		00 25
Brighton	10		21 14e	21 20	21 44		22 20	22 44		23 20	23 44	00 34
Lewes		-	20 54			21 54			22 40			
Cooksbridge		d							_			
Plumpton		d							22 48			
Wivel eld			21 06			22 07			22 54			
Haywards Heath			21 11			22 12 22 27			22 58 23 13			
Gatwick Airport			21 26 21 42			22 43			23 13			
East Croydon			21 42			22 43			00 15			
East Croydon London Bridge			21 51 22 12j						00 15 00 35i			
East Croydon			21 42			23 12j <b>22 43</b>			23 30			
Clapham Junction	10		21 42			22 43			23 41			
London Victoria			21 51			22 52			23 52			
London victoria	<u> </u>	, a	21 58			22 59			23 52			



### Sundays

Operator Facilities				SN	SN	SN	SN	SN	SN	SN	I
Notes				_		_		_		_	
Ashford Internationa	I	e	d						08 11		
Ore			d					08 19	08 53	09	19
Hastings			d					08 22	08 57		22
Hampden Park			а					08 48	09 33		48
Eastbourne			d	06 58	07 22	07 55	08 22	08 59		09	59
Hampden Park				07 02	07 26		08 26		09 33		
Polegate				07 06	07 30	08 02	08 30	09 06	09 38	10	06
Berwick			d		07 36		08 36		09 43		
Glynde			d		07 41		08 41		09 49		
Lewes				07 18	07 47	08 18	08 47	09 18	09 54		18
Falmer				07 29e		08 29e		09 29e			29€
Brighton	10			07 38e	08 05	08 38e	09 06	09 38e	10 08		38€
Lewes				07 20		08 22		09 20		10	20
Cooksbridge			d								
Plumpton				07 28		08 30		09 28			28
Wivel eld				07 35		08 37		09 35			35
Haywards Heath				07 39		08 41		09 39			39
Gatwick Airport				07 52		08 54		09 52			52
East Croydon				08 10		09 11		10 08			80
East Croydon				08 17		09 28		10 26			26
London Bridge				08 50j		09 48j		10 48j			48j
East Croydon		4		08 10		09 11		10 09			09
Clapham Junction	10	_		08 27		09 20		10 18			18
London Victoria	10	↔		08 35		09 30		10 26			26

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1	16 16		17 16		18 16		19 16		20 16		21 16	
		17 19		18 19								22 14
	16 57	17 22	17 57	18 22	18 57	19 22	19 57	20 22	20 57			22 18
1	17 30	17 48	18 30	18 48	19 30	19 48	20 30	20 48	21 30	21 43	22 30	22 43
		17 59		18 59		19 59		20 59	- 1	21 59		22 59
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Service repeats each hour until						20 20						
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S		18 39		19 39		20 39		21 39				
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		19 08		20 08		21 08		22 08				
		19 26		20 26		21 26		22 26				
		19 48j		20 48j		21 48j		22 48j				
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ı		19 18		20 18		21 18		22 18				
J		19 26		20 26		21 26		22 26				

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#### Mondays to Fridays

Operator		GX	GX	G		GX																								
Facilities		0	0	0		0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	1	0	0	0	1	0	0	1
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Gatwick Airport		-+ d 06 4	07 (	4 07	7 50	08 33	09 02	09 32	10 02	10 32	11 02	11 32	12 02	12 32	13 02	13 32	14 02	14 32	15 02	15 32	16 02	16 32	17 02	18 07	18 15	18 37	18 47	19 17	19 32	20 02
Haywards Heath		d 06 5	3 07 1	6																			17 13	18 19	18 29	18 50	18 59	19 32	19 44	20 13
Burgess Hill		d	- 1																				17 19	18 24		18 57				
Hassocks		d l	- 1																						18 37		19 08	19 41		
Preston Park		d																					17 28	18 33		19 06				
Brighton	10	a 07 1	073	5 08	20	08 57	09 27	09 54	10 24	10 54	11 24	11 54	12 24	12 54	13 24	13 54	14 24	14 55	15 24	15 54	16 24	16 54	17 32	18 39	18 48	19 12	19 21	19 53	20 02	20 27

Operator		GX	GX	GX	GX	GX	GX	GX	GX	GX
Facilities		1	0	0	0	0	0	0	0	0
Notes					FX	FO	FX	FO	FX	FO
London Victoria	10	O d 20 00	20 30	21 00	21 30	21 30	22 00	22 00	22 30	22 30
Gatwick Airport		-← d 20 32	21 02	21 32	22 02	22 02	22 34	22 32	23 03	23 02
Haywards Heath		d 20 43	21 13	21 43	22 14	22 13	22 46	22 43	23 17	23 13
Burgess Hill		d								
Hassocks		d								
Preston Park		d l								
Brighton	10	a 20 57	21 27	21 58	22 30	22 30	23 00	22 57	23 31	23 27

#### Saturdays

Operator		GX	GX	GX	GX	GX	GX	GX	GX	GX	GX	GX	GX	GX	GX	GX		GX											
Facilities		1	0	0	0	0	1	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
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London Victoria	10	O6 00	06 30	07 00	07 30	08 00	08 30	09 00	09 30	10 00	10 30	11 00	11 30	12 00	12 30	13 00	13 30	14 00	14 30	15 00	15 30	16 00	16 30	17 00	17 30	18 00	18 30	19 00	19 30
Gatwick Airport		+ d 06 32	07 02	07 32	08 02	08 32	09 02	09 32	10 02	10 32	11 02	11 32	12 02	12 32	13 02	13 32	14 02	14 32	15 02	15 32	16 02	16 32	17 02	17 32	18 02	18 32	19 02	19 32	20 02
Haywards Heath		d																											
Brighton	10	a 07 02	07 27	07 57	08 24	08 54	09 24	09 54	10 24	10 54	11 24	11 54	12 24	12 54	13 24	13 54	14 24	14 54	15 24	15 54	16 24	16 54	17 24	17 54	18 24	18 54	19 24	19 54	20 24
Operator		GX	GX	GX	GX	GX	GX																						
Facilities		1	0	0	0	0	1																						
Notes								_																					
London Victoria	10	O d 20 00	20 30	21 00	21 30	22 00	22 30																						
Gatwick Airport		-← d 20 32	21 02	21 32	22 02	22 32	23 02																						
Haywards Heath		d		21 43	22 13	22 44	23 13																						
Brighton	10	a 20 54	21 24	21 57	22 27	22 59	23 27																						

#### Notes & Symbols

First Class accommodation available

Operated by Gatwick Express

Service operates Fridays only Service operates Mondays to Thursdays only

#### Mondays to Fridays

Operator Facilities Notes		GX	GX	GX	GX	GX	GX	GX	GX	GX 1	GX	GX 1	GX []	GX	GX 1	GX	GX	GX	GX 1	GX	GX	GX	GX	GX	GX	GX	GX	GX 1	GX 1
Brighton	10	d 06 30	06 40	07 12	07 29	07 44	08 15	08 30	09 18	09 48	10 18	10 48	11 18	11 48	12 18	12 48	13 18	13 48	14 18	14 48	15 18	15 48	16 18	16 48	17 20	17 50	18 18	18 48	19 15
Preston Park		d	06 44	07 17		07 48		- 1			- 1											- 1							
Hassocks		d	06 52		07 38	07 55																							
Burgess Hill		d 06 40	06 56	07 27		08 00																							
Wivels eld		d 06 43																											
Haywards Heath		d 06 50	07 03	07 34	07 49	08 06		08 51																					
Gatwick Airport		-+ d 07 04	07 19	07 49	08 02	08 20	08 49	09 06	09 45	10 15	10 45	11 15	11 45	12 15	12 45	13 15	13 45	14 15	14 45	15 15	15 45	16 15	16 45	17 16	17 48	18 17	18 50	19 21	19 45
London Victoria	10	O a 07 41	07 54	08 23	08 39	08 55	09 23	09 39	10 16	10 45	11 15	11 45	12 15	12 45	13 15	13 45	14 15	14 45	15 15	15 46	16 15	16 47	17 17	17 47	18 22	18 52	19 26	19 51	20 15

Operator		GX	GX	GX	GX	GX	GX	GX
Facilities		0	0	0	0	0	0	0
Notes								
Brighton	10	d 19 48	20 20	20 48	21 20	21 49	22 26	22 55
Preston Park		d						
Hassocks		d						
Burgess Hill		d						
Wivels eld		d						
Haywards Heath		d						
Gatwick Airport		-+ d 20 15	20 45	21 15	21 45	22 15	22 50	23 20
London Victoria	10	O a 20 44	21 17	21 45	22 14	22 43	23 21	23 54

#### Saturdays

Operator

Operator		GX	GX	GX	GX	GX	GX	GX	GX	GX	GX	GX	GX	GX	GX	GX	GX	GX	GX	GX	GX	GX	GX	GX	GX	GX	GX	GX	GX
Facilities		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes																													
Brighton	10	d 06 18	06 48	07 18	07 48	08 18	08 48	09 18	09 48	10 18	10 48	11 18	11 48	12 18	12 48	13 18	13 48	14 18	14 48	15 18	15 48	16 18	16 48	17 18	17 48	18 18	18 48	19 18	19 48
Gatwick Airport		+ d 06 45	07 15	07 45	08 15	08 45	09 15	09 45	10 15	10 45	11 15	11 45	12 15	12 45	13 15	13 45	14 15	14 45	15 15	15 45	16 15	16 45	17 15	17 45	18 15	18 45	19 15	19 45	20 15
London Victoria	10	O a 07 15	07 46	08 15	08 45	09 15	09 45	10 15	10 45	11 15	11 45	12 15	12 45	13 15	13 45	14 15	14 45	15 15	15 45	16 15	16 45	17 15	17 45	18 15	18 45	19 15	19 45	20 15	20 45
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Facilities			1	1	0	1	1	1
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Brighton	10	d	20 1	8 20 4	8 21 18	21 48	22 18	22 55
Gatwick Airport		-+ d	20 4	5 21 1	5 21 45	22 15	22 45	23 21
London Victoria	10	<b>⊖</b> a	21 1	5 21 4	5 22 15	22 45	23 15	23 55
			•					

#### Notes & Symbols

This timetable shows Thameslink services that call at stations between East Croydon and Brighton and run to/from Bedford from 21 May to 9 December 2017.

See separate publicity for details of East Midlands Trains services between London, Luton and Bedford, for details of Southern services between London and Brighton or for details of the complete service between London and the following stations: St Albans City, Luton Airport Parkway, Luton, Bedford.

Information correct at time of printing (March 2017). Thameslink accepts no liability for inaccuracy in the information contained in this timetable.

#### Bicycle policy

Restrictions apply in the peak hours for carrying non-folding bikes. Details at thameslinkrailway.com/cyclepolicy

**National Rail Enquiries** 

For up to the minute travel information for the National Rail network and information on all other train operating companies 24 hours a day.
Phone: 03457 48 49 50

nationalrail.co.uk

Visit thameslinkrailway.com for timetable information, latest offers information on engineering work, real time train running information and to register for travel alerts by text message and email.

Follow us on Twitter @TLRailUK

**Customer relations** Phone: 0345 026 4700 (7 days a week, 0700 to 2200, except Christmas Day)

customerservices@thameslinkrailway.com Assisted travel Phone: 0800 058 2844

(7 days a week, 0700 to 2200, except Christmas Day) Textphone: **0800 975 1052** 

Traveline For all other public transport route and timetable information Phone: 0871 200 22 33

Online **British Transport Police** 

0800 40 50 40

btp.police.uk

Phone: Online:

Other websites London public transport information, tfl.gov.uk Hertfordshire public transport information, intalink.org.uk
Through tickets for train and bus, plusbus.info Information on taxis serving rail stations, **traintaxi.co.uk**National Cycle Network information, **sustrans.org.uk** 

Independent passenger groups Transport Focus, transportfocus.org.uk London TravelWatch, londontravelwatch.org.uk Direct train

Light Connecting train First Class accommodation available

Denotes the minimum time in minutes that should be allowed to change trains. At stations with no number, please allow at least 5 minutes Station with a frequent shuttle bus to

London Luton Airport Interchange with London Underground Interchange with Eurostar services

Interchange with Tramlink Station within Airport terminal

Operated by Thameslink TL Arrival time Departure time Previous night

Service operates Mondays only Service operates Tuesdays to Fridays Service operates Fridays only

Also calls at Horley 0127 Also calls at Horley 0137

Also calls at Horley 0121

Also calls at Horley 0221

Also calls at Horley 0321

Also calls at Horley 0423

Also calls at Horley 0455

Also calls at Horley 0255

Also calls at Horley 0355

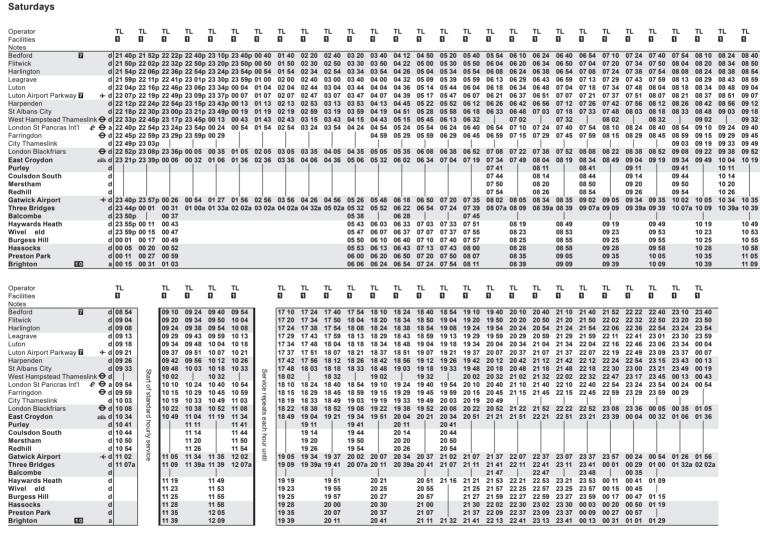
Also calls at Horley 0459

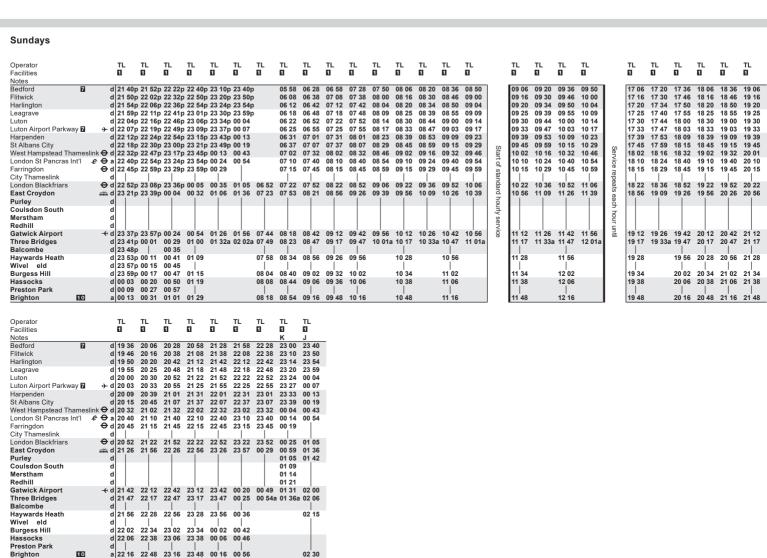
Also calls at Horley 0155

Service operates Mondays to Thursdays Service operates Tuesdays to Thursdays

Mondays to Fridays

#### TL 0 TL 0 TL 0 TL 0 TL 0 TL 0 TL 0 Operator Facilities TL 0 TL 0 TL 0 TL 0 H 02 40 03 20 03 40 04 16 04 46 05 18 05 44 06 00 06 18 06 54 06 58 07 30 07 34 07 48 08 04 08 24 07 44 07 58 07 48 08 02 07 53 08 08 07 08 07 40 07 12 07 18 06 33 06 38 06 41 07 14 07 50 07 58 08 12 08 28 08 48 07 25 | 08 00 08 15 07 31 07 56 08 06 08 22 07 38 08 02 08 12 08 28 07 20 06 27 06 41 06 32 06 46 06 38 06 52 07 07 06 56 07 14 07 02 07 20 07 05 07 23 07 08 07 28 07 36 07 58 07 26 09 03 07 44 07 56 08 20 08 32 08 48 07 50 08 02 08 26 08 38 07 53 08 05 08 29 08 41 07 56 08 08 08 32 08 44 08 26 08 38 08 58 09 12 08 54 09 10 08 57 09 13 09 00 09 31 10 04 09 37 09 40 Merstham 01 14 01 22 01 21 01 31 09 46 10 20 Redhill 04 53 09 50 10 26 Gatwick Airport 09 58a 10 05 05 48 06 18 05 52 06 22 06 28 06 02 06 34 06 08 06 40 06 11 06 43 06 18 06 50 06 22 06 54 Three Bridges 10 09 10 39a Haywards Heath Wivel eld 10<sup>°</sup>19 10 23 10 25 Burgess Hill Hassocks 10 29 10 35 Preston Park Brighton 10 07 26 07 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51 14 56 15 03 15 24 15 33 16 04 16 11 16 14 16 20 16 26 16 34 16 39a Harlington Leagrave Luton 09 34 09 37 09 48 09 51 13 04 13 07 12 51 13 07 12 56 13 12 13 03 13 18 | 13 32 13 24 13 40 13 29 13 45 13 33 13 49 13 38 13 52 14 04 14 19 14 11 14 14 14 20 14 26 14 34 14 35 14 39a 14 39 Luton Airport Parkway ☑ → d 09 07 09 21 Harpenden d 09 12 09 18 09 32 St Albans City d 09 18 09 32 09 32 09 32 09 32 09 32 09 40 09 32 09 45 09 52 09 52 09 45 09 52 09 52 09 52 09 52 09 52 09 52 09 52 09 52 09 52 09 52 00 54 09 52 09 52 09 52 09 52 00 54 09 52 00 52 09 52 10 02 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52 00 52</t Luton Airport Parkway 🛭 12 37 12 42 12 48 13 02 13 10 13 15 13 19 13 22 13 49 09 42 09 56 09 48 10 03 13 26 13 33 10 12 10 18 10 26 10 33 11 12 11 18 11 32 11 40 11 45 11 49 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17 44 5 16 52 17 07 17 35 17 47 16 58 17 12 17 40 17 52 17 04 17 18 17 48 17 58 17 32 17 40 18 08 18 18 17 33 17 45 18 13 18 23 17 17 37 17 49 18 17 18 27 17 17 40 17 52 18 20 18 30 18 18 18 25 18 50 19 01 FO 20 40 20 50 20 54 20 59 21 04 21 07 21 12 21 18 21 32 21 45 21 49 21 52 22 21 FX 21 10 21 20 21 24 21 29 21 34 21 37 21 42 22 22 10 22 15 22 25 51 d 16 08 16 26 d 16 18 16 36 d 16 22 16 40 d 16 27 16 45 d 16 32 16 50 d 16 35 16 52 d 16 41 16 58 d 16 47 17 d 16 59 17 34 17 44 17 48 17 53 17 58 18 01 18 06 18 12 18 26 18 34 18 39 18 43 18 46 19 18 Luton Airport Parkway Harpenden St Albans City West Hampstead Thameslink London St Pancras Int'l Farringdon City Thameslink London Blackfriars East Croydon Purley Coulsdon South Merstham Redhill Gatwick Airport Three Bridges Balcombe Haywards Heath Wivel eld Burgess Hill Hassocks Preston Park Brighton | 23 23 23 35 00 25 00 25 00 25 00 25 00 25 00 25 00 25 00 25 00 25 00 25 00 25 00 25 00 25 00 25 00 25 00 25 00 25 00 25 00 25 00 25 00 25 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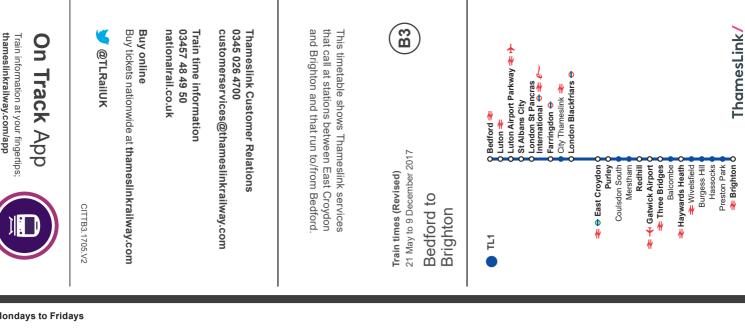


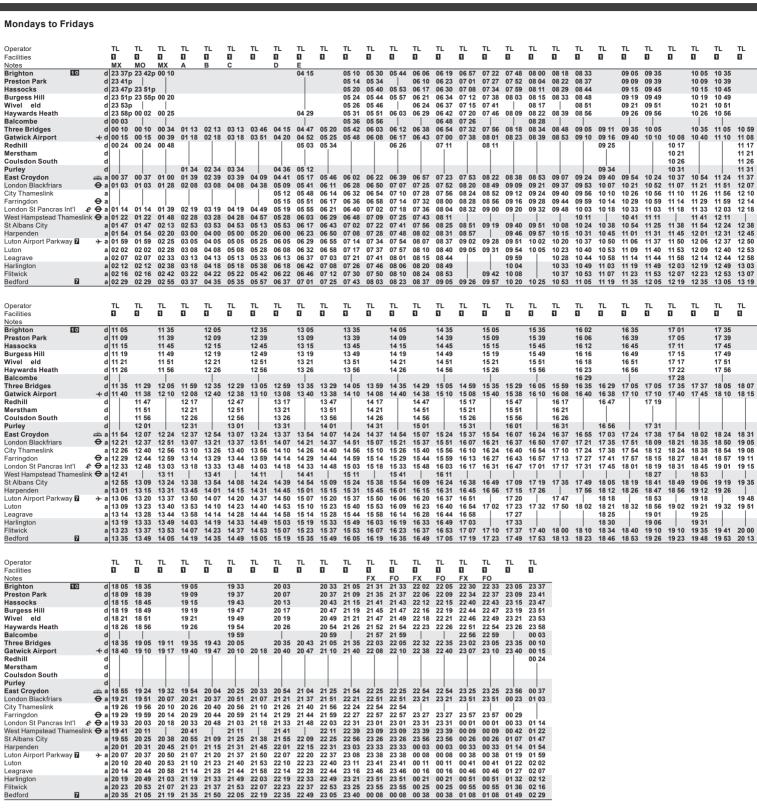


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Operator Facilities		TL O	TL O	TL	TL	TL O	TL O	TL O	TL O	TL O	TL O	TL O	TL O	TL O	TL O	TL O	TL D	TL O	TL O	TL O	TL O	TL O		TL O	TL O	TL O	TL O		TL O
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eston Park assocks		23 41p								05 37 05 43	06 09 06 15		06 39 06 45		07 09 07 15		07 41 07 47		08 09 08 15		08 39 08 45			09 09 09 15		09 39 09 45			18
assocks urgess Hill		23 47p									06 15		06 49		07 15		07 47		08 15		08 45			09 15		09 45			18
ivel eld		23 53p									06 21		06 51		07 21		07 51	07 45			08 51			09 21		09 51			118
aywards Heath		23 58p								05 54	06 26	06 20	06 56	06 47	07 26		07 56				08 56			09 26		09 56			11
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Indicative Accommodation Schedule

Private Dwellings

2 x 2 bed houses
2 x 2 bed bungalows
2 x 3 bed bungalows
8 x 3 bed houses 4 x 4 bed houses

18 Total

Private Self Build Houses:

2 x 3 bed Houses

Affordable Dwellings:

4 x 2 bed houses 5 x 3 bed houses

9 Total

29 Grand Total Dwellings

Plus:

Site for Doctor's Surgery (0.12 Acres) consisting of a two storey building of circa 1100 square feet, with 6 No. parking spaces.



: 01727 830123 **e:** email@cmykuk.net www.cmykuk.net

Reside Developments Ltd The Dutch House, 132-134 High Street, Dorking, Surrey RH4 1BG

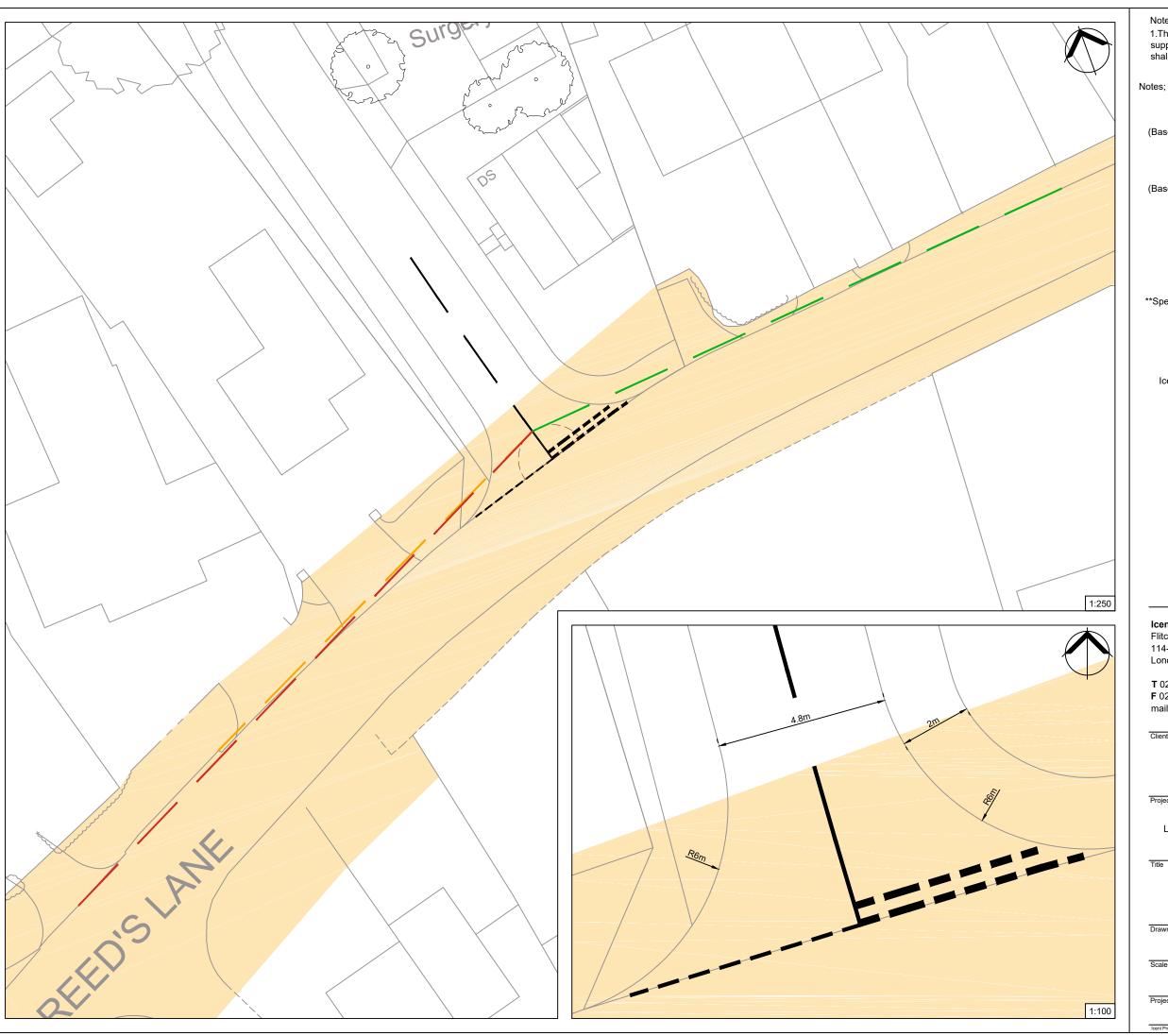
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Drg No:

1636 / P / 10.02





1. This drawing is based upon drawing number 1636/P/10.02 supplied by CMYK (Planning & design) Ltd and Iceni Projects Ltd. shall not be liable for any inaccuracies or deficiencies.

DMRB Calculated Visibility Splay of 2.4m x 46m\* looking West (Based on 85th %ile Speeds of 31.5mph recorded in vicinity of Access\*\*)

DMRB Calculated Visibility Splay of 2.4m x 40.5m\* looking East (Based on 85th %ile Speeds of 28.8mph recorded in vicinity of Access\*\*)

Visibility Splay to Tangential Points

\* Distance inclusive of bonnet length (2.4m) \*\*Speeds have been adjusted to include wet weather reduction of 2.5mph



Highway Boundary transcribed from 'OS' Base mapping to Topo. Iceni Projects Ltd. are not responsible for it's accuracy and advise that boundary is verified by solicitors.

Iceni Projects Flitcroft House 114-116 Charing Cross Road London, WC2H 0JR



**T** 020 3640 8508 **F** 020 3435 4228 mail@iceniprojects.com

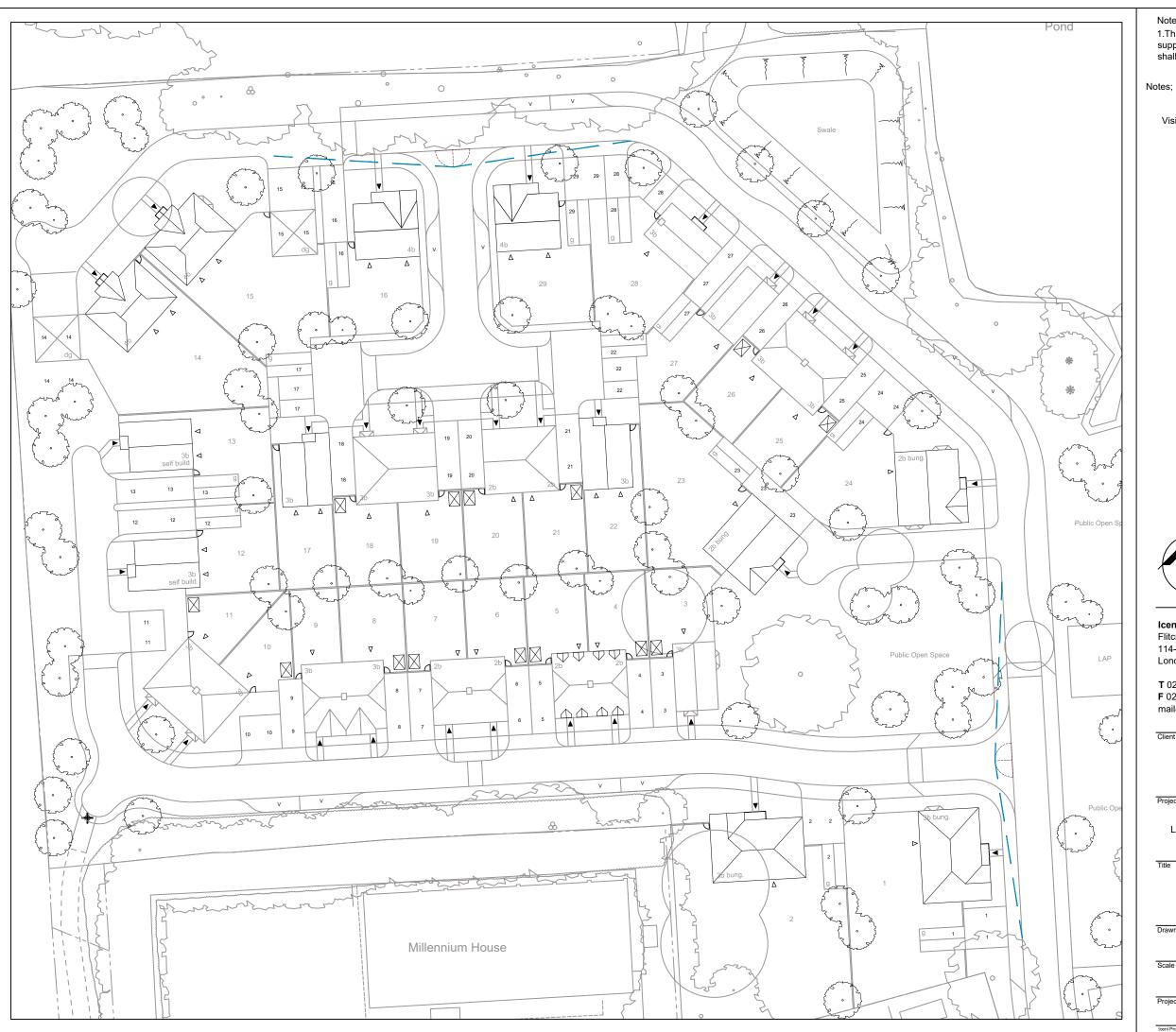
Reside Developments Ltd

Land Parcel At Reeds Lane, Sayers Common, West Sussex,

BN6 9LS

Visibility Splays at Access

Drawn By	Checked By	JM	Approved By	ME
NM		19/10/2017		19/10/2017
Scale @ A3	•	Date		
as shown			19/10/2017	
Project No.		Drawing No.		Rev.
17-T135			)2.1	-



1. This drawing is based upon drawing number 1636/P/10.02 supplied by CMYK (Planning & design) Ltd and Iceni Projects Ltd. shall not be liable for any inaccuracies or deficiencies.

Visibility Splay of 2.4m x 25m accommodating for 20mph internal roads



Iceni Projects Flitcroft House 114-116 Charing Cross Road London, WC2H 0JR

**T** 020 3640 8508 **F** 020 3435 4228 mail@iceniprojects.com



Reside Developments Ltd

Land Parcel At Reeds Lane, Sayers Common, West Sussex,

BN6 9LS

Internal Visibility Splays

•	Checked By	JM	Approved By	ME
NM		19/10/2017	19/	/10/2017
Scale @ A3		Date		
1 : 500			19/10/2017	
Project No.		Drawing No.		Rev.
17-T135		(	02.2	-



Calculation Reference: AUDIT-751001-171023-1047

#### TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL

Category : M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL VEHICLES

Selected regions and areas:

02 SOUTH EAST

ES EAST SUSSEX 2 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Secondary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Number of dwellings Actual Range: 16 to 44 (units: ) Range Selected by User: 16 to 50 (units: )

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/09 to 17/05/17

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday 1 days Wednesday 1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count 2 days
Directional ATC Count 0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Neighbourhood Centre (PPS6 Local Centre) 2

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Village 2

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

C3 2 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Page 2

Iceni Projects 114-116 Charing Cross Road London Licence No: 751001

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,000 or Less 1 days 1,001 to 5,000 1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

25,001 to 50,000 2 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

1.1 to 1.5 2 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No 2 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present 2 days

This data displays the number of selected surveys with PTAL Ratings.

#### LIST OF SITES relevant to selection parameters

1 ES-03-M-02 HOUSES & FLATS EAST SUSSEX

A26 CROWBOROUGH RD FIVE ASH DOWN VILLAGE

NEAR UCKFIELD

Neighbourhood Centre (PPS6 Local Centre)

Village

Total Number of dwellings: 44

Survey date: MONDAY 27/06/11 Survey Type: MANUAL

2 ES-03-M-09 DETACHED/SEMI-DETACHED EAST SUSSEX

STATION ROAD

**NORTHIAM** 

Neighbourhood Centre (PPS6 Local Centre)

Village

Total Number of dwellings: 16

Survey date: WEDNESDAY 17/05/17 Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

Iceni Projects 114-116 Charing Cross Road London

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL VEHICLES
Calculation factor: 1 DWELLS

Estimated TRIP rate value per 29 DWELLS shown in shaded columns

BOLD print indicates peak (busiest) period

		AF	RRIVALS			DEP	ARTURES			Ţ	OTALS	
	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated
Time Range	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate
00:00 - 01:00												
01:00 - 02:00												
02:00 - 03:00												
03:00 - 04:00												
04:00 - 05:00												
05:00 - 06:00												
06:00 - 07:00												
07:00 - 08:00	2	30	0.083	2.417	2	30	0.433	12.567	2	30	0.516	14.984
08:00 - 09:00	2	30	0.050	1.450	2	30	0.383	11.117	2	30	0.433	12.567
09:00 - 10:00	2	30	0.150	4.350	2	30	0.133	3.867	2	30	0.283	8.217
10:00 - 11:00	2	30	0.167	4.833	2	30	0.167	4.833	2	30	0.334	9.666
11:00 - 12:00	2	30	0.117	3.383	2	30	0.183	5.317	2	30	0.300	8.700
12:00 - 13:00	2	30	0.167	4.833	2	30	0.100	2.900	2	30	0.267	7.733
13:00 - 14:00	2	30	0.183	5.317	2	30	0.117	3.383	2	30	0.300	8.700
14:00 - 15:00	2	30	0.267	7.733	2	30	0.300	8.700	2	30	0.567	16.433
15:00 - 16:00	2	30	0.367	10.633	2	30	0.217	6.283	2	30	0.584	16.916
16:00 - 17:00	2	30	0.333	9.667	2	30	0.233	6.767	2	30	0.566	16.434
17:00 - 18:00	2	30	0.450	13.050	2	30	0.183	5.317	2	30	0.633	18.367
18:00 - 19:00	2	30	0.233	6.767	2	30	0.167	4.833	2	30	0.400	11.600
19:00 - 20:00												
20:00 - 21:00												
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			2.567	74.433			2.616	75.884			5.183	150.317

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.

#### Parameter summary

Trip rate parameter range selected: 16 - 44 (units: )
Survey date date range: 01/01/09 - 17/05/17

Number of weekdays (Monday-Friday): 2
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL TAXIS

Calculation factor: 1 DWELLS

Estimated TRIP rate value per 29 DWELLS shown in shaded columns

BOLD print indicates peak (busiest) period

		AF	RRIVALS			DEP	ARTURES			Т	OTALS	
	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated
Time Range	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate
00:00 - 01:00												
01:00 - 02:00												
02:00 - 03:00												
03:00 - 04:00												
04:00 - 05:00												
05:00 - 06:00												
06:00 - 07:00												
07:00 - 08:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
08:00 - 09:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
09:00 - 10:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
10:00 - 11:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
11:00 - 12:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
12:00 - 13:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
13:00 - 14:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
14:00 - 15:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
15:00 - 16:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
16:00 - 17:00	2	30	0.017	0.483	2	30	0.000	0.000	2	30	0.017	0.483
17:00 - 18:00	2	30	0.000	0.000	2	30	0.017	0.483	2	30	0.017	0.483
18:00 - 19:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
19:00 - 20:00												
20:00 - 21:00												
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			0.017	0.483			0.017	0.483			0.034	0.966

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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#### Parameter summary

Trip rate parameter range selected: 16 - 44 (units: )
Survey date date range: 01/01/09 - 17/05/17

Number of weekdays (Monday-Friday): 2
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL OGVS

Calculation factor: 1 DWELLS

Estimated TRIP rate value per 29 DWELLS shown in shaded columns

BOLD print indicates peak (busiest) period

		AF	RRIVALS			DEP	ARTURES			T	OTALS	
	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated
Time Range	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate
00:00 - 01:00												
01:00 - 02:00												
02:00 - 03:00												
03:00 - 04:00												
04:00 - 05:00												
05:00 - 06:00												
06:00 - 07:00												
07:00 - 08:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
08:00 - 09:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
09:00 - 10:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
10:00 - 11:00	2	30	0.017	0.483	2	30	0.000	0.000	2	30	0.017	0.483
11:00 - 12:00	2	30	0.000	0.000	2	30	0.017	0.483	2	30	0.017	0.483
12:00 - 13:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
13:00 - 14:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
14:00 - 15:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
15:00 - 16:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
16:00 - 17:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
17:00 - 18:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
18:00 - 19:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
19:00 - 20:00												
20:00 - 21:00												
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			0.017	0.483			0.017	0.483			0.034	0.966

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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#### Parameter summary

Trip rate parameter range selected: 16 - 44 (units: )
Survey date date range: 01/01/09 - 17/05/17

Number of weekdays (Monday-Friday): 2
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

Licence No: 751001

Iceni Projects 114-116 Charing Cross Road London

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL PSVS

Calculation factor: 1 DWELLS

Estimated TRIP rate value per 29 DWELLS shown in shaded columns

BOLD print indicates peak (busiest) period

		AF	RRIVALS			DEP	ARTURES			Т	OTALS	
	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated
Time Range	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate
00:00 - 01:00												
01:00 - 02:00												
02:00 - 03:00												
03:00 - 04:00												
04:00 - 05:00												
05:00 - 06:00												
06:00 - 07:00												
07:00 - 08:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
08:00 - 09:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
09:00 - 10:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
10:00 - 11:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
11:00 - 12:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
12:00 - 13:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
13:00 - 14:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
14:00 - 15:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
15:00 - 16:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
16:00 - 17:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
17:00 - 18:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
18:00 - 19:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
19:00 - 20:00												
20:00 - 21:00												
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			0.000	0.000			0.000	0.000			0.000	0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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#### Parameter summary

Trip rate parameter range selected: 16 - 44 (units: )
Survey date date range: 01/01/09 - 17/05/17

Number of weekdays (Monday-Friday): 2
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL CYCLISTS
Calculation factor: 1 DWELLS

Estimated TRIP rate value per 29 DWELLS shown in shaded columns

BOLD print indicates peak (busiest) period

		AF	RRIVALS			DEP	ARTURES			Т	OTALS	
	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated
Time Range	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate
00:00 - 01:00												
01:00 - 02:00												
02:00 - 03:00												
03:00 - 04:00												
04:00 - 05:00												
05:00 - 06:00												
06:00 - 07:00												
07:00 - 08:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
08:00 - 09:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
09:00 - 10:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
10:00 - 11:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
11:00 - 12:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
12:00 - 13:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
13:00 - 14:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
14:00 - 15:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
15:00 - 16:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
16:00 - 17:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
17:00 - 18:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
18:00 - 19:00	2	30	0.017	0.483	2	30	0.017	0.483	2	30	0.034	0.966
19:00 - 20:00												
20:00 - 21:00												
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			0.017	0.483			0.017	0.483			0.034	0.966

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.

#### Parameter summary

Trip rate parameter range selected: 16 - 44 (units: )
Survey date date range: 01/01/09 - 17/05/17

Number of weekdays (Monday-Friday): 2
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING MULTI-MODAL VEHICLE OCCUPANTS

Calculation factor: 1 DWELLS

Estimated TRIP rate value per 29 DWELLS shown in shaded columns

BOLD print indicates peak (busiest) period

		AF	RRIVALS			DEP	ARTURES			Т	OTALS	
	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated
Time Range	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate
00:00 - 01:00												
01:00 - 02:00												
02:00 - 03:00												
03:00 - 04:00												
04:00 - 05:00												
05:00 - 06:00												
06:00 - 07:00												
07:00 - 08:00	2	30	0.100	2.900	2	30	0.533	15.467	2	30	0.633	18.367
08:00 - 09:00	2	30	0.083	2.417	2	30	0.650	18.850	2	30	0.733	21.267
09:00 - 10:00	2	30	0.167	4.833	2	30	0.200	5.800	2	30	0.367	10.633
10:00 - 11:00	2	30	0.217	6.283	2	30	0.283	8.217	2	30	0.500	14.500
11:00 - 12:00	2	30	0.117	3.383	2	30	0.200	5.800	2	30	0.317	9.183
12:00 - 13:00	2	30	0.250	7.250	2	30	0.150	4.350	2	30	0.400	11.600
13:00 - 14:00	2	30	0.283	8.217	2	30	0.150	4.350	2	30	0.433	12.567
14:00 - 15:00	2	30	0.317	9.183	2	30	0.367	10.633	2	30	0.684	19.816
15:00 - 16:00	2	30	0.667	19.333	2	30	0.300	8.700	2	30	0.967	28.033
16:00 - 17:00	2	30	0.583	16.917	2	30	0.300	8.700	2	30	0.883	25.617
17:00 - 18:00	2	30	0.633	18.367	2	30	0.300	8.700	2	30	0.933	27.067
18:00 - 19:00	2	30	0.317	9.183	2	30	0.217	6.283	2	30	0.534	15.466
19:00 - 20:00												
20:00 - 21:00												
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			3.734	108.266			3.650	105.850			7.384	214.116

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.

#### Parameter summary

Trip rate parameter range selected: 16 - 44 (units: )
Survey date date range: 01/01/09 - 17/05/17

Number of weekdays (Monday-Friday): 2
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING MULTI-MODAL PEDESTRIANS

Calculation factor: 1 DWELLS

Estimated TRIP rate value per 29 DWELLS shown in shaded columns

BOLD print indicates peak (busiest) period

		ARRIVALS				DEP	ARTURES			TOTALS			
	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	
Time Range	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	
00:00 - 01:00													
01:00 - 02:00													
02:00 - 03:00													
03:00 - 04:00													
04:00 - 05:00													
05:00 - 06:00													
06:00 - 07:00													
07:00 - 08:00	2	30	0.033	0.967	2	30	0.017	0.483	2	30	0.050	1.450	
08:00 - 09:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000	
09:00 - 10:00	2	30	0.017	0.483	2	30	0.000	0.000	2	30	0.017	0.483	
10:00 - 11:00	2	30	0.033	0.967	2	30	0.050	1.450	2	30	0.083	2.417	
11:00 - 12:00	2	30	0.017	0.483	2	30	0.000	0.000	2	30	0.017	0.483	
12:00 - 13:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000	
13:00 - 14:00	2	30	0.017	0.483	2	30	0.017	0.483	2	30	0.034	0.966	
14:00 - 15:00	2	30	0.000	0.000	2	30	0.017	0.483	2	30	0.017	0.483	
15:00 - 16:00	2	30	0.033	0.967	2	30	0.033	0.967	2	30	0.066	1.934	
16:00 - 17:00	2	30	0.017	0.483	2	30	0.017	0.483	2	30	0.034	0.966	
17:00 - 18:00	2	30	0.050	1.450	2	30	0.150	4.350	2	30	0.200	5.800	
18:00 - 19:00	2	30	0.083	2.417	2	30	0.000	0.000	2	30	0.083	2.417	
19:00 - 20:00													
20:00 - 21:00													
21:00 - 22:00													
22:00 - 23:00							·						
23:00 - 24:00													
Total Rates:			0.300	8.700			0.301	8.699			0.601	17.399	

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.

#### Parameter summary

Trip rate parameter range selected: 16 - 44 (units: )
Survey date date range: 01/01/09 - 17/05/17

Number of weekdays (Monday-Friday): 2
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

Licence No: 751001

Iceni Projects 114-116 Charing Cross Road London

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING MULTI-MODAL BUS/TRAM PASSENGERS

Calculation factor: 1 DWELLS

Estimated TRIP rate value per 29 DWELLS shown in shaded columns

BOLD print indicates peak (busiest) period

		ARRIVALS				DEP	ARTURES		TOTALS			
	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated
Time Range	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate
00:00 - 01:00												
01:00 - 02:00												
02:00 - 03:00												
03:00 - 04:00												
04:00 - 05:00												
05:00 - 06:00												
06:00 - 07:00												
07:00 - 08:00	2	30	0.000	0.000	2	30	0.033	0.967	2	30	0.033	0.967
08:00 - 09:00	2	30	0.000	0.000	2	30	0.033	0.967	2	30	0.033	0.967
09:00 - 10:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
10:00 - 11:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
11:00 - 12:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
12:00 - 13:00	2	30	0.000	0.000	2	30	0.033	0.967	2	30	0.033	0.967
13:00 - 14:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
14:00 - 15:00	2	30	0.017	0.483	2	30	0.000	0.000	2	30	0.017	0.483
15:00 - 16:00	2	30	0.033	0.967	2	30	0.000	0.000	2	30	0.033	0.967
16:00 - 17:00	2	30	0.067	1.933	2	30	0.000	0.000	2	30	0.067	1.933
17:00 - 18:00	2	30	0.050	1.450	2	30	0.000	0.000	2	30	0.050	1.450
18:00 - 19:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
19:00 - 20:00												
20:00 - 21:00												
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			0.167	4.833			0.099	2.901			0.266	7.734

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.

#### Parameter summary

Trip rate parameter range selected: 16 - 44 (units: )
Survey date date range: 01/01/09 - 17/05/17

Number of weekdays (Monday-Friday): 2
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

Licence No: 751001

Iceni Projects 114-116 Charing Cross Road London

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING MULTI-MODAL TOTAL RAIL PASSENGERS

Calculation factor: 1 DWELLS

Estimated TRIP rate value per 29 DWELLS shown in shaded columns

BOLD print indicates peak (busiest) period

		ARRIVALS				DEP	ARTURES		TOTALS			
	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated
Time Range	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate
00:00 - 01:00												
01:00 - 02:00												
02:00 - 03:00												
03:00 - 04:00												
04:00 - 05:00												
05:00 - 06:00												
06:00 - 07:00												
07:00 - 08:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
08:00 - 09:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
09:00 - 10:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
10:00 - 11:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
11:00 - 12:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
12:00 - 13:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
13:00 - 14:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
14:00 - 15:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
15:00 - 16:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
16:00 - 17:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
17:00 - 18:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
18:00 - 19:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
19:00 - 20:00												
20:00 - 21:00												
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			0.000	0.000			0.000	0.000			0.000	0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.

#### Parameter summary

Trip rate parameter range selected: 16 - 44 (units: )
Survey date date range: 01/01/09 - 17/05/17

Number of weekdays (Monday-Friday): 2
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

Iceni Projects 114-116 Charing Cross Road London

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL COACH PASSENGERS

Calculation factor: 1 DWELLS

Estimated TRIP rate value per 29 DWELLS shown in shaded columns

BOLD print indicates peak (busiest) period

		ARRIVALS				DEP	ARTURES		TOTALS			
	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated
Time Range	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate
00:00 - 01:00												
01:00 - 02:00												
02:00 - 03:00												
03:00 - 04:00												
04:00 - 05:00												
05:00 - 06:00												
06:00 - 07:00												
07:00 - 08:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
08:00 - 09:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
09:00 - 10:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
10:00 - 11:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
11:00 - 12:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
12:00 - 13:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
13:00 - 14:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
14:00 - 15:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
15:00 - 16:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
16:00 - 17:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
17:00 - 18:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
18:00 - 19:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
19:00 - 20:00												
20:00 - 21:00												
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			0.000	0.000			0.000	0.000			0.000	0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.

#### Parameter summary

Trip rate parameter range selected: 16 - 44 (units: )
Survey date date range: 01/01/09 - 17/05/17

Number of weekdays (Monday-Friday): 2
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING MULTI-MODAL PUBLIC TRANSPORT USERS

Calculation factor: 1 DWELLS

Estimated TRIP rate value per 29 DWELLS shown in shaded columns

BOLD print indicates peak (busiest) period

		ARRIVALS				DEP	ARTURES		TOTALS			
	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated
Time Range	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate
00:00 - 01:00												
01:00 - 02:00												
02:00 - 03:00												
03:00 - 04:00												
04:00 - 05:00												
05:00 - 06:00												
06:00 - 07:00												
07:00 - 08:00	2	30	0.000	0.000	2	30	0.033	0.967	2	30	0.033	0.967
08:00 - 09:00	2	30	0.000	0.000	2	30	0.033	0.967	2	30	0.033	0.967
09:00 - 10:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
10:00 - 11:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
11:00 - 12:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
12:00 - 13:00	2	30	0.000	0.000	2	30	0.033	0.967	2	30	0.033	0.967
13:00 - 14:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
14:00 - 15:00	2	30	0.017	0.483	2	30	0.000	0.000	2	30	0.017	0.483
15:00 - 16:00	2	30	0.033	0.967	2	30	0.000	0.000	2	30	0.033	0.967
16:00 - 17:00	2	30	0.067	1.933	2	30	0.000	0.000	2	30	0.067	1.933
17:00 - 18:00	2	30	0.050	1.450	2	30	0.000	0.000	2	30	0.050	1.450
18:00 - 19:00	2	30	0.000	0.000	2	30	0.000	0.000	2	30	0.000	0.000
19:00 - 20:00												
20:00 - 21:00												
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			0.167	4.833			0.099	2.901			0.266	7.734

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.

#### Parameter summary

Trip rate parameter range selected: 16 - 44 (units: )
Survey date date range: 01/01/09 - 17/05/17

Number of weekdays (Monday-Friday): 2
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

Iceni Projects 114-116 Charing Cross Road London

Licence No: 751001

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL TOTAL PEOPLE Calculation factor: 1 DWELLS

Estimated TRIP rate value per 29 DWELLS shown in shaded columns

BOLD print indicates peak (busiest) period

		ARRIVALS				DEP	ARTURES		TOTALS			
	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated
Time Range	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate
00:00 - 01:00												
01:00 - 02:00												
02:00 - 03:00												
03:00 - 04:00												
04:00 - 05:00												
05:00 - 06:00												
06:00 - 07:00												
07:00 - 08:00	2	30	0.133	3.867	2	30	0.583	16.917	2	30	0.716	20.784
08:00 - 09:00	2	30	0.083	2.417	2	30	0.683	19.817	2	30	0.766	22.234
09:00 - 10:00	2	30	0.183	5.317	2	30	0.200	5.800	2	30	0.383	11.117
10:00 - 11:00	2	30	0.250	7.250	2	30	0.333	9.667	2	30	0.583	16.917
11:00 - 12:00	2	30	0.133	3.867	2	30	0.200	5.800	2	30	0.333	9.667
12:00 - 13:00	2	30	0.250	7.250	2	30	0.183	5.317	2	30	0.433	12.567
13:00 - 14:00	2	30	0.300	8.700	2	30	0.167	4.833	2	30	0.467	13.533
14:00 - 15:00	2	30	0.333	9.667	2	30	0.383	11.117	2	30	0.716	20.784
15:00 - 16:00	2	30	0.733	21.267	2	30	0.333	9.667	2	30	1.066	30.934
16:00 - 17:00	2	30	0.667	19.333	2	30	0.317	9.183	2	30	0.984	28.516
17:00 - 18:00	2	30	0.733	21.267	2	30	0.450	13.050	2	30	1.183	34.317
18:00 - 19:00	2	30	0.417	12.083	2	30	0.233	6.767	2	30	0.650	18.850
19:00 - 20:00												
20:00 - 21:00												
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			4.215	122.285			4.065	117.935			8.280	240.220

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.

#### Parameter summary

Trip rate parameter range selected: 16 - 44 (units: )
Survey date date range: 01/01/09 - 17/05/17

Number of weekdays (Monday-Friday): 2
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

Page 1

Calculation Reference: AUDIT-751001-171023-1024

Iceni Projects 114-116 Charing Cross Road London Licence No: 751001

#### TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 05 - HEALTH
Category : G - GP SURGERIES
MULTI-MODAL VEHICLES

Selected regions and areas:

SOUTH EAST BUCKINGHAMSHIRE 2 days 03 SOUTH WEST **GLOUCESTERSHIRE** 1 days GS SM SOMERSET 1 days 05 EAST MIDLANDS NT NOTTINGHAMSHIRE 1 days 07 YORKSHIRE & NORTH LINCOLNSHIRE NO NORTH LINCOLNSHIRE 1 days WEST YORKSHIRE WY 1 days **NORTH WEST** 80 CHESHIRE CH 1 days 09 **NORTH** 

This section displays the number of survey days per TRICS® sub-region in the selected set

#### Secondary Filtering selection:

TW

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

1 days

Parameter: Gross floor area

TYNE & WEAR

Actual Range: 350 to 1592 (units: sqm) Range Selected by User: 200 to 1592 (units: sqm)

#### Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/09 to 28/09/16

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

#### Selected survey days:

Tuesday 3 days Wednesday 2 days Thursday 2 days Friday 2 days

This data displays the number of selected surveys by day of the week.

#### Selected survey types:

Manual count 9 days
Directional ATC Count 0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre) 6 Edge of Town 3

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

#### Selected Location Sub Categories:

Residential Zone 9

Secondary Filtering selection:

#### Use Class:

D1 9 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

#### Population within 1 mile:

5,001 to 10,000	1 days
10,001 to 15,000	3 days
15,001 to 20,000	2 days
20,001 to 25,000	1 days
25,001 to 50,000	2 days

This data displays the number of selected surveys within stated 1-mile radii of population.

#### Population within 5 miles:

25,001 to 50,000	1 days
75,001 to 100,000	2 days
100,001 to 125,000	1 days
125,001 to 250,000	2 days
250,001 to 500,000	2 days
500,001 or More	1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

#### Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	2 days
1.1 to 1.5	6 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

#### Travel Plan:

Yes	1 days
No	8 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

#### PTAL Rating:

No PTAL Present 9 days

This data displays the number of selected surveys with PTAL Ratings.

#### LIST OF SITES relevant to selection parameters

1 BU-05-G-01 GP SURGERY BUCKINGHAMSHIRE

HANNON ROAD

AYLESBURY Edge of Town Residential Zone

Total Gross floor area: 620 sqm

Survey date: THURSDAY 03/12/09 Survey Type: MANUAL 2 BU-05-G-02 GP SURGERY BUCKINGHAMSHIRE

HINDHEAD KNOLL WALNUT TREE MILTON KEYNES

Suburban Area (PPS6 Out of Centre)

Residential Zone
Total Gross floor area:

Total Gross floor area: 601 sqm

Survey date: TUESDAY 19/10/10 Survey Type: MANUAL

3 CH-05-G-03 GP SURGERY CHESHIRE

HEATH LANE BOUGHTON HEATH

CHESTER

Suburban Area (PPS6 Out of Centre)

Residential Zone

Total Gross floor area: 800 sqm

Survey date: TUESDAY 29/05/12 Survey Type: MANUAL GS-05-G-01 GP SURGERY GLOUCESTERSHIRE

ABBOTSWOOD ROAD BROCKWORTH GLOUCESTER Edge of Town Residential Zone

Total Gross floor area: 475 sqm

Survey date: TUESDAY 27/04/10 Survey Type: MANUAL NO-05-G-02 GP SURGERY NORTH LINCOLNSHIRE

FERRY ROAD WEST

SCUNTHORPE Edge of Town Residential Zone Total Gross floor area:

Total Gross floor area: 350 sqm

Survey date: THURSDAY 17/09/09 Survey Type: MANUAL NT-05-G-01 GP SURGERY NOTTINGHAMSHIRE

MANSFIELD ROAD

**NOTTINGHAM** 

Suburban Area (PPS6 Out of Centre)

Residential Zone

Total Gross floor area: 460 sqm

Survey date: WEDNESDAY 24/06/15 Survey Type: MANUAL

7 SM-05-G-01 GP SURGERY SOMERSET

MANTLE STREET WELLINGTON NEAR TAUNTON

Suburban Area (PPS6 Out of Centre)

Residential Zone

Total Gross floor area: 1592 sqm

Survey date: FRIDAY 06/07/12 Survey Type: MANUAL

#### LIST OF SITES relevant to selection parameters (Cont.)

8 TW-05-G-01 GP SURGERY TYNE & WEAR

DURHAM ROAD

**SUNDERLAND** 

Suburban Area (PPS6 Out of Centre)

Residential Zone

Total Gross floor area: 600 sqm

Survey date: FRIDAY 30/11/12 Survey Type: MANUAL 05-G-01 GP SURGERY WEST YORKSHIRE

9 WY-05-G-01 GP SUR BURLEY ROAD

BURLEY LEEDS

Suburban Area (PPS6 Out of Centre)

Residential Zone

Total Gross floor area: 940 sqm

Survey date: WEDNESDAY 09/06/10 Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 05 - HEALTH/G - GP SURGERIES

MULTI-MODAL VEHICLES Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[	DEPARTURES	ò		TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	747	1.071	8	747	0.251	8	747	1.322
08:00 - 09:00	9	715	4.256	9	715	2.128	9	715	6.384
09:00 - 10:00	9	715	4.194	9	715	3.868	9	715	8.062
10:00 - 11:00	9	715	4.473	9	715	4.613	9	715	9.086
11:00 - 12:00	9	715	3.852	9	715	4.085	9	715	7.937
12:00 - 13:00	9	715	2.858	9	715	3.541	9	715	6.399
13:00 - 14:00	9	715	2.237	9	715	2.112	9	715	4.349
14:00 - 15:00	9	715	3.246	9	715	3.231	9	715	6.477
15:00 - 16:00	9	715	3.433	9	715	3.153	9	715	6.586
16:00 - 17:00	9	715	3.013	9	715	3.650	9	715	6.663
17:00 - 18:00	9	715	1.957	9	715	2.842	9	715	4.799
18:00 - 19:00	9	715	0.295	9	715	1.274	9	715	1.569
19:00 - 20:00	1	620	0.000	1	620	0.000	1	620	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			34.885			34.748			69.633

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.

### Parameter summary

Trip rate parameter range selected: 350 - 1592 (units: sqm) Survey date date range: 01/01/09 - 28/09/16

Number of weekdays (Monday-Friday): 9
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

TRIP RATE for Land Use 05 - HEALTH/G - GP SURGERIES

MULTI-MODAL TAXIS
Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[	DEPARTURES	ò		TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	747	0.000	8	747	0.000	8	747	0.000
08:00 - 09:00	9	715	0.062	9	715	0.078	9	715	0.140
09:00 - 10:00	9	715	0.171	9	715	0.109	9	715	0.280
10:00 - 11:00	9	715	0.171	9	715	0.186	9	715	0.357
11:00 - 12:00	9	715	0.202	9	715	0.140	9	715	0.342
12:00 - 13:00	9	715	0.016	9	715	0.109	9	715	0.125
13:00 - 14:00	9	715	0.124	9	715	0.124	9	715	0.248
14:00 - 15:00	9	715	0.062	9	715	0.062	9	715	0.124
15:00 - 16:00	9	715	0.031	9	715	0.031	9	715	0.062
16:00 - 17:00	9	715	0.047	9	715	0.047	9	715	0.094
17:00 - 18:00	9	715	0.000	9	715	0.000	9	715	0.000
18:00 - 19:00	9	715	0.000	9	715	0.000	9	715	0.000
19:00 - 20:00	1	620	0.000	1	620	0.000	1	620	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00	<u> </u>			<u> </u>			·		
Total Rates:			0.886			0.886			1.772

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.

## Parameter summary

Trip rate parameter range selected: 350 - 1592 (units: sqm) Survey date date range: 01/01/09 - 28/09/16

Number of weekdays (Monday-Friday): 9
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

TRIP RATE for Land Use 05 - HEALTH/G - GP SURGERIES

MULTI-MODAL OGVS Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[	DEPARTURES			TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	Rate
00:00 - 01:00	·			Ĭ			·		
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	747	0.000	8	747	0.000	8	747	0.000
08:00 - 09:00	9	715	0.016	9	715	0.016	9	715	0.032
09:00 - 10:00	9	715	0.000	9	715	0.000	9	715	0.000
10:00 - 11:00	9	715	0.000	9	715	0.000	9	715	0.000
11:00 - 12:00	9	715	0.031	9	715	0.031	9	715	0.062
12:00 - 13:00	9	715	0.000	9	715	0.000	9	715	0.000
13:00 - 14:00	9	715	0.000	9	715	0.000	9	715	0.000
14:00 - 15:00	9	715	0.000	9	715	0.000	9	715	0.000
15:00 - 16:00	9	715	0.000	9	715	0.000	9	715	0.000
16:00 - 17:00	9	715	0.000	9	715	0.000	9	715	0.000
17:00 - 18:00	9	715	0.000	9	715	0.000	9	715	0.000
18:00 - 19:00	9	715	0.000	9	715	0.000	9	715	0.000
19:00 - 20:00	1	620	0.000	1	620	0.000	1	620	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.047			0.047			0.094

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.

### Parameter summary

Trip rate parameter range selected: 350 - 1592 (units: sqm) Survey date date range: 01/01/09 - 28/09/16

Number of weekdays (Monday-Friday): 9
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

Iceni Projects 114-116 Charing Cross Road London

Licence No: 751001

TRIP RATE for Land Use 05 - HEALTH/G - GP SURGERIES

MULTI-MODAL PSVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[	DEPARTURES	)		TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	747	0.000	8	747	0.000	8	747	0.000
08:00 - 09:00	9	715	0.000	9	715	0.000	9	715	0.000
09:00 - 10:00	9	715	0.000	9	715	0.000	9	715	0.000
10:00 - 11:00	9	715	0.000	9	715	0.000	9	715	0.000
11:00 - 12:00	9	715	0.000	9	715	0.000	9	715	0.000
12:00 - 13:00	9	715	0.000	9	715	0.000	9	715	0.000
13:00 - 14:00	9	715	0.000	9	715	0.000	9	715	0.000
14:00 - 15:00	9	715	0.000	9	715	0.000	9	715	0.000
15:00 - 16:00	9	715	0.016	9	715	0.000	9	715	0.016
16:00 - 17:00	9	715	0.000	9	715	0.016	9	715	0.016
17:00 - 18:00	9	715	0.000	9	715	0.000	9	715	0.000
18:00 - 19:00	9	715	0.000	9	715	0.000	9	715	0.000
19:00 - 20:00	1	620	0.000	1	620	0.000	1	620	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.016			0.016			0.032

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.

## Parameter summary

Trip rate parameter range selected: 350 - 1592 (units: sqm) Survey date date range: 01/01/09 - 28/09/16

Number of weekdays (Monday-Friday): 9
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

TRIP RATE for Land Use 05 - HEALTH/G - GP SURGERIES

MULTI-MODAL CYCLISTS
Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[	DEPARTURES			TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	747	0.000	8	747	0.000	8	747	0.000
08:00 - 09:00	9	715	0.109	9	715	0.047	9	715	0.156
09:00 - 10:00	9	715	0.124	9	715	0.124	9	715	0.248
10:00 - 11:00	9	715	0.031	9	715	0.031	9	715	0.062
11:00 - 12:00	9	715	0.062	9	715	0.062	9	715	0.124
12:00 - 13:00	9	715	0.062	9	715	0.078	9	715	0.140
13:00 - 14:00	9	715	0.016	9	715	0.031	9	715	0.047
14:00 - 15:00	9	715	0.031	9	715	0.016	9	715	0.047
15:00 - 16:00	9	715	0.047	9	715	0.062	9	715	0.109
16:00 - 17:00	9	715	0.047	9	715	0.031	9	715	0.078
17:00 - 18:00	9	715	0.047	9	715	0.093	9	715	0.140
18:00 - 19:00	9	715	0.000	9	715	0.000	9	715	0.000
19:00 - 20:00	1	620	0.000	1	620	0.000	1	620	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.576			0.575			1.151

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.

### Parameter summary

Trip rate parameter range selected: 350 - 1592 (units: sqm) Survey date date range: 01/01/09 - 28/09/16

Number of weekdays (Monday-Friday): 9
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

TRIP RATE for Land Use 05 - HEALTH/G - GP SURGERIES MULTI-MODAL VEHICLE OCCUPANTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[	DEPARTURES	ò		TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	747	1.204	8	747	0.251	8	747	1.455
08:00 - 09:00	9	715	4.737	9	715	2.299	9	715	7.036
09:00 - 10:00	9	715	5.374	9	715	4.800	9	715	10.174
10:00 - 11:00	9	715	5.452	9	715	5.483	9	715	10.935
11:00 - 12:00	9	715	4.660	9	715	4.862	9	715	9.522
12:00 - 13:00	9	715	3.479	9	715	4.303	9	715	7.782
13:00 - 14:00	9	715	2.780	9	715	2.594	9	715	5.374
14:00 - 15:00	9	715	4.442	9	715	4.318	9	715	8.760
15:00 - 16:00	9	715	4.706	9	715	4.303	9	715	9.009
16:00 - 17:00	9	715	3.837	9	715	4.784	9	715	8.621
17:00 - 18:00	9	715	2.439	9	715	3.650	9	715	6.089
18:00 - 19:00	9	715	0.295	9	715	1.413	9	715	1.708
19:00 - 20:00	1	620	0.000	1	620	0.000	1	620	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			43.405			43.060			86.465

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.

### Parameter summary

Trip rate parameter range selected: 350 - 1592 (units: sqm) Survey date date range: 01/01/09 - 28/09/16

Number of weekdays (Monday-Friday): 9
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

TRIP RATE for Land Use 05 - HEALTH/G - GP SURGERIES

MULTI-MODAL PEDESTRIANS Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[	DEPARTURES	ò	TOTALS			
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip	
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	Rate	
00:00 - 01:00										
01:00 - 02:00										
02:00 - 03:00										
03:00 - 04:00										
04:00 - 05:00										
05:00 - 06:00										
06:00 - 07:00										
07:00 - 08:00	8	747	0.251	8	747	0.050	8	747	0.301	
08:00 - 09:00	9	715	1.755	9	715	1.180	9	715	2.935	
09:00 - 10:00	9	715	2.128	9	715	2.097	9	715	4.225	
10:00 - 11:00	9	715	1.476	9	715	1.600	9	715	3.076	
11:00 - 12:00	9	715	1.569	9	715	1.646	9	715	3.215	
12:00 - 13:00	9	715	1.258	9	715	1.491	9	715	2.749	
13:00 - 14:00	9	715	0.963	9	715	0.885	9	715	1.848	
14:00 - 15:00	9	715	1.382	9	715	1.212	9	715	2.594	
15:00 - 16:00	9	715	2.221	9	715	2.268	9	715	4.489	
16:00 - 17:00	9	715	0.839	9	715	1.274	9	715	2.113	
17:00 - 18:00	9	715	0.435	9	715	0.730	9	715	1.165	
18:00 - 19:00	9	715	0.171	9	715	0.233	9	715	0.404	
19:00 - 20:00	1	620	0.000	1	620	0.000	1	620	0.000	
20:00 - 21:00										
21:00 - 22:00										
22:00 - 23:00										
23:00 - 24:00										
Total Rates:			14.448			14.666			29.114	

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.

### Parameter summary

Trip rate parameter range selected: 350 - 1592 (units: sqm) Survey date date range: 01/01/09 - 28/09/16

Number of weekdays (Monday-Friday): 9
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

TRIP RATE for Land Use 05 - HEALTH/G - GP SURGERIES MULTI-MODAL BUS/TRAM PASSENGERS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[	DEPARTURES			TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	747	0.000	8	747	0.000	8	747	0.000
08:00 - 09:00	9	715	0.047	9	715	0.000	9	715	0.047
09:00 - 10:00	9	715	0.155	9	715	0.109	9	715	0.264
10:00 - 11:00	9	715	0.155	9	715	0.155	9	715	0.310
11:00 - 12:00	9	715	0.093	9	715	0.124	9	715	0.217
12:00 - 13:00	9	715	0.155	9	715	0.124	9	715	0.279
13:00 - 14:00	9	715	0.124	9	715	0.109	9	715	0.233
14:00 - 15:00	9	715	0.140	9	715	0.078	9	715	0.218
15:00 - 16:00	9	715	0.140	9	715	0.124	9	715	0.264
16:00 - 17:00	9	715	0.031	9	715	0.093	9	715	0.124
17:00 - 18:00	9	715	0.124	9	715	0.093	9	715	0.217
18:00 - 19:00	9	715	0.000	9	715	0.062	9	715	0.062
19:00 - 20:00	1	620	0.000	1	620	0.000	1	620	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.164			1.071			2.235

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.

### Parameter summary

Trip rate parameter range selected: 350 - 1592 (units: sqm) Survey date date range: 01/01/09 - 28/09/16

Number of weekdays (Monday-Friday): 9
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

Iceni Projects 114-116 Charing Cross Road London

Licence No: 751001

TRIP RATE for Land Use 05 - HEALTH/G - GP SURGERIES MULTI-MODAL TOTAL RAIL PASSENGERS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[	DEPARTURES	)		TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	747	0.000	8	747	0.000	8	747	0.000
08:00 - 09:00	9	715	0.000	9	715	0.000	9	715	0.000
09:00 - 10:00	9	715	0.000	9	715	0.000	9	715	0.000
10:00 - 11:00	9	715	0.000	9	715	0.000	9	715	0.000
11:00 - 12:00	9	715	0.000	9	715	0.000	9	715	0.000
12:00 - 13:00	9	715	0.000	9	715	0.000	9	715	0.000
13:00 - 14:00	9	715	0.000	9	715	0.000	9	715	0.000
14:00 - 15:00	9	715	0.000	9	715	0.000	9	715	0.000
15:00 - 16:00	9	715	0.000	9	715	0.000	9	715	0.000
16:00 - 17:00	9	715	0.000	9	715	0.000	9	715	0.000
17:00 - 18:00	9	715	0.000	9	715	0.000	9	715	0.000
18:00 - 19:00	9	715	0.000	9	715	0.000	9	715	0.000
19:00 - 20:00	1	620	0.000	1	620	0.000	1	620	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00	<u> </u>			·					<u> </u>
Total Rates:			0.000			0.000			0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.

### Parameter summary

Trip rate parameter range selected: 350 - 1592 (units: sqm) Survey date date range: 01/01/09 - 28/09/16

Number of weekdays (Monday-Friday): 9
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

Iceni Projects 114-116 Charing Cross Road London

TRIP RATE for Land Use 05 - HEALTH/G - GP SURGERIES MULTI-MODAL COACH PASSENGERS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[	DEPARTURES	)		TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	747	0.000	8	747	0.000	8	747	0.000
08:00 - 09:00	9	715	0.000	9	715	0.000	9	715	0.000
09:00 - 10:00	9	715	0.000	9	715	0.000	9	715	0.000
10:00 - 11:00	9	715	0.000	9	715	0.000	9	715	0.000
11:00 - 12:00	9	715	0.000	9	715	0.000	9	715	0.000
12:00 - 13:00	9	715	0.000	9	715	0.000	9	715	0.000
13:00 - 14:00	9	715	0.000	9	715	0.000	9	715	0.000
14:00 - 15:00	9	715	0.000	9	715	0.000	9	715	0.000
15:00 - 16:00	9	715	0.016	9	715	0.000	9	715	0.016
16:00 - 17:00	9	715	0.000	9	715	0.016	9	715	0.016
17:00 - 18:00	9	715	0.000	9	715	0.000	9	715	0.000
18:00 - 19:00	9	715	0.000	9	715	0.000	9	715	0.000
19:00 - 20:00	1	620	0.000	1	620	0.000	1	620	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.016			0.016			0.032

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.

### Parameter summary

Trip rate parameter range selected: 350 - 1592 (units: sqm) Survey date date range: 01/01/09 - 28/09/16

Number of weekdays (Monday-Friday): 9
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

TRIP RATE for Land Use 05 - HEALTH/G - GP SURGERIES MULTI-MODAL PUBLIC TRANSPORT USERS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[	DEPARTURES	ò		TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	747	0.000	8	747	0.000	8	747	0.000
08:00 - 09:00	9	715	0.047	9	715	0.000	9	715	0.047
09:00 - 10:00	9	715	0.155	9	715	0.109	9	715	0.264
10:00 - 11:00	9	715	0.155	9	715	0.155	9	715	0.310
11:00 - 12:00	9	715	0.093	9	715	0.124	9	715	0.217
12:00 - 13:00	9	715	0.155	9	715	0.124	9	715	0.279
13:00 - 14:00	9	715	0.124	9	715	0.109	9	715	0.233
14:00 - 15:00	9	715	0.140	9	715	0.078	9	715	0.218
15:00 - 16:00	9	715	0.155	9	715	0.124	9	715	0.279
16:00 - 17:00	9	715	0.031	9	715	0.109	9	715	0.140
17:00 - 18:00	9	715	0.124	9	715	0.093	9	715	0.217
18:00 - 19:00	9	715	0.000	9	715	0.062	9	715	0.062
19:00 - 20:00	1	620	0.000	1	620	0.000	1	620	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.179			1.087			2.266

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.

### Parameter summary

Trip rate parameter range selected: 350 - 1592 (units: sqm) Survey date date range: 01/01/09 - 28/09/16

Number of weekdays (Monday-Friday): 9
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

Iceni Projects 114-116 Charing Cross Road London

TRIP RATE for Land Use 05 - HEALTH/G - GP SURGERIES

MULTI-MODAL TOTAL PEOPLE Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[	DEPARTURES			TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	747	1.455	8	747	0.301	8	747	1.756
08:00 - 09:00	9	715	6.648	9	715	3.526	9	715	10.174
09:00 - 10:00	9	715	7.782	9	715	7.130	9	715	14.912
10:00 - 11:00	9	715	7.114	9	715	7.269	9	715	14.383
11:00 - 12:00	9	715	6.384	9	715	6.695	9	715	13.079
12:00 - 13:00	9	715	4.955	9	715	5.996	9	715	10.951
13:00 - 14:00	9	715	3.883	9	715	3.619	9	715	7.502
14:00 - 15:00	9	715	5.996	9	715	5.623	9	715	11.619
15:00 - 16:00	9	715	7.130	9	715	6.757	9	715	13.887
16:00 - 17:00	9	715	4.753	9	715	6.198	9	715	10.951
17:00 - 18:00	9	715	3.044	9	715	4.567	9	715	7.611
18:00 - 19:00	9	715	0.466	9	715	1.709	9	715	2.175
19:00 - 20:00	1	620	0.000	1	620	0.000	1	620	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			59.610			59.390			119.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\*FACT. Trip rates are then rounded to 3 decimal places.

### Parameter summary

Trip rate parameter range selected: 350 - 1592 (units: sqm) Survey date date range: 01/01/09 - 28/09/16

Number of weekdays (Monday-Friday): 9
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0



## **Junctions 9**

## **PICADY 9 - Priority Intersection Module**

Version: 9.0.1.4646 [] © Copyright TRL Limited, 2017

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The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the

Filename: v1.j9

Path: P:\Transport\Projects\17-T135 - Reside Developments Ltd - Land Parcel At Reeds Lane, Sayers

Common, West Sussex, BN6 9LS\4. Calculations\Traffic Models\Picady

Report generation date: 24/10/2017 12:14:30

»2017, AM »2017, PM

## **Summary of junction performance**

		AM			PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
		20			017			
Stream B-AC	0.0	8.86	0.03	Α	0.0	9.07	0.02	Α
Stream C-AB	0.0	0.00	0.00	Α	0.0	5.48	0.00	Α

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

## File summary

## **File Description**

Title	Sayers Common site access
Location	Sayers Common, West Sussex
Site number	17-T135
Date	24/10/2017
Version	v1
Status	(new file)
Identifier	
Client	Reside Developments Ltd
Jobnumber	17-T135
Enumerator	ICENIPROJECTS\jmercieca
Description	

## **Units**

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

## **Analysis Options**

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

## **Demand Set Summary**

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2017	AM	ONE HOUR	07:45	09:15	15	✓
D2	2017	PM	ONE HOUR	16:45	18:15	15	✓

## **Analysis Set Details**

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
<b>A</b> 1	✓	100.000	100.000

# 2017, AM

## **Data Errors and Warnings**

No errors or warnings

## **Junction Network**

## **Junctions**

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	New Site Access	T-Junction	Two-way	0.27	Α

## **Junction Network Options**

Driving side	Lighting
Left	Normal/unknown

## **Arms**

#### Arms

Arm	Name	Description	Arm type
Α	Reeds Lane (west)		Major
В	Site access		Minor
С	Reeds Lane (east)		Major

## **Major Arm Geometry**

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
С	6.00			137.8	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

## **Minor Arm Geometry**

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
В	One lane	2.51	65	15

## Slope / Intercept / Capacity

### **Priority Intersection Slopes and Intercepts**

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	481	0.088	0.221	0.139	0.316
1	B-C	602	0.092	0.233	-	-
1	С-В	654	0.253	0.253	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

## **Traffic Demand**

## **Demand Set Details**

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2017	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

## **Demand overview (Traffic)**

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Α		ONE HOUR	✓	135	100.000
В		ONE HOUR	✓	12	100.000
С		ONE HOUR	✓	201	100.000

## **Origin-Destination Data**

## Demand (Veh/hr)

		Т	0	
		A	В	С
From	Α	0	4	131
From	В	11	0	1
	С	201	0	0

## **Vehicle Mix**

## **Heavy Vehicle Percentages**

		Т	0	
		Α	В	С
From	Α	0	0	12
FIOIII	В	0	0	0
	С	13	0	0

## **Results**

## Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.03	8.86	0.0	Α	11	17
C-AB	0.00	0.00	0.0	Α	0	0
C-A					184	277
A-B					4	6
A-C					120	180

## Main Results for each time segment

## 07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-AC	9	2	442	0.020	9	0.0	0.0	8.317	Α

C-AB	0	0	588	0.000	0	0.0	0.0	0.000	A
C-A	151	38			151				
A-B	3	0.75			3				
A-C	99	25			99				

## 08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-AC	11	3	433	0.025	11	0.0	0.0	8.535	А
C-AB	0	0	583	0.000	0	0.0	0.0	0.000	Α
C-A	181	45			181				
A-B	4	0.90			4				
A-C	118	29			118				

### 08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-AC	13	3	420	0.031	13	0.0	0.0	8.855	А
C-AB	0	0	576	0.000	0	0.0	0.0	0.000	А
C-A	221	55			221				
A-B	4	1			4				
A-C	144	36			144				

### 08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-AC	13	3	420	0.031	13	0.0	0.0	8.855	Α
C-AB	0	0	576	0.000	0	0.0	0.0	0.000	Α
C-A	221	55			221				
A-B	4	1			4				
A-C	144	36			144				

## 08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-AC	11	3	433	0.025	11	0.0	0.0	8.538	А
C-AB	0	0	583	0.000	0	0.0	0.0	0.000	А
C-A	181	45			181				
A-B	4	0.90			4				
A-C	118	29			118				

## 09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-AC	9	2	442	0.020	9	0.0	0.0	8.319	Α
C-AB	0	0	588	0.000	0	0.0	0.0	0.000	А
C-A	151	38			151				
A-B	3	0.75			3				
A-C	99	25			99				

# 2017, PM

## **Data Errors and Warnings**

No errors or warnings

## **Junction Network**

## **Junctions**

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	New Site Access	T-Junction	Two-way	0.19	Α

## **Junction Network Options**

Driving side	Lighting
Left	Normal/unknown

## **Traffic Demand**

## **Demand Set Details**

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2017	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

## **Demand overview (Traffic)**

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Α		ONE HOUR	✓	217	100.000
В		ONE HOUR	✓	7	100.000
С		ONE HOUR	✓	111	100.000

## **Origin-Destination Data**

## Demand (Veh/hr)

	То						
From		Α	В	С			
	Α	0	13	204			
	В	7	0	0			
	С	110	1	0			

## **Vehicle Mix**

## **Heavy Vehicle Percentages**

	То					
		Α	В	С		
From	Α	0	0	12		
rioiii	В	0	0	0		



## **Results**

## Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.02	9.07	0.0	Α	6	10
C-AB	0.00	5.48	0.0	Α	1	2
C-A					101	151
A-B					12	18
A-C					187	281

## Main Results for each time segment

### 16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS		
B-AC	5	1	429	0.012	5	0.0	0.0	8.496	А		
C-AB	0.86	0.22	659	0.001	0.86	0.0	0.0	5.470	А		
C-A	83	21			83						
A-B	10	2			10						
A-C	154	38			154						

## 17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-AC	6	2	419	0.015	6	0.0	0.0	8.728	Α
C-AB	1	0.26	660	0.002	1	0.0	0.0	5.451	Α
C-A	99	25			99				
A-B	12	3			12				
A-C	183	46			183				

## 17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS		
B-AC	8	2	405	0.019	8	0.0	0.0	9.067	А		
C-AB	1	0.34	663	0.002	1	0.0	0.0	5.431	А		
C-A	121	30			121						
А-В	14	4			14						
A-C	225	56			225						

## 17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-AC	8	2	405	0.019	8	0.0	0.0	9.067	Α
C-AB	1	0.34	663	0.002	1	0.0	0.0	5.441	Α
C-A	121	30			121				
A-B	14	4			14				
A-C	225	56			225				

### 17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-AC	6	2	419	0.015	6	0.0	0.0	8.729	Α
C-AB	1	0.26	660	0.002	1	0.0	0.0	5.472	А
C-A	99	25			99				
А-В	12	3			12				
A-C	183	46			183				

### 18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
B-AC	5	1	429	0.012	5	0.0	0.0	8.498	А
C-AB	0.86	0.22	659	0.001	0.86	0.0	0.0	5.482	А
C-A	83	21			83				
A-B	10	2			10				
A-C	154	38			154				



iceni

# Report presented by

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# **REEDS LANE, SAYERS COMMON**

# RESIDENTIAL DEVELOPMENT ACCESS ARRANGEMENTS

## Stage 1 Road Safety Audit

Date: 8th November 2017

Report produced for: Iceni Projects Ltd

Report produced by: Elaine Bingham, Road Safety Consulting Ltd

Reference: RSC/EB/ KS/17008

Road Safety Consulting Ltd 4 Paramore Close Whetstone Leicestershire LE8 6EY



## **Document Control Sheet**

Project Title Reeds Lane, Sayers Common

Residential Development – Access Arrangements

Report Title Road Safety Audit Stage 1

Reference: RSC/ EB/ KS/17008

Revision -

Status Final

Control Date 8 h November 2017

## Record of Issue

Issue	Author	Date	Check	Date	Authorised	Date
Final	ЕВ	08/11/17	KS	08/11/17	KS	08/11/17

## Distribution

Organisation	Contact	Copies
ICENI Projects Ltd	Joseph Mercieca	есору



### 1. INTRODUCTION

- 1.1. This report results from a Stage 1 Road Safety Audit carried out on the access arrangements associated with a residential development off Reeds Lane, Sayers Common, on behalf of Iceni Projects Ltd. The Audit was carried out during November 2017.
- 1.2. The Audit Team membership was as follows:

Audit Team Leader Elaine Bingham, B Eng (Hons), MCIHT, MSoRSA Highways England Certificate of Competence (Road Safety Audit) Road Safety Consulting Ltd

Audit Team Member
Kevin Seymour,
B Sc, PG Dip TS, MCIHT, MSoRSA
Highways England Certificate of Competence (Road Safety Audit)
Road Safety Consulting Ltd

- 1.3. The audit took place at the offices of Road Safety Consulting Ltd between 7th and 8th November 2017. The audit was undertaken in accordance with the audit brief provided by Joseph Mercieca, Iceni Projects Ltd. The report has been prepared with reference to the Design Manual for Roads and Bridges (DMRB) Highways Directive HD19/15. The audit comprised an examination of the documents provided by the designer and listed in Appendix 1. The document consisted of a Road Safety Audit Brief with a sketch design drawing, a summary of the general details of the scheme including traffic flows and a summary of the personal injury collision data between 2012 and 2016. The personal injury collision data indicates that there is no injury collision problem within the vicinity of the proposed development.
- 1.4. The Audit Team has not been advised of any departures from standards.
- 1.5. The Audit Team visited the site together on the 7<sup>th</sup> November 2017 between 2:30pm and 3:00pm. Weather conditions at the time of the audit was overcast with light rain. The road surface was damp. Traffic flows were low. No pedestrians or cyclists were observed during the site visit.
- 1.6. The team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.
- 1.7. All comments and recommendations are referenced to the design drawing and the locations have been indicated on plans in Appendix 2.



1.8. The scheme consists of the provision of a simple tee give way controlled junction, to facilitate access to a proposed residential development for 29 dwellings and a Doctor's surgery off Reeds Lane, Sayers Common.



## 2. ITEMS RAISED BY THIS STAGE 1 AUDIT

### 2.1. JUNCTIONS

### 2.1.1. Problem

Location: A (Drawing Q2.1) - At the Development Access

**Summary:** Large vehicles may have difficulty turning in/out of the development access and this may result in them over-riding the kerbs or conflicting with other users.

Large vehicles such as delivery vehicles or refuse vehicles turning in or out of the development access may have difficulty negotiating the proposed geometry and this may result in them overriding the kerbs, or conflicting with other road users.

## Recommendation

It is recommended that vehicle swept paths are checked to ensure that all anticipated vehicle types and movements are catered for.

### 2.1.2. Problem

Location: B (Drawing Q2.1) - At the Development Access/Reed's Lane

Summary: Sunken Service Cover within junction area – potential hazard for two-wheel users

At the junction location there is an existing sunken service cover. This could potentially be a hazard for two-wheeled users when turning. Two-wheeled users can be vulnerable to loss of control on service covers particularly during wet road surface conditions.





## Recommendation

It is recommended that the service cover is located away from the junction, or the cover should have adequate skid resistant properties and raised to the level with the carriageway surface.

## 2.2. NON-MOTORISED USERS

## 2.2.1. Problem

Location: C (Drawing Q2.1) - At the Development Access

Summary: Potential trip hazard or obstruction for pedestrians

The existing footway runs along the southern side of Reeds Lane with no provision along the north side. The development is likely to create a pedestrian desire line and therefore there is likely to be a need to cross Reeds Lane. Full height kerbs may lead to pedestrian trips or falls, or accessibility issues for wheel chair users. Opposite the proposed footway on Reeds Lane there is a private driveway, and this may be located at a point where pedestrians wish to cross.



## Recommendation

It is recommended that a co-ordinated footway and pedestrian crossing facility is provided to link the proposed footways within the development and the existing footway. Any pedestrian crossing facility on Reeds Lane should not conflict with private driveways on the south side of Reeds Lane.



## 3. AUDIT TEAM STATEMENT

We certify that this audit has been carried with reference to HD 19/15.

## **Audit Team Leader**

Elaine Bingham, B Eng (Hons), MCIHT, MSoRSA Highways England Certificate of Competence (Road Safety Audit)

Signed:	Dated	8 <sup>th</sup> November 2017

## **Audit Team Member**

Kevin Seymour, B Sc, PG Dip TS, MCIHT, MSoRSA Highways England Certificate of Competence (Road Safety Audit)

Signed:	Dated	8 <sup>th</sup> November 2017

Road Safety Consulting Ltd 4 Paramore Close Whetstone Leicestershire LE8 6EY



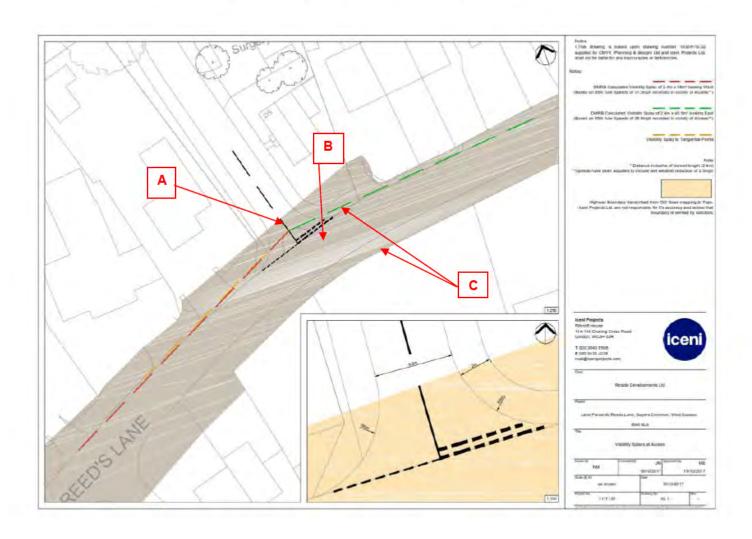
## **APPENDIX 1: Information Provided**

## **List of Information Provided**

- Audit Brief
- Drawing 17-T135-02.1 Visibility Splays at Access
- Drawing 1636/P/10.02 Site Layout



## **APPENDIX 2: Drawing Showing Problem Locations**



## **DESIGNER'S RESPONSE**

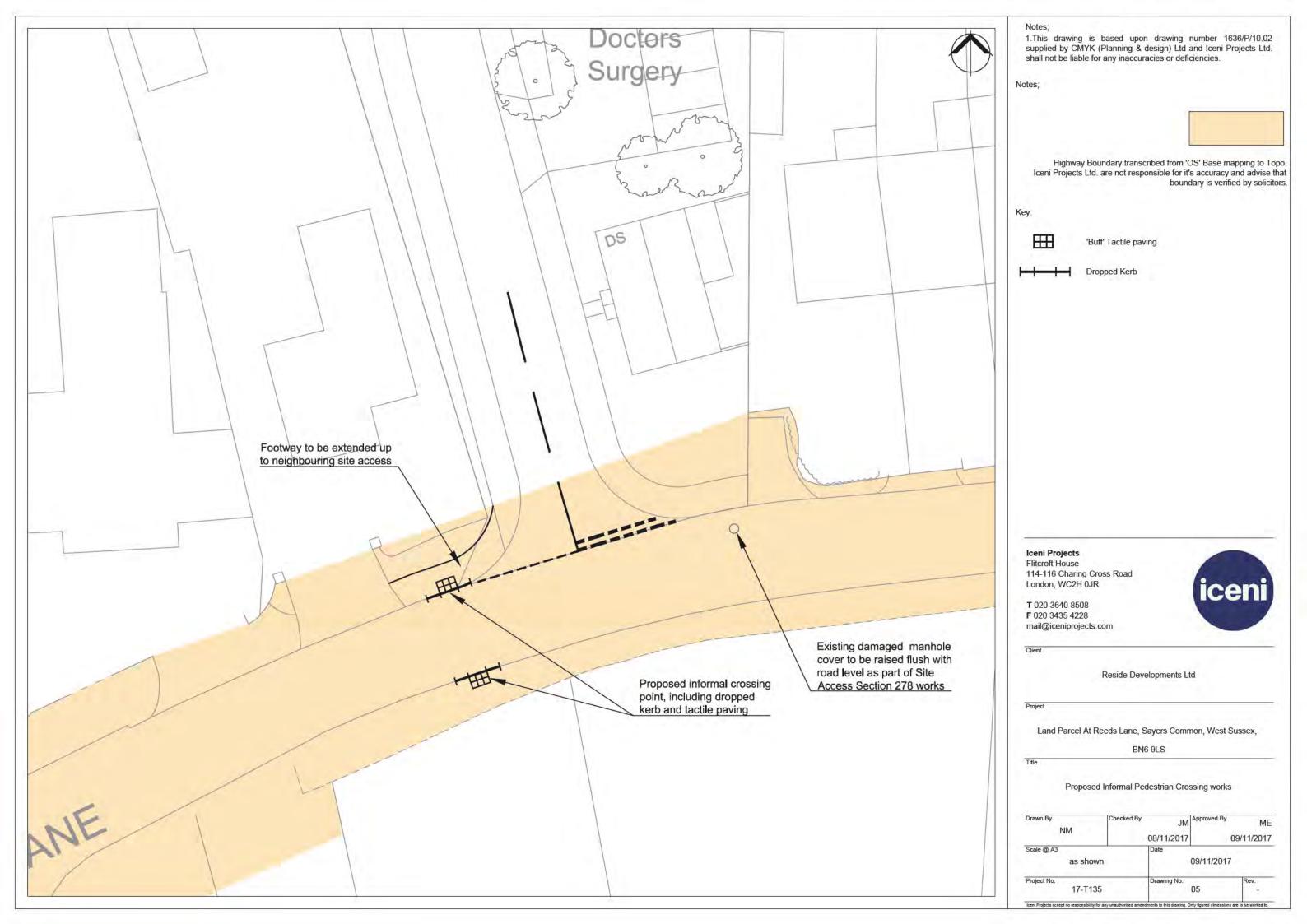
Auditors: Elaine Bingham (Team Leader) and Kevin Seymour (Team Member).

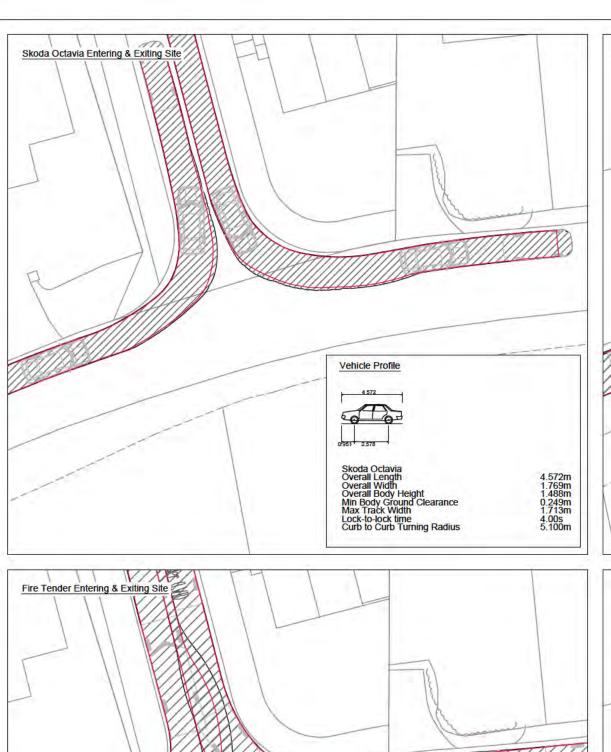
Date Audit Completed: 7<sup>th</sup> November 2017.

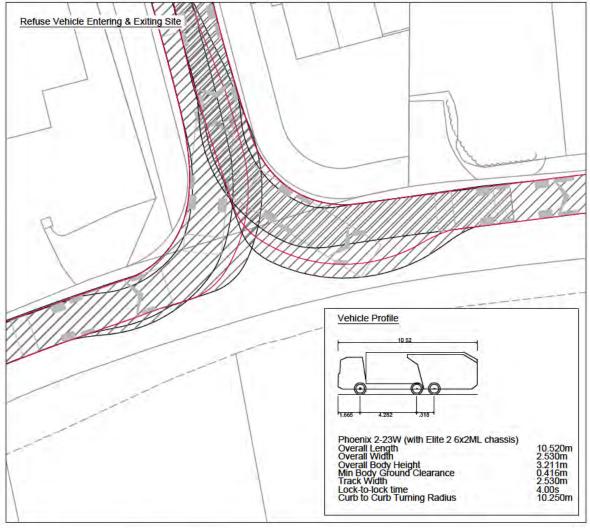
# REEDS LANE, SAYERS COMMON, WEST SUSSEX. PROPOSED ROUNDABOUT ACCESS TO NEW DEVELOPMENT

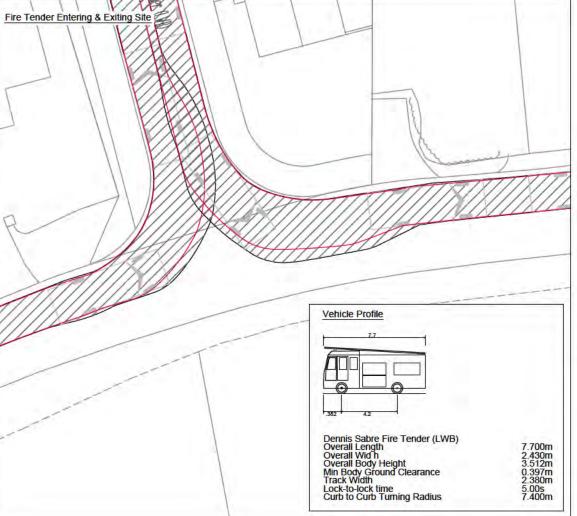
This response is to a Stage 1 Road Safety Audit to the design standard detailed within HD19/03 of Volume 5, Section 2, Part 2, of the Design Manual for Roads and Bridges, as detailed by the Highways Agency.

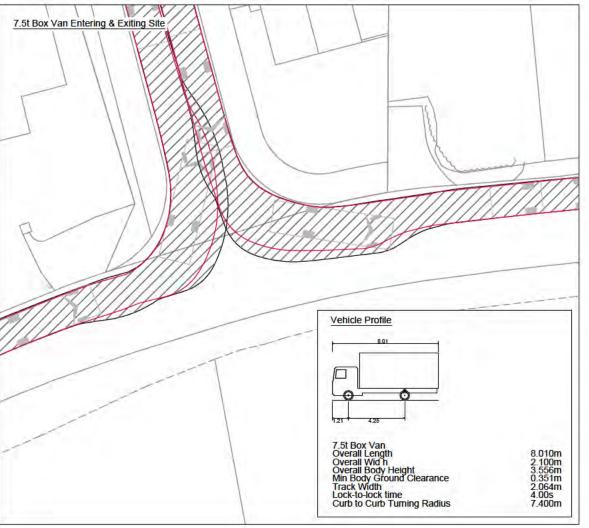
Problem no. in safety audit report	Problem accepted (yes/no)	Recommended measure accepted (yes/no)	Alternative measure (detail description)
2.1.1	Yes	Yes	Accepted. A Swept Path Analysis exercise has been undertaken as part of the highway access review, and the swept paths can function safely in its current form. The full details of this can be provided as part of the Reserved Matters application for the site and reviewed as part of the Stage 2 RSA.
2.1.2	Yes	Yes	Accepted. Details regarding statutory undertakers' equipment to be provided for the detailed design Stage 2 Road Safety Audit.
2.2.1	Yes	Yes	Accepted. An informal pedestrian crossing can be incorporated within the junction design, the full details of which can be provided as part of the Reserved Matters application for the site and reviewed as part of the Stage 2 RSA











#### Note

1. This drawing is based upon drawing number 1636/P/10.02 supplied by CMYK (Planning & design) Ltd and Iceni Projects Ltd. shall not be liable for any inaccuracies or deficiencies.



# Iceni Projects Flitcroft House 114-116 Charing Cross Road London, WC2H 0JR

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Clier

Reside Developments Ltd

Project

Land Parcel At Reeds Lane, Sayers Common, West Sussex,

BN6 9LS

Title

## Swept Path Analysis

(Entering and Exiting Site Access)

Drawn By NM	Checked By	JM 19/10/2017	Approved By	ME 19/10/2017
Scale @ A3 1:500		Date	19/10/2017	
Project No.		Drawing No.	1.6	Rev.



## TRANSPORT NOTE

To: Mid Sussex District Council Highways

From: Iceni Projects (Transport)

Date: 23<sup>rd</sup> February 2018

Title: Highway comments on 30-unit residential scheme Reeds Lane, Sayers Common

1. This Note has been prepared as a response to the Highway Comments issued by Katie Kurek of Mid Sussex District Council, the local Highway Authority, on the 20<sup>th</sup> of February 2018, asking for further information.

## a. Summary

- 2. This report is being drafted in relation to the proposed scheme for an outline application for a 30-unit residential development on Reeds Lane, in Sayers Common. This is a revision of the earlier proposal for the development of 29 units and a doctors' surgery.
- 3. The note confirms that the application is an outline application with all matters reserved, except for the site access.

## b. Visibility at the Site Access

4. The local Highway Authority (LHA) is satisfied that appropriate visibility is available at the proposed site access.

### c. Junction Capacity of Site Access

5. The LHA is satisfied that adequate capacity is available at the proposed site access with both the original and the latest proposals.

## d. Proposed Access Arrangements

- 6. Following revisions to drawings arising from comments made within the Stage 1 Road Safety Audit, whereby the footway to the west of the site access was formalised and an informal pedestrian crossing added to link site into footway across the road, the LHA have enquired if this is a shared footway or otherwise. We can confirm this is a shared footway, as shown in the Iceni Projects drawing 17-T135\_05.
- 7. The LHA also query the highway arrangement of the proposed access with no.1 Kingsland Cottages that the footway terminates into an existing crossover serving this dwelling. The footway and vehicular crossover will be flush, similar to that at the nearby junction of Reeds Lane/Osborn Close, to allow cars from this site to reverse off of the Reeds Lane carriageway as per current practice, or alternatively into the carriageway as per other residential driveways on Reeds Lane.







Plate 3 - Reeds Lane/Osborne Close junction

8. A Swept Path Analysis of the vehicle manoeuvres for no.1 Kingsland Cottages are shown in Iceni Projects drawing 17-T135\_06 and 07 attached to this note. The reversing manoeuvres in and out of the access are shown as a worst-case scenario.

## e. Other Matters

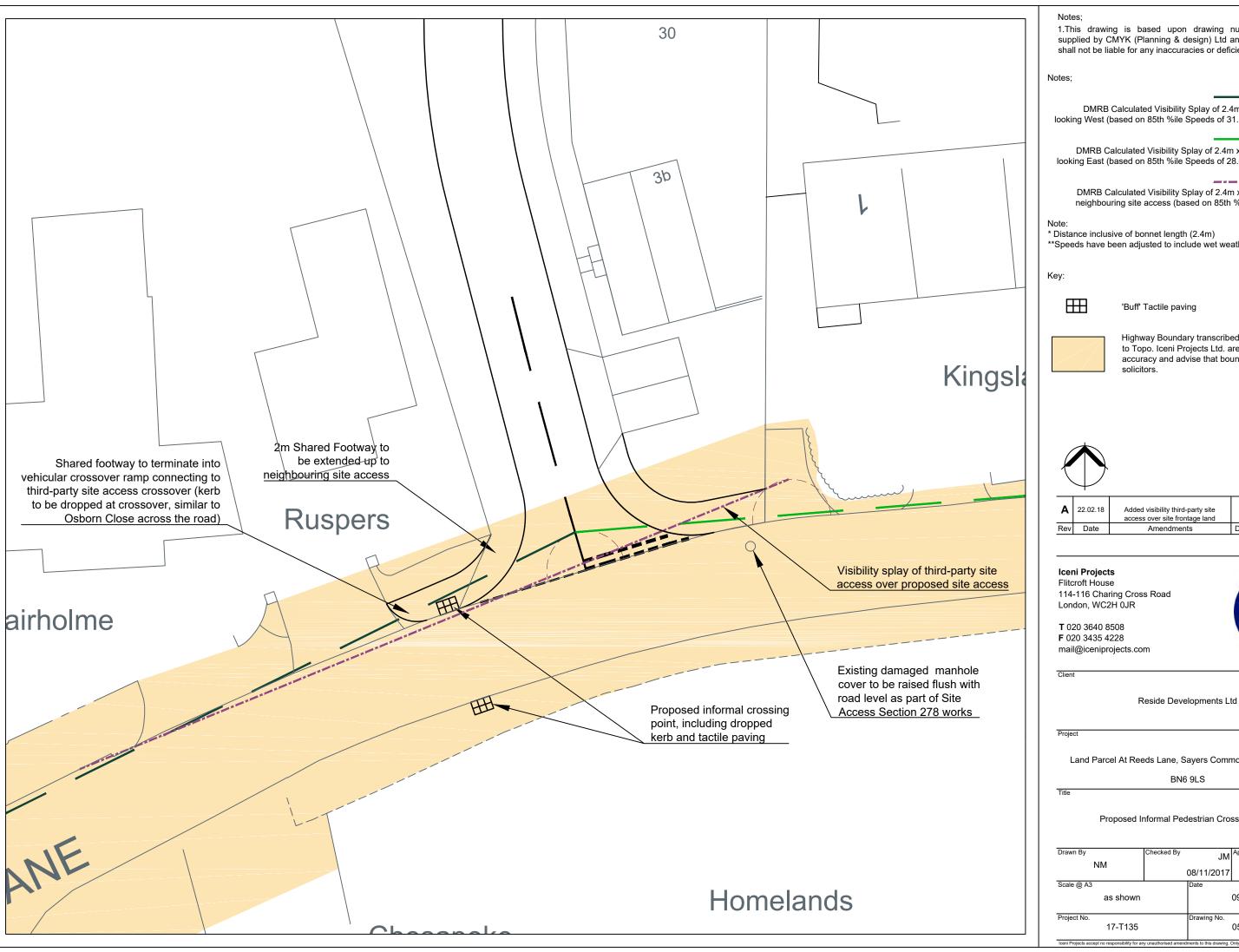
- 9. The LHA notes that Swept Path Analysis for the site access works suitably. The LHA also notes that Swept Path Analysis within the site still needs to be demonstrated and will be retained within the application as a reserved matter. Iceni Projects agree with this.
- 10. The LHA also note that any off-site works within the public highway will require a Section 278 agreement, and that if any of the internal roads are to be adopted, a Section 38 agreement will be required.

## f. Conclusions

- 11. The LHA conclude their comments that whilst they previously assessed the proposals as acceptable, they wish to see the additional information requested in their letter and provided above.
- 12. It is noted that the proposed 2m footway is a shared footway. It is also shown that the proposed footway will not compromise the ability for entry and exit vehicle manoeuvres associated with no.1 Kingsland Cottages.
- 13. It is therefore concluded that the proposed site access with Reeds Lane will provide a suitable pedestrian link across Reeds Lane, and that a safe vehicular access to the neighbouring unit will not be hindered with the proposed development.

## Iceni Projects Ltd

## February 2018



1.This drawing is based upon drawing number 1636/P/10.02 supplied by CMYK (Planning & design) Ltd and Iceni Projects Ltd. shall not be liable for any inaccuracies or deficiencies.

DMRB Calculated Visibility Splay of 2.4m x 46m\* from site access looking West (based on 85th %ile Speeds of 31.5mph recorded in area\*\*)

DMRB Calculated Visibility Splay of 2.4m x 40.5m\* from site access looking East (based on 85th %ile Speeds of 28.8mph recorded in area\*\*)

DMRB Calculated Visibility Splay of 2.4m x 46m\* looking West from neighbouring site access (based on 85th %ile speeds of 28.8mph\*\*)

\*\*Speeds have been adjusted to include wet weather reduction of 2.5mph

Highway Boundary transcribed from 'OS' Base mapping to Topo. Iceni Projects Ltd. are not responsible for it's accuracy and advise that boundary is verified by

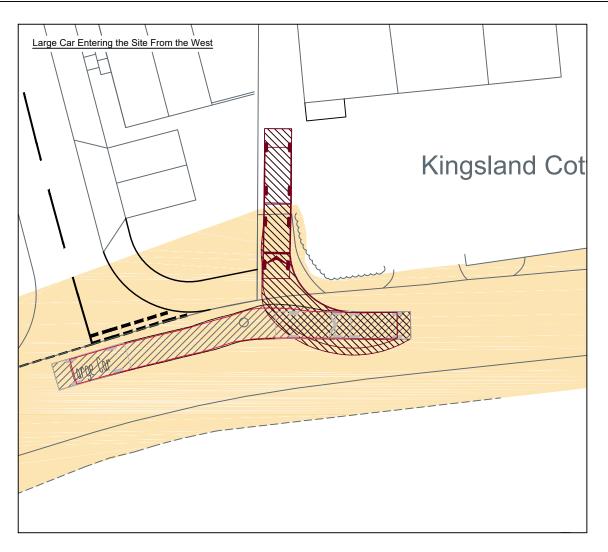
Α	22.02.18	Added visibility third-party site access over site frontage land	JM	ME	ME
Rev	Date	Amendments	Drawn	Chk	App

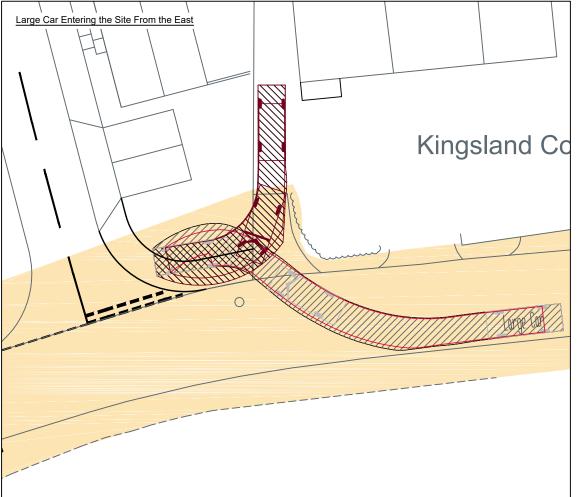


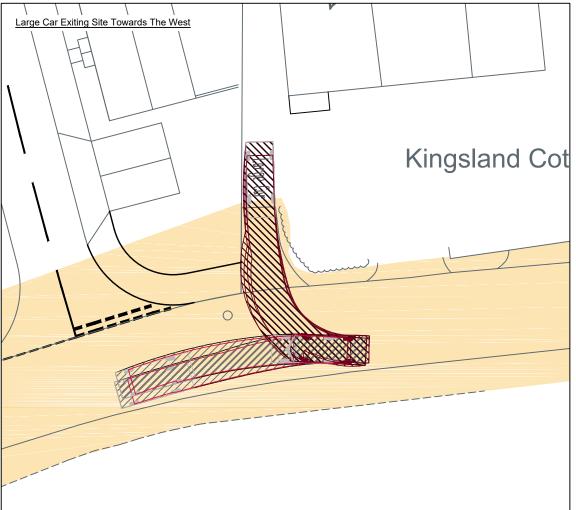
Land Parcel At Reeds Lane, Sayers Common, West Sussex,

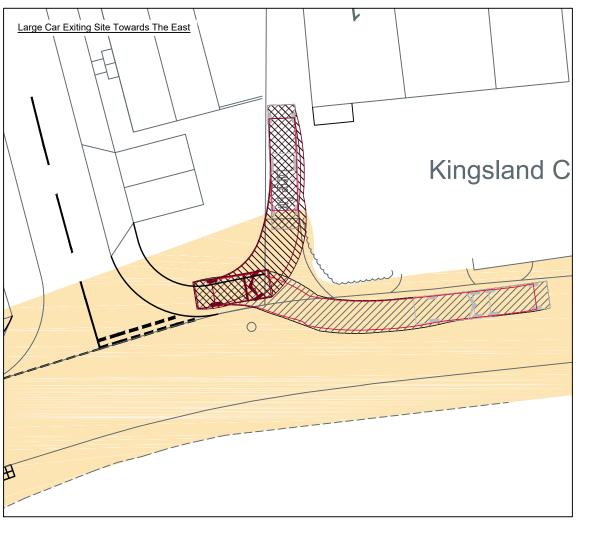
Proposed Informal Pedestrian Crossing works

Drawn By NM	Checked By	JM	Approved By	ME
INIVI		08/11/2017	09/	11/2017
Scale @ A3		Date		
as shown			09/11/2017	
Project No.		Drawing No.	05	Rev.
17-T135			05	A









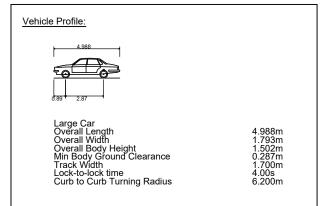
#### Note

1.This drawing is based upon drawing number 1636/P/10.02 supplied by CMYK (Planning & design) Ltd and Iceni Projects Ltd. shall not be liable for any inaccuracies or deficiencies.

Kev:



Highway Boundary transcribed from 'OS' Base mapping to Topo. Iceni Projects Ltd. are not responsible for it's accuracy and advise that boundary is verified by solicitors.





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Client

Reside Developments Ltd

Proie

Land Parcel At Reeds Lane, Sayers Common, West Sussex,

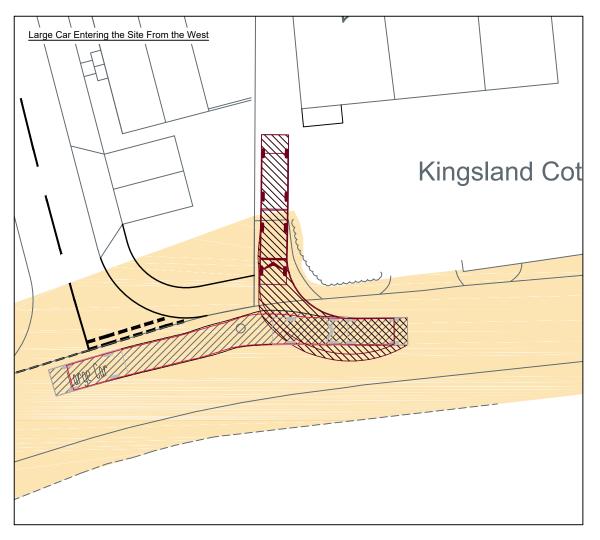
BN6 9LS

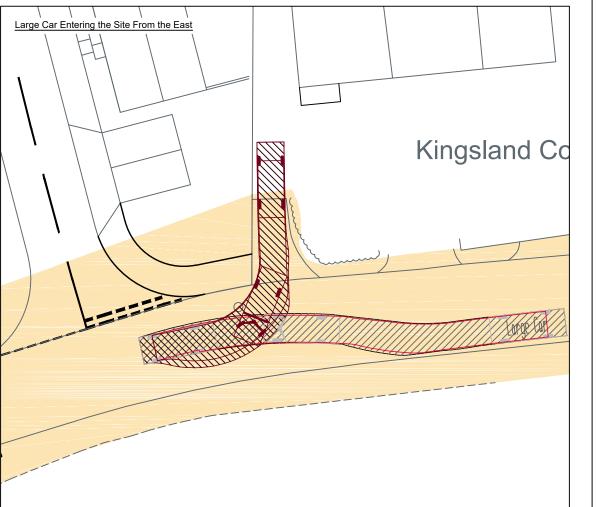
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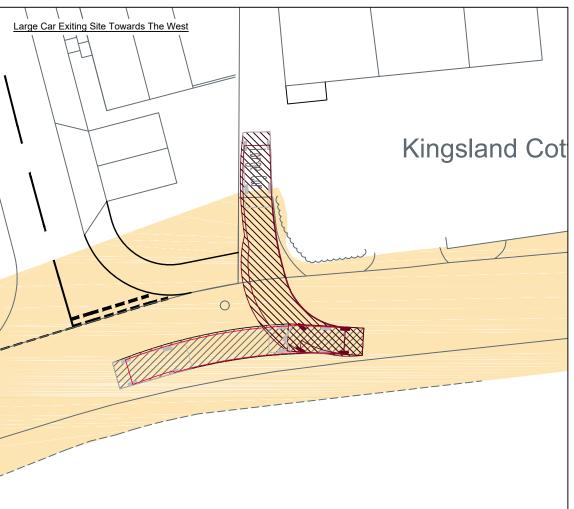
## Swept Path Analysis

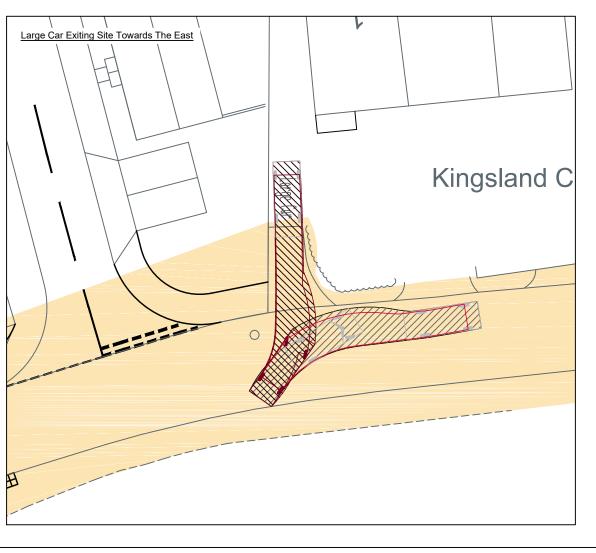
(Large Car)

		,		
Drawn By FA	Checked By	JM	Approved By	ME
FA		23/02/2018	23/	02/2018
Scale @ A3		Date		
1:250			23/02/2018	
Project No. 17-T135		Drawing No.	06.1	Rev.









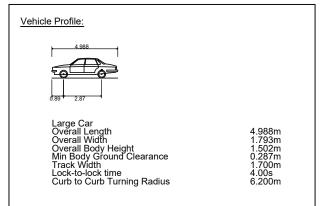
#### Note

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Kev



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Client

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Projec

Land Parcel At Reeds Lane, Sayers Common, West Sussex,

BN6 9LS

Title

## Swept Path Analysis

(Large Car)

Drawn By	Checked By	JM	Approved By	ME
FA		23/02/2018	23/	02/2018
Scale @ A3	•	Date	•	
1:250		23/02/2018		
Project No.		Drawing No.		Rev.
17-T135			06.2	-