Ref: SH/GP/P18-1903
28th September 2020

Vail Williams LLP
Unit 4 Peveril Court
6-8 London Road
Crawley
West Sussex
RH10 8JE

Tel 01293 612600
vailwilliams.com

Sally Blomfield & Andrew Marsh
Mid Sussex District Council
Oaklands
Oaklands Road
HAYWARDS HEATH
West Sussex
RH16 1SS

Dear Sally & Andrew

Letter of representation to MSDC for Site Allocations DPD: Response on behalf of Dacorar (Southern) Ltd/ Glenbeigh Developments Ltd and Wortleford Trading Company Ltd for the Mid Sussex District Council Regulation 19 Site Allocations DPD public consultation

Further to our meetings and correspondence, please accept this letter as our formal representation on behalf of our clients Dacorar (Southern) Ltd/Glenbeigh Developments Ltd and Wortleford Trading Company Ltd, in response to the Site Allocations Development Plan Document (DPD) (Regulation 19), which allocates our site "Land North of the A2300" for a Science and Technology Park (S&TP).

In summary, we support the Council's Regulation 19 Site Allocations DPD which continues to allocate our site to the North of the A2300, for the Science and Technology Park under **Policy SA9: Science and Technology Park.**

As per our meetings and continued liaison with you as LPA, we have been working on further developing our evidence base since our Regulation 18 proposals, collating a wider evidence base whilst continuing to work with key partners and stakeholders.

As you are aware, this has included a significant amount of partnership working with MSDC, WSCC and Highways England regarding highways matters.

Our clients are committed to delivering a S&TP on their site, and our positioning document provides a summary of key issues as to how we can achieve this. The positioning document is supported by a raft of evidence based assessments, and these technical reports will be made available electronically to support this representation.

Our positioning document and evidence base aim to demonstrate how we can accommodate the S&TP on our 48 hectare site, to provide a minimum of 2,500 new jobs. We believe our proposals encourage innovation & growth of knowledge based businesses, which fits within the definition of a 'Science Park' as stated in **Policy DP1: Sustainable Economic Development** of the Mid Sussex District Plan 2014-2031 (Adopted March 2018).

We also believe that our site is able to meet the strategic objectives set out in Policy DP1 which are central to the S&TP allocation, which require the allocation:

- *To promote a place which is attractive to a full range of businesses, and where local enterprise thrives; and*
- *To provide opportunities for people to live and work within their communities, reducing the need for commuting".*

Section 2.11-2.16 of the Site Allocation DPD introduce the Science and Technology Park. In regard to the specific requirements as set out in this section of the DPD and **Policy SA9: Science and Technology Park** we have the following comments we would like to be considered:

Policy SA9:

We support paragraph 2.11 which identifies that the significant planned housing growth at Burgess Hill must be supplemented with sufficient employment land also in this location.

Paragraph 2.12 recognises that the District Plan Policy **DP1: Sustainable Economic Development** seeks to support the provision of high quality S&TP development and premises, to meet the needs of the 21st Century.

This is reiterated in paragraph 2.13 in regard to the Coast to Capital Local Enterprise Partnership Strategic Economic Plan 2014 (LEPSEP) which identified Burgess Hill as a strategic growth location, based collectively on the Northern Arc development for 3500 new homes, our clients' The Hub business park for c.1000 new jobs, and this proposed Science and Technology Park for 100,000 m^2 of employment floor space and 2500 new jobs.

Paragraph 2.14 confirms that the Strategic Economic Plan from C2C was refreshed in 2018, now known as Gatwick 360° and also continues to support development that looks to develop business infrastructure, invest in sustainable growth and create skills for the future, whilst pioneering innovation.

We agree that the work undertaken by the Council for Policy DP1 identified a broad location to the West of Burgess Hill as the correct location for a S&TP and our supporting positioning document identifies how our site is aligned with the Council's rationale to allocate our site to the North of the A2300.

Objectives:

Policy SA9 on pages 31-33 of the Site Allocations DPD identifies that the S&TP allocation must comprise employment accommodation capable of creating a minimum of approximately 2500 jobs. Our supporting positioning document shows that our masterplan for approximately 1,300,000 sq ft can support in excess of

this across the mix of identified uses. Our masterplan focuses on the Use classes definition of B1a-c uses as well as ancillary mixed uses.

We are also in agreement that the development on our S&TP will comprise uses falling within the definition of a S&TP in the District Plan, where our development will provide a business support environment, that encourages and supports start-up and incubation, whilst encompassing the development of innovation-led, high growth, and knowledge based businesses.

Phasing:

Whilst we are still in discussions with MSDC on any potential mechanisms for agreeing a Phasing Strategy, we understand and accept that the re-drafted Regulation 19 Policy SA9 requires us to develop an allocation wide Masterplan and Phasing Strategy.

As part of the partnership working with MSDC and WSCC as Highways Authority and Highways England, we would like to confirm that we wish to better understand how our Phasing Strategy can be developed further and to understand any formal approval mechanisms, both through discussions with the MSDC Policy team and Development Management team.

We understand that this Phasing Strategy also relates to transport mitigation, aligning with our supporting Transport Statement; we confirm that we are committed to continuing to work with all parties regarding our emerging Mobility Strategy and how this will align with aspirations of travel modal shift, sustainable access and connectivity, and physical highway mitigation measures.

Our proposals also indicate that this Phasing Strategy may result in later phases of development being outside the plan period and we will continue to discuss these with all key stakeholders to ensure development is supported by any necessary infrastructure.

Urban Design Principles:

HNW as part of our Project Newton Project Design Team have designed our product on the principles in both Policy DP26 and the Mid Sussex Design Guide and have indicated in our supporting documents our approach to landmark buildings, high quality public realm and public areas. We are confident that our design ethos and illustrative Masterplan are sensitive to the pylons on the North of the site, aligning with the UK Power Network requirements and National Grid 'A Sense of Place Design Guidance.'

From our discussions with WSCC and MSDC we are also aware of requirements to consider how our proposals impact and take account of the safeguarded Waste allocation and the adjacent Water Treatment Works. We believe this area of our client's site can be managed to ensure a successful transition with the S&TP and its environs, now and in the future.

Landscape, Biodiversity & Green Infrastructure Considerations:

An LVIA and Ecology Report are included in our technical evidence base and further works following allocation will also be undertaken, to assist any planning strategy regarding impact on the natural environment. With 40% of the site area retained as green space, we are also maximising green infrastructure and links to enhance connectivity both within and to/from the site.

Historic Environment & Cultural Heritage:

Whilst assessments have not been undertaken at this stage, desk based reports indicate this this is not a high risk area however further pre-determination assessment and any future mitigation as part of any subsequent applications is acknowledged.

Highways & Access:

Connect Consultants form part of the Project Newton Design Team. Connect supported the promotion of Project Newton through the Regulation 18 consultation, and are now working in partnership with MSDC and WSCC and Highways England in preparing the next level of technical assessment of the traffic effects of the proposed S&TP on the surrounding road network.

The Project Team will continue to work in close collaboration with all parties, as well as with MSDC and their transport consultant, and have agreed a defined scope and methodology to assess the Project Newton traffic impact as we progress to submission. This will enable all parties to front-load our transport assessments and any infrastructure requirements and mitigation.

A vital element of the Project Newton development is its emerging Mobility Strategy, which will be an overarching strategy for the whole development. The Strategy will focus on all transport users and travel modes and is again being developed in conjunction with the Highway and Planning Authorities, as well as a number of other stakeholders including Homes England regarding the Northern Arc development.

The Transport Assessment methodology and the Mobility Strategy are set out in more detail within the Project Newton Transport and Highways Statement, which accompany this representation.

These align with the DPD requirement of Policy SA9, that the first priority is to mitigate development impacts by maximising sustainable transport interventions.

The supporting Transport and Highways Statement by Connect, and the emerging Mobility Strategy, will also ensure partnership working with HE and WSCC, to enable the safe and efficient operation of the A23 and the A23/A2300 junction.

Central to the indicative Masterplan is connectivity within and to/from the site, especially with the adjacent Bolney Grange Industrial Park, Northern Arc and Burgess Hill, and the adjacent Hub development also owned and developed by our clients.

Flood Risk & Drainage:

As part of the project, initial assessments have been undertaken on Drainage and Flooding to inform the indicative Masterplan and scale/quantum of development. Opportunities for SuDs and Green Infrastructure as

well as Ecological betterment, are also being considered and are addressed in our positioning document and technical evidence base.

Minerals:

We note that our site is within the Weald Clay Minerals Safeguarding Area and there is a need to consider our development in accordance with Policy M9 of the WSCC Joint Minerals Local Plan 2018.

General Policy SA GEN:

We note the inclusion of General Policy SE GEN to the Regulation 19 DPD document and have no specific comments to add to the policy. However, we would note that many of the issues raised are addressed through our technical evidence base that supports our positioning document as well as our initial stakeholder engagement and discussions with utilities providers, local interest groups and statutory consultees.

We also note the requirements of the generic policies in Section 3 of the DPD in regard to the following policies:

- Policy SA35: Safeguarding of Land for Strategic Highway Improvements, especially in relation to the Hickstead Junction;
- Policy SA37: Burgess Hill/Haywards Heath Cycle Network;
- Policy SA38: Air Quality

Conclusions:

We are grateful for the opportunity to comment on the Site Allocations DPD. We hope that this formal representation, alongside our positioning document and supporting evidence-based assessments, set out a S&TP allocation that can be supported by the necessary infrastructure, in accordance with District Plan policies and the MSDC evidence base. This ensures that our S&TP can align with both local, and regional aspirations.

We believe that the Regulation 19 Site Allocations DPD reflects the policy context as discussed with MSDC in regard to our S&TP site allocation, and that the emerging Policy Framework will allow our site to deliver a genuinely sustainable and future-proofed development, consistent with the District's aspirations over the plan period, and beyond.

We are committed to continue our dialogue with MSDC, WSCC, and HE, with regard to the emerging transport strategies and assessments and how they align with the emerging Mobility Strategy and any emerging Phasing Strategy.

We look forward to continuing to work with members and officers at MSDC, and their partners, in delivering a successful and innovative development on our client's site and working in partnership towards submission of the Site Allocations DPD.

Yours sincerely

[redacted]

Site Allocations Development Plan Document
Regulation 19
Submission Draft Consultation Form

The District Council is seeking representations on the Submission Draft Site Allocations Development Plan Document, which supports the strategic framework for development in Mid Sussex until 2031.

The Site Allocations DPD, has four main aims, which are:

i) to allocate sufficient housing sites to address the residual necessary to meet the identified housing requirement for the district up to 2031 in accordance with the Spatial Strategy set out in the District Plan;
ii) to allocate sufficient employment land to meet the residual need and in line with policy requirements set out in District Plan Policy DP1: Sustainable Economic Development;
iii) to allocate a site for a Science and Technology Park west of Burgess Hill in line with policy requirements set out in District Plan Policy DP1: Sustainable Economic Development, and
iv) to set out additional Strategic Policies necessary to deliver sustainable development.

All comments submitted will be considered by a Planning Inspector, appointed by the Secretary of State, at a public examination to determine whether the plan is sound.

The Site Allocations DPD is available to view at:
www.midsussex.gov.uk/planning-building/development-plan-documents/

A number of documents have been prepared to provide evidence for the Site Allocations DPD and these can be viewed on the Council's website at the above address.

Paper copies will also be at the Council offices (see address below) and your local library and available to view if the buildings are able to open during the consultation period.

Please return to Mid Sussex District Council by midnight on 28th September 2020

How can I respond to this consultation?

Online: A secure e-form is available online at:
www.midsussex.gov.uk/planning-building/development-plan-documents/

The online form has been prepared following the guidelines and standard model form provided by the Planning Inspectorate. To enable the consultation responses to be processed efficiently, it would be helpful to submit a response using the online form, however, it is not necessary to do so. Consultation responses can also be submitted by:

Post: Mid Sussex District Council
Planning Policy
Oaklands Road
Haywards Heath
West Sussex
RH16 1SS

E-mail: LDFconsultation@midsussex.gov.uk

A guidance note accompanies this form and can be used to help fill this form in.

Part A – Your Details (You only need to complete this once)

1. Personal Details

Title	Mrs
First Name	Suzanne
Last Name	Holloway
Job Title (where relevant)	Planning Consultant
Organisation (where relevant)	Vail Williams
Respondent Ref. No. (if known)	
On behalf of (where relevant)	Dacorar (Southern) Ltd/Glenbeigh Developments Ltd and Wortleford Trading Ltd
Address Line 1	c/o Agent
Line 2	
Line 3	
Line 4	
Post Code	
Telephone Number	
E-mail Address	

……

Information will only be used by Mid Sussex District Council and its employees in accordance with the Data Protection Act 1998. Mid Sussex District Council will not supply information to any other organisation or individual except to the extent permitted by the Data Protection Act and which is required or permitted by law in carrying out any of its proper functions.

The information gathered from this form will only be used for the purposes described and any personal details given will not be used for any other purpose.

Part B – Your Comments

You can find an explanation of the terms used in the guidance note. Please fill this part of the form out for each representation you make.

Name or Organisation: Vail Williams on behalf of Dacorar (Southern) Ltd/Glenbeigh Developments Ltd and Wortleford Trading Ltd

3a. Does your comment relate to:

Site Allocations DPD	X	Sustainability Appraisal		Habitats Regulations Assessment	
Community Involvement Plan		Equalities Impact Assessment		Draft Policies Maps	X

3b. To which part does this representation relate?

Paragraph 2.11-2.16 Policy SA 9 Draft Policies Map

4. Do you consider the Site Allocations DPD is:

4a. In accordance with legal and procedural requirements; including the duty to cooperate.	Yes x	No
4b. Sound	Yes x	No

5. With regard to each test, do you consider the Plan to be sound or unsound:

	Sound	Unsound
(1) Positively prepared	x	
(2) Justified	x	
(3) Effective	x	
(4) Consistent with national policy	x	

6a. If you wish to support the legal compliance or soundness of the Plan, please use this box to set out your comments. If you selected '**No**' to either part of question **4** please also complete question **6b**.

6b. Please give details of why you consider the Site Allocations Development Plan Document is not legally compliant or is unsound. Please be as precise as possible.

Please see attached letter.

6b. Please give details of why you consider the Site Allocations DPD is not legally compliant or is unsound. Please be as precise as possible.

7. Please set out what change(s) you consider necessary to make the Site Allocations DPD legally compliant or sound, having regard to the reason you have identified at question 5 above where this relates to soundness.

You will need to say why this change will make the Plan legally compliant or sound. It will be helpful if you are able to put forward your suggested revised wording of any policy or text. Please be as precise as possible.

Please note your representation should cover succinctly all the information, evidence and supporting information necessary to support/justify the representation and the suggested change, as there will not normally be a subsequent opportunity to make further representations based on the original representation at publication stage.

After this stage, further submissions will be only at the request of the Inspector, based on the matters and issues he/she identifies for examination.

8. If your representation is seeking a change, do you consider it necessary to attend and give evidence at the hearing part of the examination? (tick below as appropriate)

	No, I do not wish to participate at the oral examination	**X**	**Yes**, I wish to participate at the oral examination

9. If you wish to participate at the oral part of the examination, please outline why you consider this to be necessary:

In line with supporting positioning statement and technical evidence base, we would wish to use the opportunity to support MSDC in regard to the Science and Technology Park allocation (SA9). Please see attached letter for further information.

Please note the Inspector will determine the most appropriate procedure to adopt to hear those who have indicated that they wish to participate at the oral part of the examination.

10. Please notify me when:

(i) The Plan has been submitted for Examination	x
(ii) The publication of the recommendations from the Examination	x
(iii) The Site Allocations DPD is adopted	x

Signature: [redacted]

Date: 28 September 2020

Thank you for taking time to respond to this consultation

positioning statement

September 2020

Regulation 19

PROJECT NEWTON

land North of A2300, Burgess Hill, West Sussex

science

technology

business

environment

connectivity

Section;

executive summary

1.1 The project team behind Project Newton have been developing our Science & Technology Park (STP) proposals through engagement in both the Mid Sussex District Council (MSDC) Strategic Housing and Employment Land Availability Assessment and Regulation 18 stage of the Site Allocations Development Plan Documents (DPD). Through our continued liaison and engagement with MSDC and other key stakeholders, we believe our Regulation 19 submission builds upon elements previously outlined in our Regulation 18 submissions, to evidence our proposals for our STP. This interim (September 2020) positioning document, as supporting by our technical appendices, provides our evidence base that the site is suitable, available and deliverable to achieve the requirement for a STP development, as outlined in the Adopted Mid Sussex District Plan 2018.

1.2 We believe that our site is available as we have demonstrated commitment from the two landowners, Dacorar (Southern) Limited and Wortleford Trading Company Limited, to progress with the allocation, with an aspiration to ensure that their land contributes to the social, environmental and economic function of the Mid Sussex District, and wider economic region. It is suitable in regard to its location as it is accessible directly from the A2300. It is also able to deliver the scale and form of development required for the STP, being 43 hectares in size (120 acres) and with the land ownership also including essential land to the South of the A2300 to achieve a suitable roundabout junction. Therefore, enabling our scheme to deliver a STP of c1.4million sqft.

1.3 Given the proven track record of our landowners and the wider project team in delivering significant projects both within the Mid Sussex District and elsewhere across the region, we can ensure that our project is deliverable. This is based on our team's wealth of commercial success which also includes The Hub development, currently operational to the South East of the site.

1.4 In addition to the experience and local market knowledge of the project team, we believe the team's expertise will ensure a unique and successful development that meets the objectives of the wider Coast to Capital region as well as bespoke opportunities to link with the proposed and existing land uses surrounding our site, including the Northern Arc development. As part of discussions with MSDC, we have set out an indicative Masterplan and Phasing Strategy as required by the Site Allocations DPD. This clearly sets out a delivery strategy for the site, which will allow development to be phased in line with market and occupier demand, and also infrastructure options for its delivery.

1.5 This positioning document intends to show the evolution of our STP proposals and how the ethos of the project team is central to the design and opportunity of the site. Project Newton seeks to secure a successful development that will be delivered over the plan period and beyond, addressing social, economic and environmental matters, ensuring long- term success and agility to respond to changing market demands.

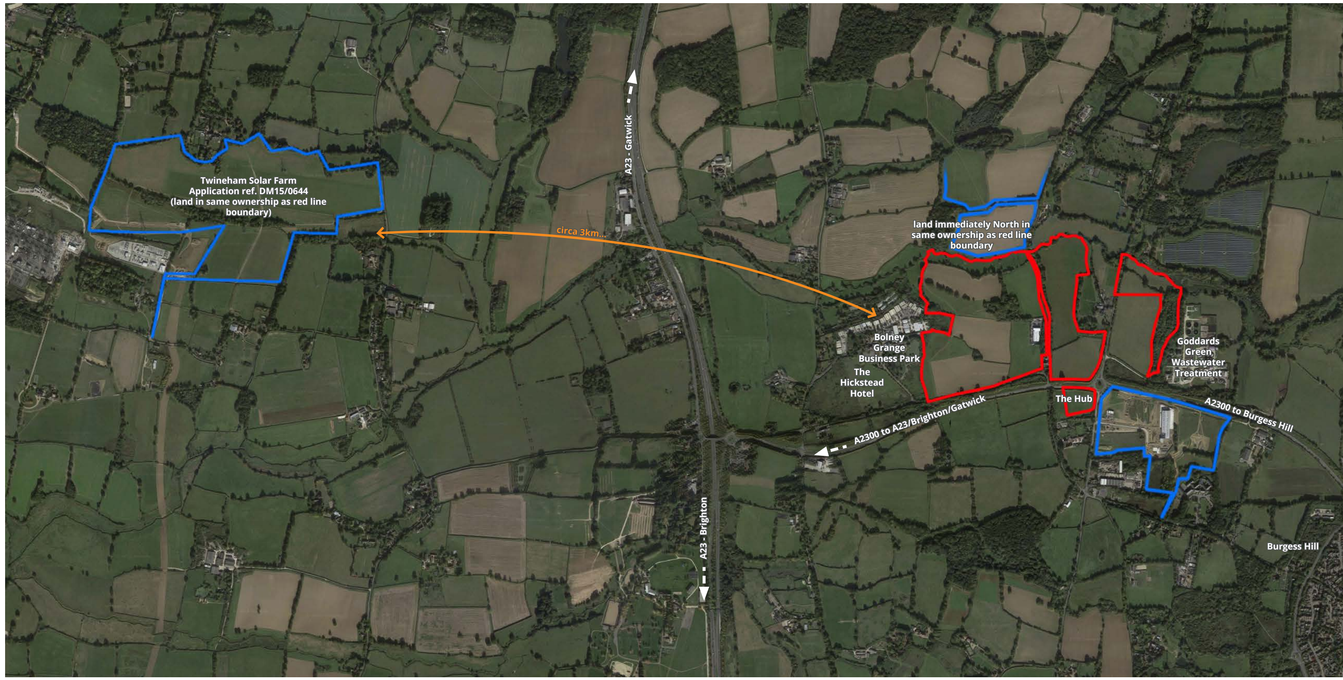


Fig 1.1 - Aerial view and diagram of adjacent land ownership within same parties

introduction

2.1 Throughout the formal planning process of the District Plan, SHELAA and Site Allocations Development Plan Document (DPD), Mid Sussex District Council (MSDC) has identified the need for additional employment floorspace in the form of a strategic employment allocation for Science and Technology use. Whilst the District Plan allocates a broad location at Burgess Hill, the recent Regulation 18 and Regulation 19 Site Allocations DPD identified our site, to the North of the A2300, as MSDC's preferred location to deliver the STP allocation, under Site Selection Paper 4: Employment Sites.

2.2 In addition, the formal process was underpinned by a raft of technical evidence based documents from MSDC, including Sustainability Appraisal, Habitats Regulation Assessments, Air Quality Assessments and Transport Assessments. These also identified scenario testing with other identified commercial and residential sites. Following the assessment of our proposal, known as Project Newton, and our own evidence based documents, our preferred site has been endorsed by Cabinet and Scrutiny Committee for Community, Housing and Planning.

2.3 The initial definition and aspiration for a Science & Technology Park came from the definition in the Mid Sussex District Plan as:

"a business support environment that encourages and supports the start-up, incubation and development of innovation-led, high-growth, knowledge-based businesses; initiatives called by other names such as Research Park, Innovation Centre, Technology Park, Technopole or technology-based Incubator – where they aspire to meet the essential criteria set out above are also included within the definition."

2.4 To ensure delivery of our STP, our project team consists of two landowners; Dacorar (Southern) Ltd and Wortleford Trading Company Ltd; Vail Williams who are advising as planning and development consultants; HNW as masterplanners and architects; along with other supporting consultants. This includes further technical evidence provided by Connect Consultants on transport; RPS on Air Quality advice; Bradbrook Consulting on issues relating to flood risk, drainage strategy, and water efficiency; Pegasus on landscaping impact; Charles D Smith & Associates on Utilities; and Ecology Solutions on ecological issues.

2.5 Together, we believe that we can deliver our STP concept to provide a viable mixed-use development that will create a new regional commercial hub, consistent with the Science Park Associations science & technological definition. We therefore believe that our STP development would attract demand from a wide range of uses such as technology, medical, pharmaceutical, research & development and other 'B Class' facilities with a 'science' or technology bias.

glenbeigh DEVELOPMENTS LTD

Dacorar (Southern) Ltd

Wortleford Trading Company Ltd

Vail Williams

hnw architects

connect consultants · Pegasus Group · HDR · rps · Bradbrook Consulting

site context

3.1 The site comprises 43 hectares of land situated North of the A2300, adjacent to Cuckfield Road. This site currently consists of parcels of commercial land and low-grade agricultural land and is adjacent to the Bolney Industrial Estate and the Hickstead Hotel to the West, and the Goddards Green Wastewater Treatment Works to the East.

3.2 In terms of the existing road network, the site is adjacent to Jobs Lane which runs parallel to the A2300. In addition, Cuckfield Road runs parallel to the site boundary North-South, providing direct access to the A2300 which runs East-West. Bishopstone Lane runs parallel providing access to Westbourne Motors.

3.3 There are a mix of other uses within the vicinity of the site including 3 privately owned residential properties and the existing workshop for Westbourne Motors which is also owned by Wortleford Trading Company Ltd.

3.4 On the South Eastern corner of the site, there is a waste allocation under the West Sussex County Council Waste Local Plan (2014). Policy W10 of the WSCC Waste Local Plan ensures that this site is retained for such uses and this has been discussed in consultation with WSCC Officers as part of the allocation process. For clarity, the area shown within the red line for the STP now excludes this area of land. This site is also owned by Wortleford Trading Company Ltd. On-going consultation with WSCC regarding the proposals will ensure that any proposed design and layout, considers both the safeguarded land for waste uses and the Goddards Green Wastewater Treatment Works to the East.

Fig 3.1 - Drone/Aerial View looking West towards Bolney Grange, The Hickstead Hotel and the A23

Fig 3.2 - View looking East towards adjacent Hub

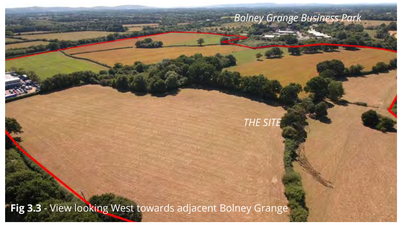


Fig 3.3 - View looking West towards adjacent Bolney Grange

Fig 3.4 - South view towards A23

Fig 3.1-3.4 - Drone/Aerial Views Across identified site for new Science and Technology Park

site constraints

4.1 The adjacent site of Bolney Industrial Estate and the Hickstead Hotel to the West, and the Goddards Green Wastewater Treatment Works to the East provide opportunities to link and potentially enhance our STP proposals.

4.2 There are a mix of other uses within the vicinity of the site, including three residential properties at Hamblin Cottages, on Bishopstone Lane and Flintstones, on Cuckfield Road. There is also the existing workshop for Westbourne Motors, within the site and initial discussions have been undertaken with these landowners in regard to the potential allocation.

4.3 The site has pylons to the North; however these are not a restriction to development, and further research has been undertaken to ensure that development is suitable in line with the National Grid Design Guidance. This will ensure development adequately dovetails with their position and is compliant with legal requirements for access. This is further detailed in section 22 on Utilities, as considered by our consultants Charles Smith & Associates.

4.4 The site is characterised by small clusters of mature/established trees within the open fields and ecological surveys have been undertaken by our consultants Ecology Solutions. As confirmed by the MSDC Sustainability Appraisal there are no protected trees or Ancient Woodland on site.

4.5 The site is also bounded by the River Adur to the North, with some areas along the Northern site boundary identified by the Environment Agency as Flood Risk Zones 2 and 3. Our proposed masterplan has considered these and initial consultants reports indicate that a surface water strategy and mitigation, dovetailed with careful design, can address successfully the areas of Flood Zone 2 & 3 into an integrated design without prejudicing the development proposal. Water management, drainage and flooding have been considered by our consultants Bradbrooks, in our supporting evidence base and in section 7 of this positioning document.

4.6 The location of the site, given the scale of the land available, allows for sufficient structured landscaping and open space to prevent coalescence with the adjacent existing buildings to the East and West, whilst also responding to the existing nature and setting of the site. Indeed, our masterplan shows 40% of the site is retained as green or open space. This aligns with policy DP12 of the District Plan (2018) which seeks to ensure the protection and enhancement of the countryside.

4.7 The character and topography of the Project Newton site ensures that the existing woodlands and the riverside location can also be harnessed to improve connectivity and to ensure that a large employment opportunity does not dominate the surrounding landscape. This is also supported by our Landscape Visual Impact Assessment (LVIA), by Pegasus, which forms part of our supporting evidence base.

4.8 Further highways assessments have been undertaken to support our masterplan concept. The site has existing access from the A2300 and the existing road network is subject to highways improvement (WSCC Highways) with new dual carriageway improvements and shared pedestrian/cycle land proposed to the Northern side of the A2300. Ongoing liaison with SYSTRA, West Sussex as the Highways Authority and MSDC, informs our supporting transport assessments and the site layout as demonstrated with the hamburger junction, in both our evidence base and section 9 of this positioning document.

4.9 Therefore, we consider that all site constraints have been mitigated through our Masterplanning process. However, these will be addressed in more detail during the subsequent design iterations, as our full proposals develop further towards the formal planning application stage.

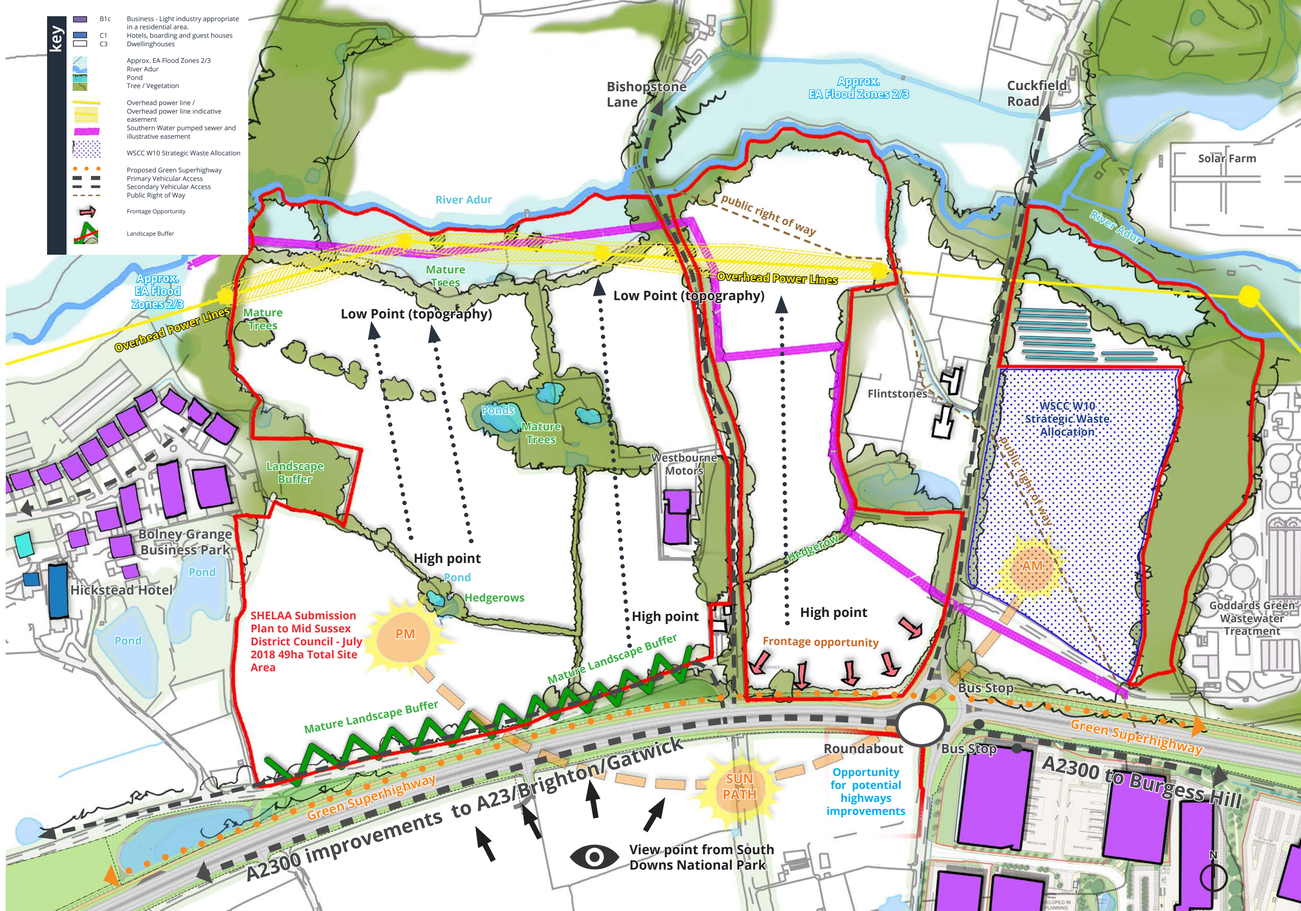


Fig 4.1 (Right) - Initial site analysis of Science and Technology Park site

connectivity

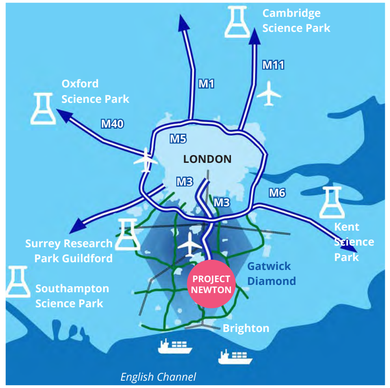
5.1 It is important that a Science and Technology Park or any similar large scale strategic employment location compliments other Science and Technology Park locations, the nearest of which are the Southampton Science Park, Kent Science Park in Sittingbourne and the Surrey Research Park in Guildford. Burgess Hill is ideally located to fill a gap for such provision in the South as it utilises opportunities within the Coast to Capital Local Enterprise Partnership (LEP) area, harnessing the existing links from Brighton to London. This opportunity has been recognised as part of the Coast to Capital Local Economic Strategy and is being assessed as part of their emerging Local Industrial Strategy. Discussions with the LEP are ongoing as part of our discussions with key stakeholders and they support partnership working opportunities following allocation.

5.2 Our location provides an opportunity to align with the ethos and aspirations of the Northern Arc development to the East, providing a 'golden thread' through our Masterplan. In particular this assists with key sustainable transport opportunities, green infrastructure and pedestrian movement, as well as opportunities to link through to the adjacent water treatment works and Bolney Grange Business Park, that can provide further opportunities to the allocated Science and Technology Park site. Ongoing discussions with Highways England to identify partnership working are also occurring.

5.3 Our illustrative plans show multiple connections which offer sustainable transport options, particularly pedestrian and cycle opportunities with the Northern Arc as well as bus and train connections via Burgess Hill Town Centre.

5.4 There are opportunities to further develop the existing footways and extend across the site to the North, with rights of way to the East with Bolney Industrial Estate, to the West and North with the Northern Arc and to the South West with The Hub. The site utilises the green superhighway proposal for the Northern Arc and the new road and cycle & pedestrian links proposed within the A2300 improvement works. Green bus stops are also being considered that may generate power, providing a space to connect digitally and allow you to 'work while you wait' as part of the developing strategy for this site and its allocation, as a next generation Science and Technology Park.

5.5 We are therefore in discussions with key providers and stakeholders about utilising innovation as a result of our sites location, adjacent to the A2300, Northern Arc and Hub developments. These include Compass, Metrobus, Homes England and the Northern Arc and WSCC as the Highways Authority. Initial discussions with the University of Brighton and Sussex University have also looked at skilled and innovative connectivity past allocation. Such technological advancements and opportunities as a result of scale and topography may be unique to the site and will allow a sustainable development which is both fit for purpose now, and flexible to changing requirements as technology and market innovation evolves.



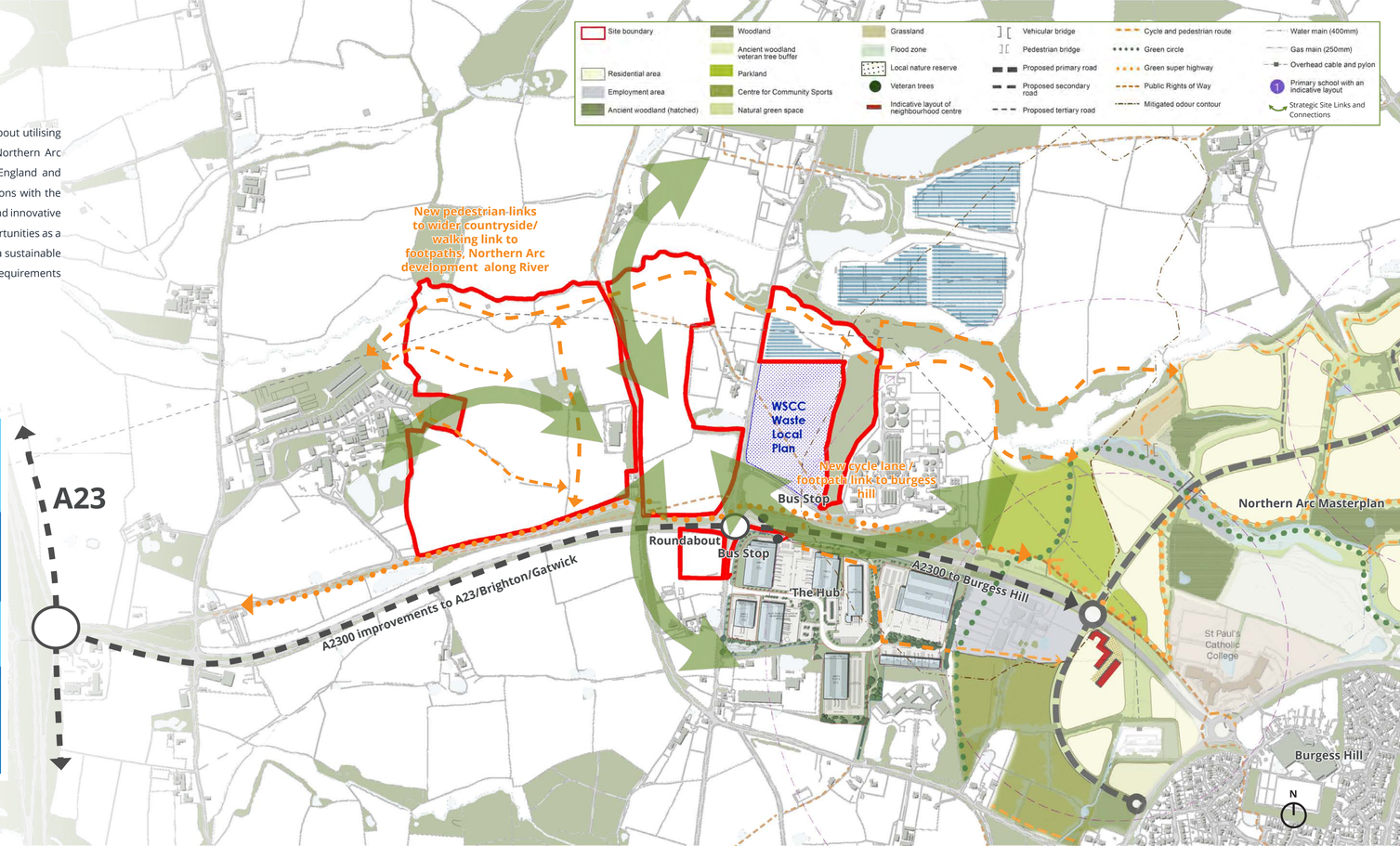


Fig 5.1 (Above and Right) - Site Connectivity to local and wider context

planning context

6.1 The principle of a STP development in this area has been found sound as part of the Adopted Mid Sussex District Plan (2018) under Policy DP1 'Sustainable Economic Development'. This policy sets out the aspiration to provide 1,000,000 sqft of floorspace and 2500 jobs through the development of a high quality Science and Technology Park proposal.

6.2 In addition to our site to the North of the A2300 as the preferred STP allocation, other sites to the North of the A2300 have been identified as new employment allocations. This enables further localised opportunities surrounding our site that could provide further enhancement of employment provision. These sites are located to the West of our site and have been allocated in the Draft Submission Site Allocations DPD (Reg 19), under Policy SA5 'Land at Bolney Grange Business Park' totalling 7 ha of developable land:

- *Extension to the South Bolney Grange, a 0.59 ha site (SHELAA ref 906)*
- *Undeveloped land at Bolney Grange, which is a 0.19 ha site (SHELAA ref 907)*
- *Land at Stairbridge Lane (South of Bolney Grange) 5.5 ha, Bolney (SHELAA ref 24)*
- *Extension East of Bolney Grange Business Park, Stairbridge Lane 0.7ha (SHELAA 931)*

6.3 These sites are now included in the Regulation 19 Site Allocations DPD as having potential as new employment site allocations, further endorsing development to the North of the A2300 to ensure consistent opportunities for consolidated new economic development, East to West.

6.4 The emerging policy framework for the wider Gatwick Diamond under the Coast to Capital LEP 360 Local Industrial Strategy, as well as the emerging evidence base for Local Plan reviews for Mid Sussex, Crawley and Horsham Councils, provides a perfect opportunity for Mid Sussex to allocate our site as the preferred location for the Science and Technology Park. Our site therefore provides a unique scale of development to address the regional shortfall in quality and quantity of commercial floorspace, therefore aligning with the District Plan objectives.

6.5 Given the existing countryside setting and form of the Project Newton site, it is essential that any Science and Technology Park proposal adequately addresses its location, and its transition to the adjacent countryside. The proposal would seek to utilise any key landscape factors such as woodlands, water courses and topography as central to any design evolution of the site. We therefore have ensured that our indicative layout and green infrastructure plans recognise the setting of the site.

6.6 Given the slope of the site, as shown in our supporting Landscape Visual Impact Assessment and the context of the indicative layout and phasing plans that respect the landscape and setting of the site, we believe we can balance design with issues such as scale and quantum of development, access, transport and mix of uses in this countryside location.

6.7 We therefore consider that our STP proposal complements the raft of documents produced by consultants for MSDC in regard to Transport, Habitats Regulations Assessment (HRA) and Air Quality, as well as considering the wider objectives of the MSDC Design Guide that is proposed by MSDC to sit alongside the Site Allocation DPD.

6.8 Whilst the DPD looks to allocate an STP, recent emerging White Paper 'Planning for the Future' August 2020, recent

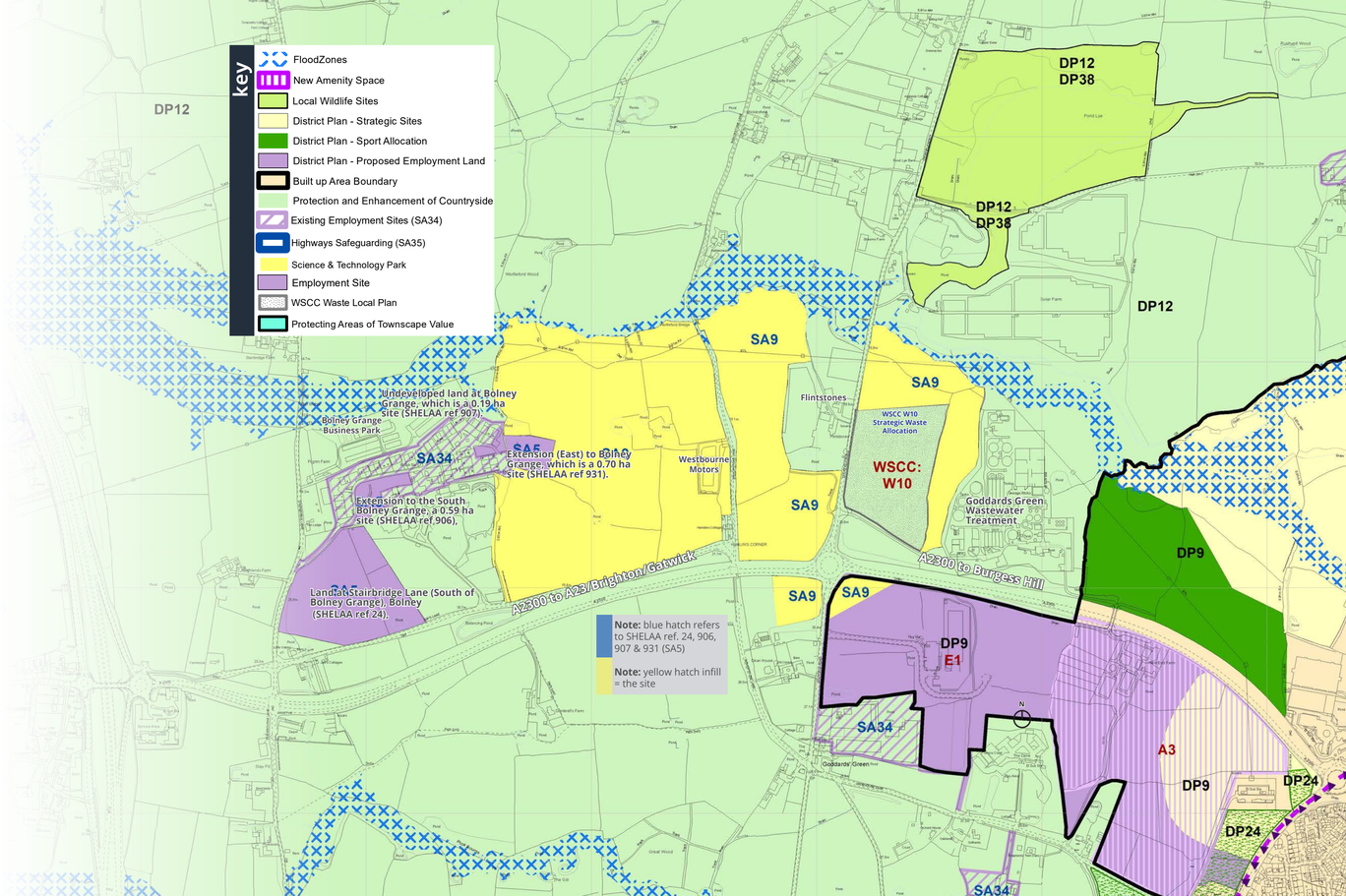


Fig 6.1 (Right) -Extract from Policies Maps for Draft Submission Site Allocations DPD: Regulation 19 - 7b. Burgess Hill Science and Technology Park

flood risk and water management strategy

Existing flood risk to site

7.1 The site forms the Southern side of the River Adur valley as the river flows from East to West along the Northern boundary of the site. The River Adur is shown to cause flooding along a narrow margin parallel with the watercourse, encroaching a maximum of about 60 m into the Northern edge of the site, as shown on the adjacent constraints map. This is indicated on the Environment Agency (EA) Flood Risk map for Planning. The maps indicate this narrow strip to fall within Flood Zone 3 – meaning there is a greater than 1 in 100 probability of river flooding in this location in any year. Small areas are located within Zone 2, which can be considered to be at 'moderate' risk – meaning between 1 in 100 and 1 in 1000 annual probability of flooding from the river.

7.2 The great majority of the site is therefore outside Flood Zones 2 and 3 and is defined be being located within Flood Zone 1. This designation applies to land, at low risk of flooding meaning less than 1 in 1000 annual probability.

7.3 EA data indicating modelled flood levels for events of various return periods have been obtained. A comparison of these levels with available site-specific topographical information supports the above indication of the extent of the flood zone. Ground levels rise steadily towards the South away from the river, such that only the far Northern margin would be affected by flood waters in even the most severe event.

7.4 Published geological mapping indicates ground conditions comprise discontinuous River Terrace Deposits, over bedrock of Weald Clay. The River Terrace Deposits comprise sand and gravel and are likely to be water-bearing. The Weald Clay consists of low-permeability clay. A ribbon of Alluvium exists along the route of the River Adur, so is expected to be present below the far Northern part of the site only.

7.5 There are several ponds and a stream situated within the site, and these are anticipated to be retained as features within the future development, and our masterplan has utilised these as key features within the site ecology assessments undertaken by Ecological Solutions as detailed in the following section 8 of this positioning document.

Impact of Development

7.6 The proposed development and its occupants will need to be safe from flooding from all events during the lifetime of the development, and the development must not make flooding worse off site. Furthermore, the development will be designed to enhance biodiversity, create an attractive amenity and reduce flood risk on and off site – the development will bring betterment to the area, in accordance with the guidance in the National Planning Policy Framework (NPPF).

7.7 General Proposals that have guided the masterplan for the site in relation to flooding include:

- Defining the predicted flood levels with climate change allowance
- Flood risk and water management strategy
- Restricting development within areas at risk of flooding, or ensuring its compatible with flooding such as permissible amenity areas
- Identifying areas such as ponds and watercourses to be retained and enhanced within an appropriate setting
- Considering the potential runoff from impermeable development areas and the terrain
- Identifying natural flow paths and considering sustainable drainage (SuDS) features which can convey runoff and add to the amenity and improve water quality
- Including SuDS features such as swales, ponds, permeable paving, landscaping, etc
- Ensuring improved maintenance and management of such SuDS features in the design of the masterplan
- Considering the existing greenfield runoff rates and develop a strategy to match the rates using ponds and other features to attenuate runoff for the lifetime of the development with climate change allowance.
- Integrate these engineering requirements with the development proposals to create a holistic development which contributes to the amenity and well-being of the area.

Fig 7.1 - EA Flood Risk Map for Planning, showing areas at risk of fluvial flooding

Fig 7.2 - EA Surface water flooding map, showing areas of ponding/streaming to be incorporated into the development

7.8 The general strategy of Project Newton is to incorporate Sustainable Urban Drainage Systems (SuDS) into these earliest stages of the design, to ensure appropriate management of surface water runoff. In broad terms this is anticipated to comprise above-ground attenuation ponds / basins in the Northern sector, prior to discharge at greenfield rates into the River Adur. It may also be possible to incorporate infiltration devises in some part of the site, such as soakaways and/ or permeable paving, subject to field testing to determine soil infiltration characteristics.

7.9 Our development should result in better visibility of the river, and therefore improved monitoring and maintenance of the river. This will ensure that our proposals enhance and bring improvements to the river characteristics, reducing the risk of flooding on the site and in its surrounds.

7.10 Where parts of the site are currently situated within the modelled flood plain, development levels will be set to ensure no loss of flood storage capacity. At present the development masterplan envisages such areas to be used for car parking, i.e. lower sensitivity land use. We also note that level-for-level flood compensation will be provided if necessary - in this way there will be no change in the fluvial flood risk profile at either the site or at neighbouring properties.

7.11 Foul water drainage is proposed to be directed into the Southern Water public sewer network and into the treatment works situated immediately beyond the site's Eastern boundary. Initial work from Charles D. Smith & Associated Ltd. confirms that the adjacent treatment works has capacity to take foul drainage from the proposed STP on our site. Consultation is ongoing and further information on this is detailed in section 22 of this positioning document and within our Utilities evidence base.

ecology

8.1 In order to ensure that our site and proposals have consider the setting and site specifics of the land to the north of the A2300, initial ecological studies (comprising a Phase 1 Habitat Survey) have been undertaken. A full report by Ecology Solutions is contained within our evidence base. However, our initial study shows the following areas have been considered.

Habitats

8.2 As the agricultural fields (both pasture and arable) are of no ecological significance this is not a constraint to development. The ecologist confirms that the habitat features of value are the woodland pockets, tree belts and hedgerows. Most of the hedgerows are of good ecological quality, being relatively species rich in nature, of a good structure and, in some cases likely to be older habitats given presence of features such as banks, mature trees, old coppice stools etc. On this basis, some are likely to qualify as under the Hedgerow Regulations 1997. However, the site layout reflects these field patterns in the main, with these wooded features forming the backbone of the green infrastructure on site.

8.3 The ecological survey also confirms that the river which forms the Northern edge of the site, does not appear to support any particularly notable floral species, but is important as a high value wildlife corridor and would ideally be buffered from development to align with Environment Agency requirements that can be a minimum 8m off-set from the watercourses in their remit.

8.4 In addition the surveys identify that there are occasional wet ponds and ditches within the site. Most are over-shaded, floristically poor and will dry regularly, while some are likely to remain permanently wet. The intrinsic value of the individual ponds vary but the ecologist suggest that collectively they should also be viewed as a higher value asset (not least on account of the potential opportunities for faunal species – see below) and should be retained and enhanced where possible and this is addressed in the indicative masterplan.

8.5 In addition, in regard to the designated Ancient Woodland to the North east of the site, outside the site boundary, a minimum 15m buffer off-set has been identified and retained between development and the ancient woodland boundary.

Species

8.6 The ecology survey work undertaken by Ecology Solutions allowed for an assessment on potential opportunities for protected and notable faunal species/groups and these opportunities have influenced the indicative layouts.

8.7 For bats it is evident that the woodland, hedges and tree network, river corridor and ponds will be of potential value to foraging and commuting bats. A high proportion of the mature trees offer potential bat roosting opportunities. We are aware that activity surveys would be required to support a planning application in due course, in order to guide appropriate mitigation and enhancement opportunities.

8.8 For dormice, the network of wooded habitat offers suitable foraging and nesting opportunities. Specific surveys would likely be required in the event that habitat losses are required. Noting that the emerging proposals retain the vast majority of suitable habitat, it is considered that the emerging masterplan could easily secure mitigation and enhancement opportunities for this species, should it be recorded.

8.9 For great crested newts, local experience indicates that they are present in the local area and further surveys to support any planning application would be undertaken to ascertain whether GCN utilise on site habitats (ponds and terrestrial habitat). However as most of the terrestrial habitat is sub-optimal on site and several of the ponds are of low suitability on account of their ephemeral nature, any on site presence may be limited. The enhancement of the on-site water bodies and the creation of optimal terrestrial habitat as part of the masterplan would significantly enhance the value of the site to amphibian species.

8.10 For reptiles, the grassland is generally sub-optimal on account of the management regime but suitable habitat for reptiles is nonetheless present, particularly along the northern edge of the site. Again, further reptile surveys would be required in due course. The emerging green infrastructure proposals would retain opportunities for reptiles within the site.

8.11 For badgers, a single potential entrance was recorded in a hedgerow in the North-west of the site, although no direct evidence of badger use was noted. Badgers are therefore not considered to be a key constraint at the current time. Opportunities for this faunal group would be retained within the site, not least continued sett building and foraging opportunities within areas of green infrastructure.

8.12 In regard to breeding birds, our surveys have not indicated that the site would be of heightened interest for breeding birds (the habitats are commonplace in the landscape) and there was no significant farmland bird activity noted during the initial assessments. The masterplan and indicative layout plans indicate that the majority of higher suitability habitats (woodland/trees) are to be retained and therefore, opportunities will be retained for this faunal group. Opportunities for enhancement will be sought through new native planting as well as new nesting opportunities within built form and upon retained trees.

8.13 For water voles & otters, our surveys show that the river and its immediate environs offers suitable opportunities. Specific surveys could be required if development was to impact this watercourse. However, indicative plans show an offset from the water course and no evidence of either species was recorded during the habitat appraisal. The habitats in the wider site are not considered to offer further opportunities to these amphibious species.

Other Species

8.14 The habitats present within the site are unlikely to be of significant importance to other protected or notable faunal groups. The woody habitats are likely to be of some value to a range of small mammals, including hedgehog and will be largely retained as part of the emerging proposals.

Fig 8.1 (Right) - preliminary habitat survey plan from Ecology Solutions

sustainable transport & highways

Mobility Strategy

9.1 A key element of the Project Newton S&TP has always been that it will incorporate a comprehensive sustainability strategy which will ensure that sustainable travel is at the centre of the development's ethos.

9.2 Our emerging Mobility Strategy will provide a wide range of travel benefits to both the site itself and to the wider population which would achieve a wider-reaching regional travel-mode-shift than just the S&TP users.

9.3 It is anticipated that the Mobility Strategy will include the following elements:

- Public Transport Strategy (incorporating bus viability analysis)
- Walking and Cycling Strategy
- On-Site Care Share Scheme
- On-Site Electric Car Club
- On-Site Bike-Hire Scheme

9.4 Since the Regulation 18 stage of the DPD, further discussions are being undertaken in partnership with WSCC and Highways England, as well as with Homes England with regard to the synergies and potential links with the Northern Arc's transport strategy.

9.5 Discussions are continuing to establish collaborations with the local bus operators Metrobus and Compass, electric car-club and cycle-scheme operators, as well as the Northern Arc development (Homes England). All parties are keen to work with our project team to enhance the opportunities at the STP, with a view to align the public transport and sustainable access strategies and to ensure a realistic and feasible bus / public transport solution is possible, to address the requirement of the proposed SA9 allocation.

9.6 We have engaged with the Burgess Hill Place and Connectivity Programme to provide our support for the schemes proposed by MSDC and WSCC on improving sustainable transport infrastructure in this area.

9.7 In addition to enhancing and maximising the opportunities for sustainable modes of transport, and to the vehicular access strategy, the initial Masterplans are also looking at incorporating the infrastructure and future-ready plans for green technology, artificial intelligence and transport automation.

Pedestrian Access

9.8 The Institute of Highways and Transportation (IHT) guidance document titled 'Providing for Journeys on Foot' identifies a maximum walk distance of 2.0km for commuter trips. The 2km commuting catchment for Project Newton includes parts of northwest Burgess Hill and surrounding villages, as well as approximately 1,300 homes in the western parts of the Northern Arc development site (the western part of Phase 1 c.500 dwellings, a small portion of Phase 2 c.100 dwellings, and most of Phase 3 c.700 dwellings). This means that a significant area of residential land will be within walking distance of this proposed employment site.

9.9 As part of the A2300 Corridor Improvement Scheme, a footway / cycleway will be provided along the route's northern side between the A2300 / A23 interchange and Burgess Hill. The route will run alongside the site's southern boundary, providing attractive, accessible walking and cycling infrastructure between the site, Burgess Hill, Bolney Grange, and the A23.

9.10 Discussions are taking place with Southern Water, Homes England, and MSDC, relating to the potential provision of an additional non-car route through land east of Cuckfield Road to link the Project Newton site with the western end of the Northern Arc.

9.11 The Project Newton site is within walking distance of the nearby Hub employment development and its associated sustainable transport links, including a safe, low-trafficked pedestrian and cycle route between The Hub and Burgess Hill via Gatehouse Lane. Visitors to the proposed Science & Technology Park will be able to use this route between the site and Burgess Hill, and will benefit from signal-controlled crossing facilities over the A2300 as part of the proposed upgrade to the A2300 / Cuckfield Road roundabout.

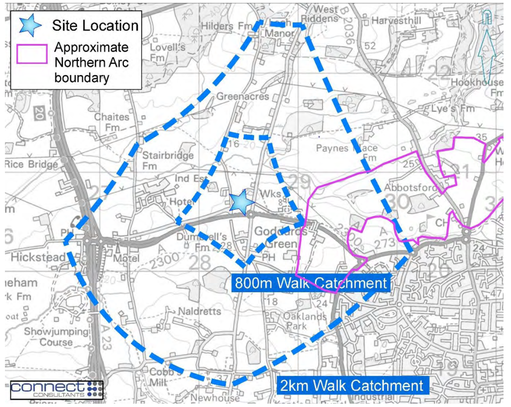


Fig 9.1 - 800m and 2km Walk Catchment

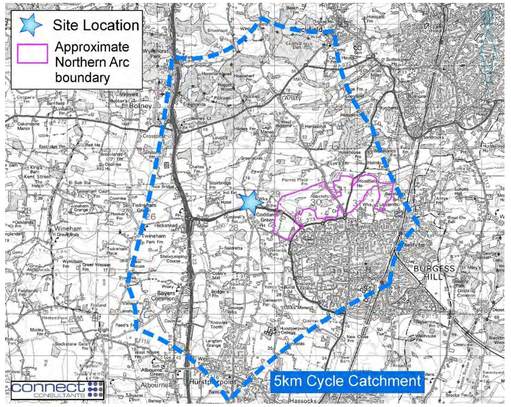


Fig 9.2 - Cycle Catchment Area

Cycle Access

9.12 The 2018 National Travel Survey identified average journey lengths by cycle in England of c.5.3km. The CIHT document titled 'Planning for Cycling' (October 2014) indicates that 80% of cycling trips are less than five miles (8km) and 40% are less than two miles (3.2km). This suggests that cycling can offer a realistic alternative to car travel, particularly for trips of up to c.5km.

9.13 Cycling has the potential to play an important part in sustainable travel to and from the proposed Science & Technology Park, for visitors and staff.

9.14 The A2300 Corridor Improvement Scheme will provide a footway / cycleway which passes along the Project Newton's southern boundary, thereby providing the site with a good quality, attractive local and longer distance cycle route.

9.15 The 5km radius of the site includes most of Burgess Hill and settlements to the west of the town, including Hurstpierpoint, Sayers Common, Bolney, Ansty, and Goddards Green. It also includes the entire Northern Arc site, the southern half of Cuckfield, and southwestern Haywards Heath.

9.16 There is a local population of approximately 40,000 – 50,000 located within cycle distance of the site, which includes Burgess Hill, Haywards Heath, Hurstpierpoint & Sayers Common, and Bolney.

9.17 Cyclists will also have the opportunity to use the sustainable transport links between The Hub development and Burgess Hill, including a new signal-controlled pedestrian and cycle crossing over Jane Murray Way, and signal-controlled crossing facilities over the A2300 as part of the proposed upgrade to the A2300 / Cuckfield Road roundabout.

9.18 This will provide a quiet and low-trafficked route via Gatehouse Lane to the proposed Science & Technology Park for pedestrians and cyclists travelling to and from Burgess Hill.

Public Transport Access

9.19 The publication 'Planning for Public Transport in Developments' produced by the Institution of Highways and Transportation (IHT) specifies that new developments should be located within 400m of the nearest bus stop.

9.20 As part of the permitted Hub development two bus stops have been provided on the A2300 adjacent to the Hub site, serving westbound and eastbound routes. The bus stops are situated approximately 200m and 250m east of the Project Newton Science & Technology Park site.

9.21 The stops will serve the existing 100 bus route, which provides hourly services between Burgess Hill and Horsham, both of which have train stations. The Project Newton Science & Technology Park site already benefits from convenient and regular bus access, with opportunities for longer-distance multi-modal public transport journeys.

9.22 The ongoing discussions with Compass and Metrobus are with a view to providing a viable public transport strategy focussed on the opportunities for existing and proposed bus services to link the site with Burgess Hill town and rail stations, Crawley, and the south coast.

9.23 The Project Newton Mobility Strategy will be centred upon a 'superhub' located close to the entrance of the Science & Technology Park, which will be the interchange between bus services and other forms of sustainable intra-site transport, such as electric vehicles, potential circular shuttle service, bikes and electric bikes / scooters, and a pedestrian route network.

9.24 The location of the 'superhub' facility would mean that external buses would not need to circulate within the site which otherwise would add journey time and detract from the attractiveness of the bus services. Its location at the eastern end of the site places it within 1km of the Northern Arc western roundabout, facilitating links between the two development sites.

9.25 The 'superhub' will be an exemplar facility, providing bus facilities and real-time passenger information along with flexible working space, a café/restaurant, cycle shop/repair facility, taxi pickup/drop off point etc. so that it would be a vibrant work and meeting place as well as the focus for sustainable travel to and from the site.

Vehicular Access Strategy

Mid Sussex Transport Study

9.26 To support the Site Allocations DPD, Mid Sussex District Council commissioned a strategic highway model; the Mid Sussex Transport Study (MSTS).

9.27 The modelling has identified the Project Newton site as the preferred location for the S&TP, and it shows that without mitigation the proposed future MSDC development scenario generates significant additional traffic, notably on the A2300 and the surrounding roads, and the A23/A2300 junction.

9.28 When tested with some potential mitigation measures in place, the strategic modelling shows that 'severe' impacts are predicted at just two junctions, as opposed to eight junctions in the scenario without mitigation:

- A272 / B2036, Ansty
- A23 / A2300 Southbound on-slip, Burgess Hill

9.29 The MSTS modelling report, which forms part of the Regulation 19 evidence base, notes that a 10% reduction in the predicted future traffic (i.e. 65 fewer) on the A23/ A2300 Southbound on-slip could remove the 'severe' impact, which is predicted predominantly in the PM peak hour.

9.30 The MSTS 'with mitigation' scenario assumes that there will be three sustainable mitigation measures associated with the S&TP, which will reduce predicted Science and Technology Park traffic by 3%.

9.31 The proposed Project Newton Mobility Strategy is far broader than the three measures assumed in the modelling, and will provide additional benefits to the wider population which would achieve a wider-reaching regional travel mode-shift than just the Science and Technology Park users.

9.32 Furthermore, the synergies between the Science and Technology Park and the Northern Arc public transport strategies will help to further reduce the predicted future traffic levels.

9.33 The Project Newton Mobility Strategy is designed to target a 10% reduction of the predicted Science and Technology Park traffic.

9.34 Traffic modelling work is in progress, with ongoing dialogue between the Project Newton Team, Highways England, West Sussex County Council Highways, and Mid Sussex District Council.

9.35 A methodology has been agreed by which Connect Consultants will use traffic data from the MSTS to assess the predicted impact at key local junctions and to use detailed junction modelling to identify effective mitigation where necessary.

9.36 Whilst significant improvements are currently planned to alleviate the future impact at key junctions, these improvement schemes rely upon external funding. Therefore, the Project Newton Phasing Strategy will incorporate flexibility in terms of scale and timing of each phase, in conjunction with traffic modelling and transport assessment, and through ongoing engagement with WSCC, Highways England, and local bus operators, to ensure that each phase can be acceptably accommodated and is appropriately mitigated.

masterplanning

10.1 Our plan shows our initial concept for the development, with the retention of the main areas of woodland and the sensitive design, having regard to the existing overhead cables, pylons and watercourse as well as the mature rural soft landscape and falling site topography.

10.2 The concept drawing considers the retention of much of the existing boundary landscaping and creates a gateway entrance to our site, ensuring that the strong landscape strategy can be used to both protect and screen yet also frame and promote, carefully selected views and vistas to, from and within the site.

10.3 The development will require a new roundabout for access from the A2300 and options have been progressed to review direct access into the site without adverse impact upon the existing (and 'to be' improved) A2300 network. Further detail is available in the Connect Transport Statement and our emerging Mobility Statement produced in partnership with WSCC, MSDC and Highways England.

10.4 Aspirational images of successfully established Science and Technology Parks, and other high quality buildings and their settings, are shown throughout this document. This is coupled with a further plan outlining a suitable mix of uses consistent with a high quality Business Park / Science & Technology Park environment, including supporting uses that may accompany this strategic employment location.

10.5 The focus of the Masterplanning on this particular parcel of land also lends itself to the future potential opportunities for further sustainable energy and solar power, potentially to the North of the watercourse, where the same freeholders own further land directly adjacent to this site.

10.6 Our masterplan is intended to be forward thinking. As part of our review and approach we have looked at lessons learnt from other sites of a similar size and nature. The BRE guide '*Masterplanning Science and Technology Parks*' previously concluded that such sites, where not planned appropriately, have resulted in *"a collection of unrelated, inefficient, unsustainable buildings of mediocre quality and condition on an inward-looking site which was inefficient to maintain and difficult to navigate"*.

10.7 As outlined within this document, our approach is for a destination site that connects directly to its wider context (both immediate and wider) supporting an established landscaped framework for a new, high quality and sustainable built environment to exist within.

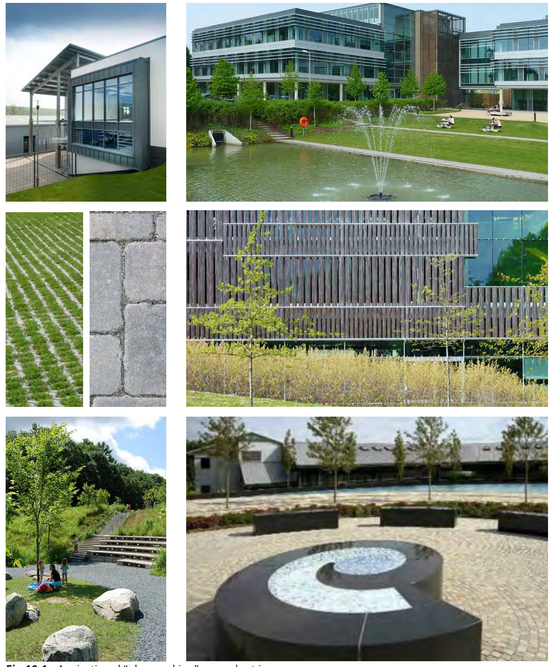


Fig 10.1 - Aspirational "placemaking" precedent images

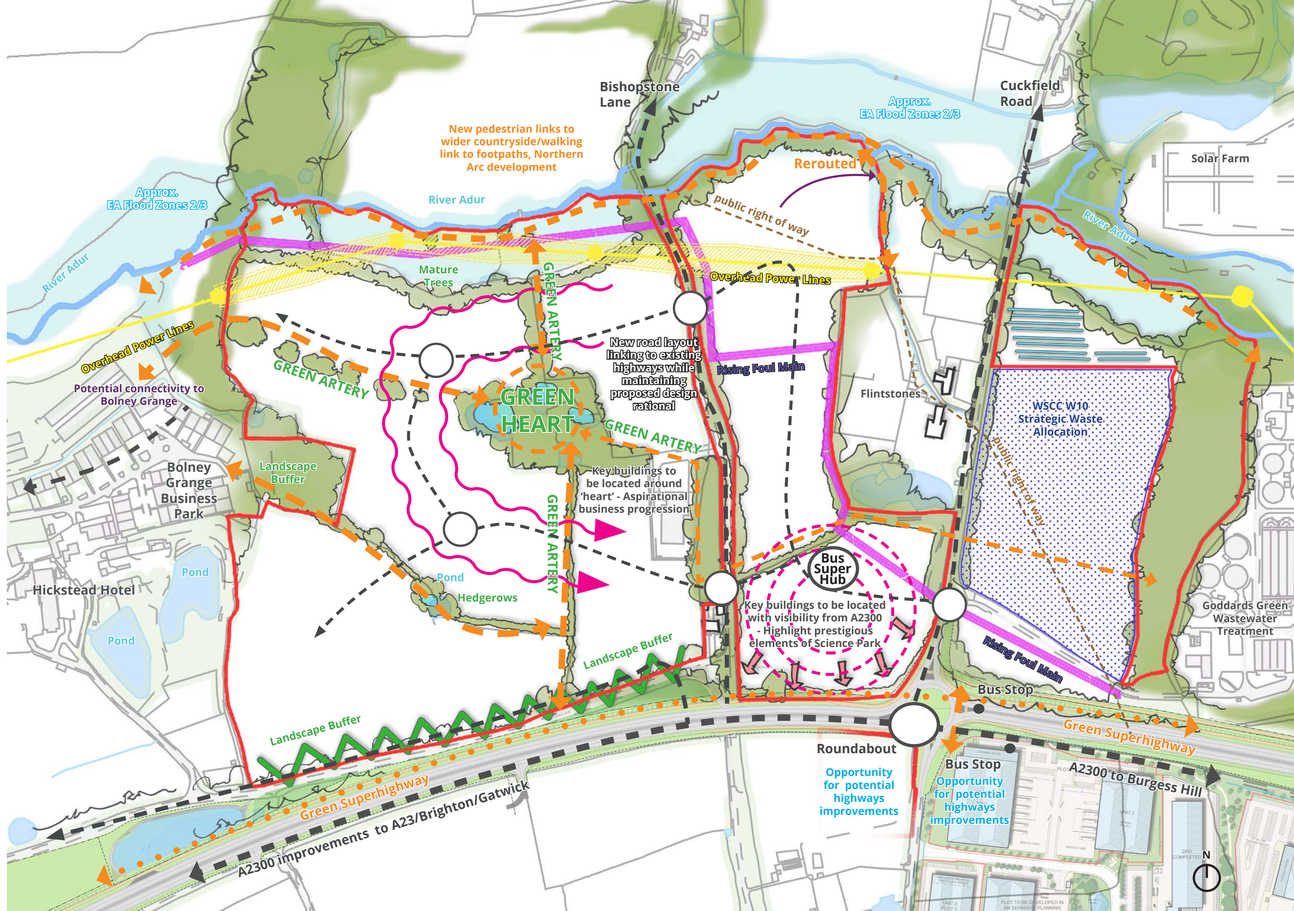


Fig 10.2 (Right) - Highly indicative Concept development of Science and Technology Park site

development potential and vision

11.1 In regard to quality of environment, this document highlights aspirational images of successfully established Science and Technology Parks and their settings. These are indicative of the quality and public realm that we would seek to provide on this site.

11.2 By developing our Masterplan, this document is intended to lead to successful collaborative relationships between existing and proposed buildings, both on site and in the surrounding area, resulting in the creation of a high-quality mixed-use scheme, connected to the existing, and emerging Burgess Hill development at the Hub and the Northern Arc.

11.3 The vision is to ensure a creative approach to the mix, quality and scale of buildings helping to unlock much needed business accommodation and the inclusion of other ancillary uses, creating a 'destination' and landmark site, as encouraged by the Mid Sussex adopted District Plan (2018).

11.4 We believe our proposals are consistent with the visions and objectives of the Adopted District Plan (2018) creating an attractive place to live, work and visit; ensuring that we are sensitive to the countryside setting of the site, whilst offering a perfect opportunity to further ensure the resilience of the District; and secure its sound economic function, building on its current foundations of success in the professional, scientific, technical and communication sectors.

11.5 We believe that the Science and Technology Park in this location can assist in future innovation ensuring growing space for the current 1000 businesses identified in the local plan that are under 2 years old . This will also assist in reducing the need for 'in and out district' commuting reducing impact on traffic levels and environmental quality.

11.6 Our proposition enhances the vision of the District Plan to "improve the social, economic and environmental well- being of the District and the quality of life for all, now and for the future."

11.7 Policy DP1 'Sustainable Economic Development' of the District Plan states on p.24 that the broad location for the Science & Technology Park is defined by the LEP Strategic Economic Plan 2014 which supports 100,000 sqm employment floorspace with the potential to create 2500 new jobs.

11.8 As outlined by in the The BRE guide '*Masterplanning Science and Technology Parks*'; *"the success of Science or Technology parks lies in their ability to encourage innovation and attract the right resources. This is more easily achieved in a built environment that promotes a sense of community and is conducive to knowledge sharing, enterprise and innovation."*

11.9 Our vision is to ensure that our Science and Technology Park proposals can create a new significant economic and innovative destination, marrying high-quality planning and landscaping, architectural and commercial buildings, that create a sense of place, aligning with the Coast to Capital LEP Strategic Economic Plan (SEP) aspirations and those of Mid Sussex, as defined in policy DP1.


Active, green public spaces


Mature Landscape setting at Southampton Science Park, Chilworth


A sense of place' at the Kent Science Park


Water and Soft Landscaping defining the site layout at The Oxford Science Park

Fig 11.1 (Right) - Aspirational development potential precedent images

market demand

12.1 Vail Williams has considerable experience of letting and selling commercial property within Mid Sussex District. More recently they are letting agents on the Hub, Burgess Hill where up to 46,450 sqm (500,000 sqft) is currently being developed. They were also selling agent on the former Wyevale garden centre site at Handcross, now Tungsten Park, where they were retained to sell up to 83,000 sqft, now complete following the recent pre-sale of a HQ facility to Pets Corner on phase 1, and to investor Martins Properties on phase 2.

12.2 Historically, Vail Williams were development and letting advisors on Phases 2 and 3 of the Birches Industrial Estate, East Grinstead (400,000 sqft) and handled the sale of the former Ericson complex, Burgess Hill where they undertook pre-lettings to Roche for their HQ, and sales to Whitbread Premier Inn, R F Solutions and others. They also acted on the sale of the Honeywell building to B E Aerospace, and on numerous other building sales/lettings in the vicinity of and within the main Victoria Estate.

12.3 Given their local and regional experience, they anticipate strong occupier demand with a significant proportion of all market transactions in the region falling within the MSDC Science and Technology Park definition.

12.4 Strategically, the site will attract occupiers from the South coast including Brighton and surrounding conurbation, due to positive occupier demand and a land-locked location (between the sea and the Downs), all of Mid Sussex, and North to include Crawley/ Gatwick and Southern M25 locations. Post COVID-19, it is also likely to attract business from cities to a location where employees can drive to work. It will also be attractive to businesses who cannot find expansion space in locations such as Guildford or Gatwick which has limited land available at very high prices.

12.5 The limited supply of bespoke Science and Technology Park development opportunities throughout the Gatwick Diamond region and across the South East will focus occupier's attention on this opportunity. The 1,000,000+ sqft potential will provide the critical mass to both attract and retain occupiers across all size ranges.

12.6 They have undertaken initial research and identified numerous occupiers located in the catchment area falling within the Science and Technology Park definition. This research has not yet targeted those which may be 'footloose' through lease event activity. However, there is without doubt a growing trend for occupiers to improve the quality and standards of their property to provide the best working environments which will attract and retain the most talented employees. This will be exacerbated post COVID-19 with occupiers wishing to satisfy long term wellbeing issues with top quality building design and layouts that ensure a safe working environment.

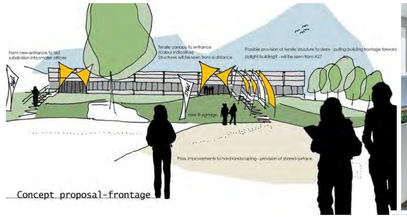
12.7 Vail Williams are active in the local, regional and UK property market. They have 7 offices in the South East with 23 business space letting agents in the firm handling letting and sales on office parks, industrial estates and high technology accommodation.

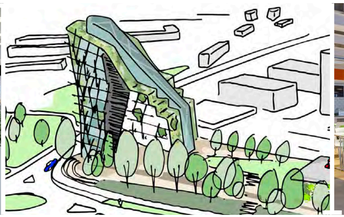
12.8 They have also advised on both the Southampton Science Park and the Surrey Research Park (Guildford) in differing capacities.

12.9 In addition, they have a reputation for our occupier advisory services and we have been instrumental in a number of significant acquisitions over 100,000 sqft in the South East including Elekta, Sub-sea 7, Jacobs, L3, AJ Walters, CAE, Roche, Goldman Sachs, Verizon, Becton Dickinson, Daylo Rowney and Rockwell Collins. The majority of these occupiers satisfy the Science and Technology Park criteria.

12.10 Vail Williams highlight various examples of demand, below a number of which they were directly involved with including;

- Elekta – 111,000 sqft relocation to new UK head office and R&D facility in Crawley
- CSL Behring – relocation to 20,000 sqft grade A facility in Haywards Heath
- AJ Walter Aviation – 120,000 sqft new facility in Slinfold to serve the aviation sector
- Siemens – relocation to new 10,000 sqft Manor Royal facility
- Gatwick Airport HQ – 100,000 sq (A pre-let at J10 M23 to serve the airport)





HNW Architects: New build office, under-croft car parking and Cat-A fit out allowing a high-tech company to relocate a high as part of the wider Adur Civic Centre regeneration programme *(Shoreham)*

HNW Architects: Formaplex - high tech manufacturing (autoclaves/injection moulding/paint spraying) 125,000 sqft B1c/B2 & Head Office facility *(Portsmouth)*

HNW Architects: 90,000 sqft B1c/B2 scheme with flexibility for future growth - forms part of HNW's wider 350,000 sqft masterplan for the site *(Bracknell)*

Vail Williams: Elekta – 111,000 sqft relocation to new UK head office *(Crawley)*

Vail Williams: The L3 London Training Centre 158,000 sq ft *(Crawley)*

Vail Williams: AJ Walter Aviation – 120,000 sqft new facility *(Slinfold)*

SECTION 13

target occupiers

13.1 As explained throughout this document, Vail Williams' expert opinion indicates demand exists for at least 1,000,000 sqft of accommodation, from businesses involved in the Science and Technology sectors within the current District Plan period to 2031.

13.2 This will be from businesses located within the District, Gatwick Diamond and wider catchment, for a range of planning uses, building sizes and tenure. For this reason, on the Masterplan as shown, we have set out a broad mix of building types covering B1a office, B1b R&D and B1c light industrial uses. In all instances we envisage high quality buildings and not basic industrial/warehouse units which would be more suited to an Industrial Estate environment.

13.3 Through their market testing and activity in the last 12 months they have identified 9 significant target occupiers based within West Sussex who have current requirements and fit the Project Newton criteria. They can confirm the organisations identified subject to MSDC entering into an NDA. High level information on each search is set out below:

Nature of Company	Employees	Size of requirement (sq ft)	Planning Use	Timing
High Tech/ IT	1000	150,000	B1c	Short/Medium term
High Tech / Automation Solutions	300	70,000	B1c	Short
Science/High Tech Oil & Gas sector	150	60,000	B1c	Short/Medium
Aviation R&D	150	150,000	B1c, B8	Short/Medium
Pharmacy	350	40,000	B1a	Medium
I.T/A.V	150	120,000	B1c, B8	Medium
I.T/A.V	100	30,000	B1c, B8	Medium/Long

13.4 Further work regarding the branding and marketing of the STP is currently ongoing. In addition, dialogue with business groups and stakeholders including Coast to Capital, local agents and potential occupiers is ongoing ahead of any allocation to ensure we can provide fit for purpose buildings that are flexible and can future proof for sectors in a post COVID-19 economy.

Fig 13.4 (Above) - Aspirational concept for Innovation / Enterprise / Hub uses

SECTION 14

target occupying sectors

14.1 In Vail Williams' opinion around a quarter of occupier requirements within the region have a high technology bias that should fit the MSDC Science and Technology Park definition. This is backed up by an analysis of SIC codes where 180 out of 730 businesses could have a research, technological or science focus.

14.2 Vail Williams utilise specialist mailing houses when needed who determine organisations principle business via a SIC codes.

14.3 To inform market demand they set out below some specialist UK wide occupier target lists and number of organisations below:

Bio Tech	300
Energy	500
Fastest expanding	400
Manufacturers	500
Medical	400
Science park	700
TMT (technology, media and telecom)	500

market testing

15.1 It is premature to be pro-actively marketing a site without an allocation, however VW confirm that they have undertaken selective market testing and spoken on a confidential basis to 7 companies about the principle of relocation to a Science and Technology Park or Business Park in West Sussex. All are potentially interested and would like further information once planning is more certain as any relocation would be conditional on the grant of a satisfactory planning consent.

15.2 The local and regional education providers including the University of Sussex, University of Brighton and Chichester College Group, have made their requirements known to Coast to Capital LEP resulting in the aspiration to support the delivery of a Science and Technology Park at Burgess Hill. The interaction with the education providers works at multiple levels to retain and attract an evolving skilled workforce.

15.3 Vail Williams has a track record of involvement at two Science and Technology Parks, where they have historically acted as letting agents and currently manage the Southampton Science Park for The University of Southampton, and at the Surrey Research Park, Guildford where they acted as planning consultant.

15.4 As part of Vail Williams' day to day involvement in the region they are constantly active in the market, monitoring general activity, occupier's movement and trends together with lease events up to 2 years in advance. Consequently, they have an excellent knowledge of opportunities that have a correlation with the proposal for a Science and Technology Park.

economic benefits

16.1 Our proposal will have direct and indirect economic and employment benefits across the District and the wider region. As the concept is still evolving, we have given regard to the Mid Sussex Economic Development Strategy 2018 – 2031, which supports the District Plan and highlights the need to make Mid Sussex a vibrant and attractive place for businesses and people to grow and succeed. Inherent in this document is the need to balance local labour and training opportunities, including apprenticeships, with a quality economic environment that supports economic growth in the region.

16.2 The Economic Development Strategy supports the Government's national ambition for economic growth and the County Council's West Sussex Plan for 2017-2022 set out in the emerging Local Industrial Strategy, as well as the regional aspirations articulated in the Coast to Capital Local Enterprise Partnership (LEP) Strategic Economic Plan (SEP), and the County Council's West Sussex Plan for 2017-2022.

16.3 Our proposition for the Science and Technology Park, would ensure that the priority themes of the strategy in place, premises, people and promotion can be met and the STP as identified in the strategy, can be realised.

16.4 Given the B1 focus and ancillary support facilities proposed, under Priority One of the LEP SEP, the strategy states that MSDC aim to provide Business Parks which "provide an attractive environment and secures the retention and relocation of new businesses into Mid Sussex." We believe that this is achieved through our proposal. In addition, our proposal will also secure the necessary Infrastructure; improvements which meet business needs, along with improvements to the A2300 and other sustainable transport infrastructure improvements, through connectivity with the Northern Arc and potential for links to the existing Bolney Industrial Estate.

16.5 In regard to Priority Theme Two of the LEP SEP, on premises, our proposal for a new Science and Technology Park will ensure that there is an excellent supply of quality and appropriate industrial and office space to meet the needs and demand across the District, whilst providing an employment offer which is complementary to that elsewhere in West Sussex. This wholly aligns with the economic development strategy which seeks the delivery of new business units, that complement the Northern Arc and the Hub development being developed by our clients

16.6 Our development can also allow for centres of excellence and clusters of specialist industries to locate on the park. This will ensure both new and existing companies, that comply with the Science and Technology Park definition to facilitate additional growth. This will support the aim of increasing the number of high gross value added jobs in the District. Our proposal could also facilitate the development of hotel and conference facilities, as stated in the Economic strategy.

16.7 Priority Theme Three of the LEP SEP relates to people and whilst detailed skills plans have yet to be developed, the requirement to provide graduate jobs as a result of the development and 2500 new jobs is recognised and can be met.

16.8 In line with our positioning document, we anticipate an employment density of between 2325-5280 jobs, and we seek to ensure that this aligns with the strategy's aim of working with partners across the education sector including the Universities of Sussex and Brighton and Chichester College Group. Our proposals also cover a range of units ensuring that we can support a variety of businesses and their evolution and growth, including start-ups and scale-up businesses.

16.9 The development of the Science and Technology Park in this location therefore also complies with Priority Four of the LEP SEP "Promotion" that seeks to *"promote the District's advantages clearly and widely, encouraging business retention and growth and appropriate inward investment"*.

16.10 We would expect that, as our proposals and discussions with education providers and potential tenants progress, we will also be able to provide further skills plans and training initiatives. These will relate to both the construction process and the longer term employment opportunities of the site.

16.11 Further partnership works with local Economic Development Offices, local agents and Coast to Capital as they develop their local industrial strategy will also align with our objectives, beyond purely economic benefits. These aim to address skills and graduate opportunities, innovations and green sustainable industries.

design

17.1 Our approach to developing the Masterplan is intended to lead to successful collaborative relationships and result in the creation of a high-quality mixed use scheme, connected to the existing, and emerging Burgess Hill plans at the Northern Arc.

17.2 The Masterplan initially reflects this unique opportunity to develop the Science and Technology Park on this green field site and considers appropriate densities and space between buildings to reflect the cluster of uses within the wider landscape itself. The rural context of this site is of significant value, both commercially yet also increasingly importantly for the health and well-being of the STP visitors and occupiers.

17.3 The integration of high quality public realms and a creative approach helps to unlock development value and the inclusion of other ancillary uses allows any development to become both a 'destination' and landmark site. At this stage we are not looking at the individual design of each buildings within the site, however, the place, the landscape and the buildings that will follow will all look to follow strategies for high-quality design and placemaking, as set out in our following section 18 'Landscape & Setting' and as outlined within the Consultation Draft MSDC Design Guide SPD (2019) Section 1.4 'The Value of Good Design'.

17.4 Our Architects and Urban Designers will work closely with key stakeholders and long-term consultant partners to develop holistic schemes which create a sense of place.

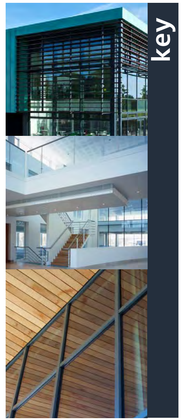
17.5 A Landscape and Visual Impact Assessment (LVIA) has informed our concept development proposal at this stage in terms of site layout, capacity and mitigation requirements to reduce visual impact of the development from surrounding countryside locations. The LVIA demonstrates that the site topography limits views onto and surrounding the site for 5 storey buildings, although our proposal itself does not exceed 4 storeys.

17.6 This considers the site without any mitigation through further appropriate landscaping which would further reduce landscape and visual impact. Opportunity for such mitigation will be addressed in more detail as part of the formal planning application however, this document illustrates the green image and setting of our proposal and how both the existing established landscape and rural setting, along with the proposed landscape strategies, are fundamental to the design and concept for this site.

17.7 The design of this site, at strategic level, is synonymous with the strategy for the MSDC SPD Design Guide. As highlighted in Section 1.5 'High Quality Design and Innovation' of the Consultation Draft MSDC Design Guide SPD (2019) our proposals have set out to be achievable whilst *"inventive and innovative... respond to place, (will) meet the needs of modern lifestyles and ... are (designed to be) adaptable"* in order to meet both current and future needs.

17.8 Our masterplan therefore successfully shows the potential connectivity and inter relationship with the Hub, the Northern Arc, and other proposed allocations for nearby employment uses.

Fig 17.1 (Right) - Shows our illustrative zonal plan that comprehensively masterplans the mix and type of uses across our site.



key

- B1a Business - Offices
- B1b Business - High tech, Laboratories
- B1c Business - Light industry, R&D, High Quality Factory Environment
- C1 Hotel
- C3 Mixed Use
- Approx. EA Flood Zones 2/3
- River Adur
- Pond
- Tree / Vegetation
- Overhead power line / Overhead power line indicative easement
- WSCC W10 Strategic Waste Allocation
- Proposed Cycle/pedestrian Route
- Proposed Green Superhighway
- Primary Vehicular Access
- Secondary Vehicular Access
- Public Right of Way
- Frontage Opportunity
- Landscape Buffer
- Green Artery (structured landscaping)

SECTION

landscape & setting

18.1 The site affords strong linear structural landscaping adjacent to the A2300, and as identified through our LVIA, the topography of the site ensures that development will be screened by the existing mature landscaping and hedgerows that exist on the site. The site levels also ensure that development of a scale consistent with HQ buildings can be accommodated without adverse impact on the surrounding countryside. This ensures that the proposed development would not be dominant or prominent in the landscape.

18.2 **Approximately 40% of the site is proposed as 'soft landscaping' and where hard surfaces are required, these will be designed to sit comfortably within the overarching soft landscape setting**.

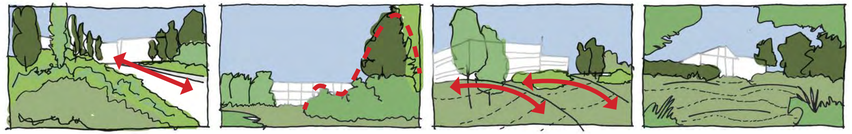
18.3 The strategic proposals for this site are a direct response to the site setting and opportunities that this brings. Research and evidence has helped the design team to understand the context of this unique site, aligning with the MSDC Design Guide SPD (2019) Section 2.4 'Landscape Character' and the District Plan Policy DP26 'Character and Design' to ensure that these proposals reflect the context of the site.

18.4 Our concept for the development of all three key plots of land available, ensures the retention of the main areas of woodland, whilst the sensitive design has regard to the pylons to the North.

Fig 18.1 - Aspirational "placemaking" precedent images

Fig 18.2 - Design Intent; Newton Landscape Design Guide (Rule Book)

design: landscape setting



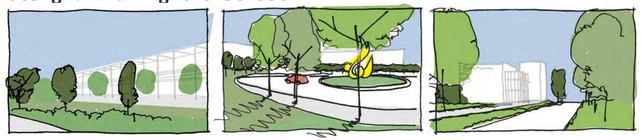
Pedestrian access through wider depths of rich landscape

Variety in landscape treatment: planting height and depth with parking and servicing concealed behind

Raised bund landscape features defining plot edges and concealing parking and servicing

Native woodland planting to screen units and add to visually undulating landscape.

design: framing the street

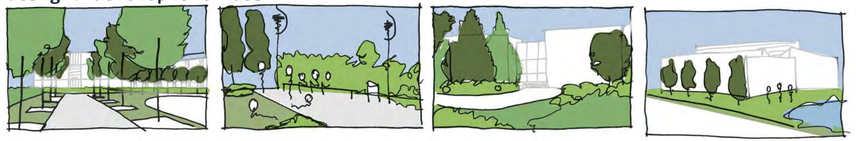


Maximum active frontage to boulevards

Public art opportunities in key locations

Accentuated built form on key corners

design: development hubs



High quality formal landscape design to front built form

Pedestrian spaces centrally located between key building frontages

Strong emphasis of key entrance features through landscape led approaches

Maximum active frontages addressing important public realm

18.5 Whilst previous District Plan evidence queried the pylons as a restrictive factor to development, initial research and discussions, including engagement with UKPN, can ensure that sensitive development as shown on our Masterplan can be achieved, utilising the site areas to the North. Any development through a hybrid/outline planning application would deal with this and adhere to the National Grid: A Sense of Place Design Guidance.

18.6 The concept drawing also considers the retention of much of the existing boundary landscaping and creates a gateway entrance to this unique site.

18.7 Given the sensitive nature of the surrounding countryside protection area, and the AONB further to the North, consideration has been given to how the site will connect with the Northern Arc and to ensure that frontage structural landscaping is retained along the A2300 as part of the Masterplan.

18.8 We believe our masterplan balances the ability to achieve a sense of place that is fitting for a commercial 'destination' and landmark site, whilst aligning with wider aspirations to respect the context and setting to the North of the site and to the South of the A2300, also protected under policy DP12 of the District Plan as an area of protection and enhancement of the countryside.

18.9 In reflection of all the points above and the District Plan Policies on design and the Design Guide SPD, we have looked to develop a 'Landscape & Setting Strategy' to ensure that as the detail of this site develops, the importance of the Landscape cannot be diluted. The plans above outline our fundamental principles that have been worked into the strategic/concept masterplan, that are all therefore achievable and appropriate to ensure that the quantum, distances, type and quality of landscaping for any detailed proposals remain true to this concept.

Fig 18.3 (Right) - Highly illustrative landscaping/space planning diagram utilising Newton Design Guide 'Rules'

mix of uses

19.1 As mentioned previously, Vail Williams' expert opinion indicates demand exists for at least 1,000,000 sqft of accommodation from businesses involved in the Science and Technology sectors. This will be from businesses within the District, Gatwick Diamond and wider catchment, for a range of planning uses, building sizes and tenure.

19.2 For this reason, we have set out an anticipated broad mix of building types covering B1a office, B1b R&D and B1c light industrial uses.

19.3 We set out our opinion on the optimum mix in line with anticipated demand.

19.4 34% B1a offices, minimum size 20,000 sqft up to 100,000 sqft (range of sizes)

19.5 28% B1b high-tech (ground floor shell B1c with ancillary B8 – small loading doors, and fitted first floor office usually 50%), minimum size 30,000 sqft up to 60,000 sqft

19.6 38% B1c (industrial – R&D/manufacturing – high value use in quality factory environment – typically 15% to 40% office content, 8m to eaves, large loading doors and yard areas with parking), minimum size 30,000 sqft to 150,000 sqft

19.7 Innovation Centre – comprises B1a and B1c uses (incubation units) – single unit of 30,000 sqft (internal unit sizes flexible from 200 sqft up to 2000 sqft)

19.8 Multi occupied B1 building (nursery units) – single unit of 40,000 sqft (internal divisible sizes 4,000 sqft to 10,000 sqft)

19.9 In addition, we consider that a landmark development should attract interest from ancillary uses such as a hotel (this might include conference use, mini gym, bar etc.), a crèche, convenience store and café, which would add to the amenities and benefit nearby occupiers.

Building	Area (GEA)	Parking	Per sqm
Mixed Use			
Innovation Centre	2,800 sqm / *30,000sqft*	90	1/30 sqm
Use Class - B1a: Business - Offices (34%)			
1	3,330 sqm / *35,800sqft*	111	1/30 sqm
2	2,750 sqm / *29,600sqft*	70	1/40 sqm
3	3,620 sqm / *39,000sqft*	90	1/40 sqm
4	5,290 sqm / *56,900sqft*	180	1/30 sqm
5	6,180 sqm / *66,500sqft*	200	1/30 sqm
6	4,120 sqm / *44,300sqft*	140	1/30 sqm
7	6,180 sqm / *66,500sqft*	200	1/30 sqm
8	3,620 sqm / *39,000sqft*	90	1/40 sqm
9	3,620 sqm / *39,000sqft*	90	1/40 sqm
Use Class - B1b: Business - High tech, Laboratories (28%)			
HQ	9,000 sqm / *96,900sqft*	300	1/30 sqm
1	6,280 sqm / *67,600sqft*	120	1/50 sqm
2	9,410 sqm / *101,300sqft*	185	1/50 sqm
3	2,690 sqm / *29,000sqft*	90	1/30 sqm
4	6,650 sqm / *71,600sqft*	160	1/40 sqm
Use Class - B1c: Business - Light industry, R&D, High Quality Factory Environment (38%)			
HQ	11,900 sqm / *128,100sqft*	180	1/65 sqm
1	10,040 sqm / *108,100sqft*	340	1/30 sqm
2	6,650 sqm / *71,600sqft*	220	1/30 sqm
3	4,230 sqm / *45,500sqft*	110	1/40 sqm
4	3,720 sqm / *40,000sqft*	80	1/45 sqm
5	2,260 sqm / *24,300sqft*	80	1/30 sqm
6	4,230 sqm / *45,500sqft*	120	1/35 sqm
7	4,230 sqm / *45,500sqft*	135	1/30 sqm
Total	122,800 sqm/*1,321,800sqft*	3,381	1/36 sqm
Hotel	6,800 sqm / *73,200sqft*	240	
154 Bed, Gym/Conference rooms (Village Hotel Std. Spec.)			
Crèche	370 sqm / *4,200sqft*		
Pavilion	840 sqm / *9,000sqft*		
(inc. Cafe/Coffee shop/Hair Salon/Convenience Shop/Florist etc)			
5no. EcoCycle Stores with capacity for 1,020 bicycles			
(5 x 204 Bikes - circular footprint 8.05m in diameter)			
Total	8,010 sqm/*86,400sqft*		

Potential Employment Density; 2,325 – 4,753 jobs

Assumes a range taking: circa. 1:10sqm for B-use classes (British Council for Offices), 1:40 for B1b and 1:47 for B1c (HCA [now Homes England] Employment Density Guide, 2015).
Density ratio measured against indicative NIA floorspace. Range of employment density excludes other ancillary uses and focuses on B-use classes only.

- **Typical phase circa 200,000-300,000 sqft**
- **Site Coverage (Total GEA / Site Area) circa 36%**
- **Percentage of site given to soft landscaping circa 40%**

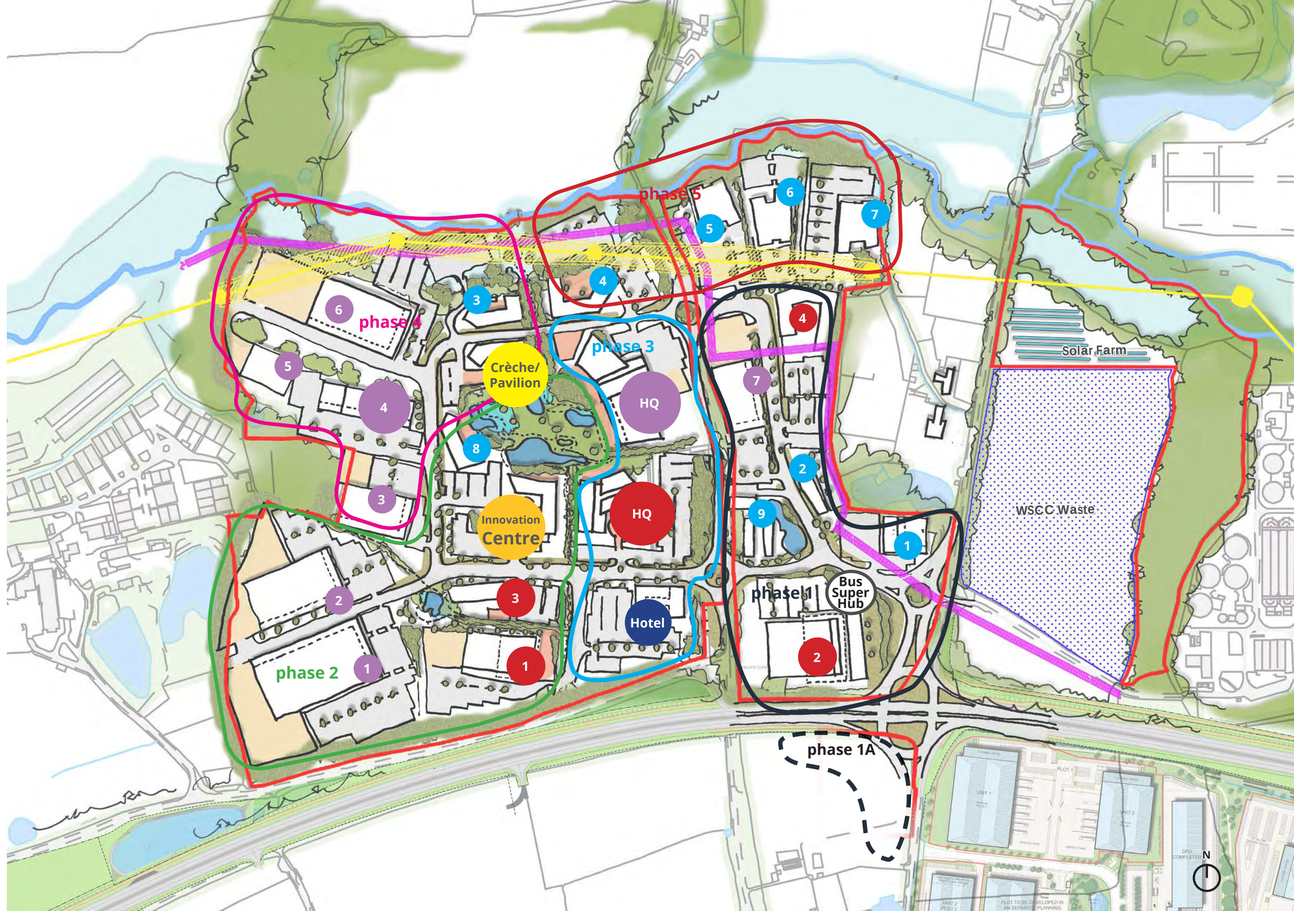


Fig 19.1 - Highly indicative 'Mix of Uses Overlay' to illustrative masterplan option

green credentials and sustainability

20.1 A green ethos is central to our proposals, from design strategies, to BREEAM construction and operation. Careful design considerations will also consider the development as 'future-ready' to support and encourage improvements in technology as the market requirements change and technology advances. To support this we have developed a further Sustainability Statement that expands on detail and specifies proposals for our site (see appendix VII)

20.2 The opportunity for electrical charging points and green technology exists and, as outlined, the infrastructure will be designed and installed not just to accommodate this but to enable adaptation and flexibility for future fuel types and technologies. There are also opportunities to ensure that the orientation and layout of the public spaces, buildings and footprints consider reducing energy use, reusing waste products and enhancing recycling due to proximity to the adjacent solar farms and Waste Allocation.

20.3 Adjoining this site is 5 hectares of land allocated in the WSCC Waste Local Plan 2014 for non-municipal solid waste. This is safeguarded for 200,000 tonnes per annum of commercial, industrial construction and demolition waste. The relationship between the potential Science and Technology Park and the Waste Allocation could allow a positive and unique opportunity to create co-locating commercial uses and waste facilities that complement each other and reduce the need to travel. These facilities could also benefit significant adjacent developments at the Hub and the Northern Arc. Initial discussions have been undertaken with WSCC as the Waste Authority to inform the layout and further pre-applications will be undertaken as a formal planning application evolves.

20.4 There are also additional opportunities to bring forward green technologies on the STP and to potentially connect provision to the surrounding solar farms and Southern Water operations immediately adjacent. The opportunity to align green technologies with the scale of floorspace proposed is unique, aligning with the District Plan aspirations. There is also potential to align with potential and developed solar farms, both being proposed by our clients.

20.5 The use of waste and/or solar energy and using fabric first commitment to design, all ensures that the development can at the heart of its vision complement the aspirations of the District Plan. This can ensure that we develop an attractive place to live work and visit, ensuring that we are sensitive to the countryside setting of the site, whilst reducing the need for in and out commuting and reducing impact on traffic levels and environmental quality.

20.6 Policy DP39 of the District Plan: Sustainable Design and Construction seeks to ensure that new development is sustainable and should be appropriate and feasible in type, size and location of minimise risks associated with future climate change. It suggests development should incorporate the following measures:

- *"Minimise energy use through the design and layout of the scheme including through the use of natural lighting and ventilation;*
- *Explore opportunities for efficient energy supply through the use of communal heating networks where viable and feasible;*
- *Use renewable sources of energy;*
- *Maximise efficient use of resources, including minimising waste and maximising recycling/ re-use of materials through both construction and occupation;*
- *Limit water use to 110 litres/person/day in accordance with Policy DP42: Water Infrastructure and the Water Environment;*
- *Demonstrate how the risks associated with future climate change have been planned for as part of the layout of the scheme and design of its buildings to ensure its longer term resilience"*

20.7 Whilst these principles are appropriate to the ethos of our indicative masterplan further detail will be provided as part of our formal planning applications stage.

20.8 DP42: Water Infrastructure and the Water Environment which sets out the requirements that new development must accord with in regard to the Water Framework Directive and Gatwick Sub Region Water Cycle Study, so to demonstrate:

- *"that sufficient capacity already exists off-site for foul and surface water provision. Where capacity off-site is not available, plans must set out how appropriate infrastructure improvements approved by the statutory undertaker will be completed ahead of the development's occupation; and*
- *That there is adequate water supply to serve the development".*

For non-residential building, policy DP42 requires a minimum standard of 'Good' with regard to the BREEAM targets for water consumption for this development type.

20.9 To highlight the commitment and also the adaptability of these proposals, since the original Positioning Document (April 2019), consent has been granted to a portion of the Dacorar (Southern) Ltd site for a solar farm and Wortleford Trading Ltd have secured solar farm consent at Twineham Green. Whilst the principles of the use and technology can be utilised across the site for the Science and Technology Park, these recent applications demonstrates both our client's clear commitment to, and expertise in, solar energy which presents a unique opportunity for the STP allocation to align green technologies.

20.10 Our strategic connectivity diagram shows how these proposals for the Science and Technology Park will not 'replace' the consented solar farm on this site but that it has the potential to be co-located on the site, on land immediately North of the site within the same land ownership, and connected to nearby (off-site) plans in the vicinity (application DM15/0644 at Twineham Green). This will provide both appropriate and commercially viable loads to make green technologies to service this site, a reality.

20.11 With these proposals being developed at a time where Climate Change and Sustainability are (rightly) so topical, the future STP will look to be innovative and forward thinking in how it can respond to the current and emerging understanding of Climate Change and mitigation. Appendix VII includes an aspirational Sustainability Strategy for the site to which the future design of plots and buildings across the site will review. This often exceeds current-day regulations and expectations but in doing so is aligned with the requirements of Policy DP39 of the District Plan and also the pledge made by MSDC to actively look for ways to protect the environment and tackle climate change, while supporting the government's work to cut greenhouse gas emissions to zero by 2050. It is both anticipated and expected that the occupiers of a brand new Science and Technology Park may actually be expecting an aspirational view and they themselves may be able to further contribute to progressive and green credentials in line with local policy and our aspirational strategy.

20.12 Our proposals therefore enhance the sustainable vision of the District Plan to "improve the social, economic and environmental well-being of the District and the quality of life for all, now and for the future".

Fig 20.1 (Right) - Site solar farm development potential

scale of development and phasing

21.1 We believe that we can achieve in excess of 1,000,000 sqft as defined by the Coast to Capital LEP SEP (2014) and Policy DP1 of the MSDC Adopted District Plan (2018).

21.2 Our current masterplan identifies an indicative mix of uses as shown on the extract below, with a total of 1,321,800 sqft of floorspace defined into B1a, B1b and B1c with ancillary hotel, leisure and amenity facilities.

21.3 From our market experience in the region, we believe that phases of circa. 18,600 to 23,200 sqm (200,000 sqft to 300,000 sqft) are considered viable, in line with occupier demand as shown on the indicative phasing plan.

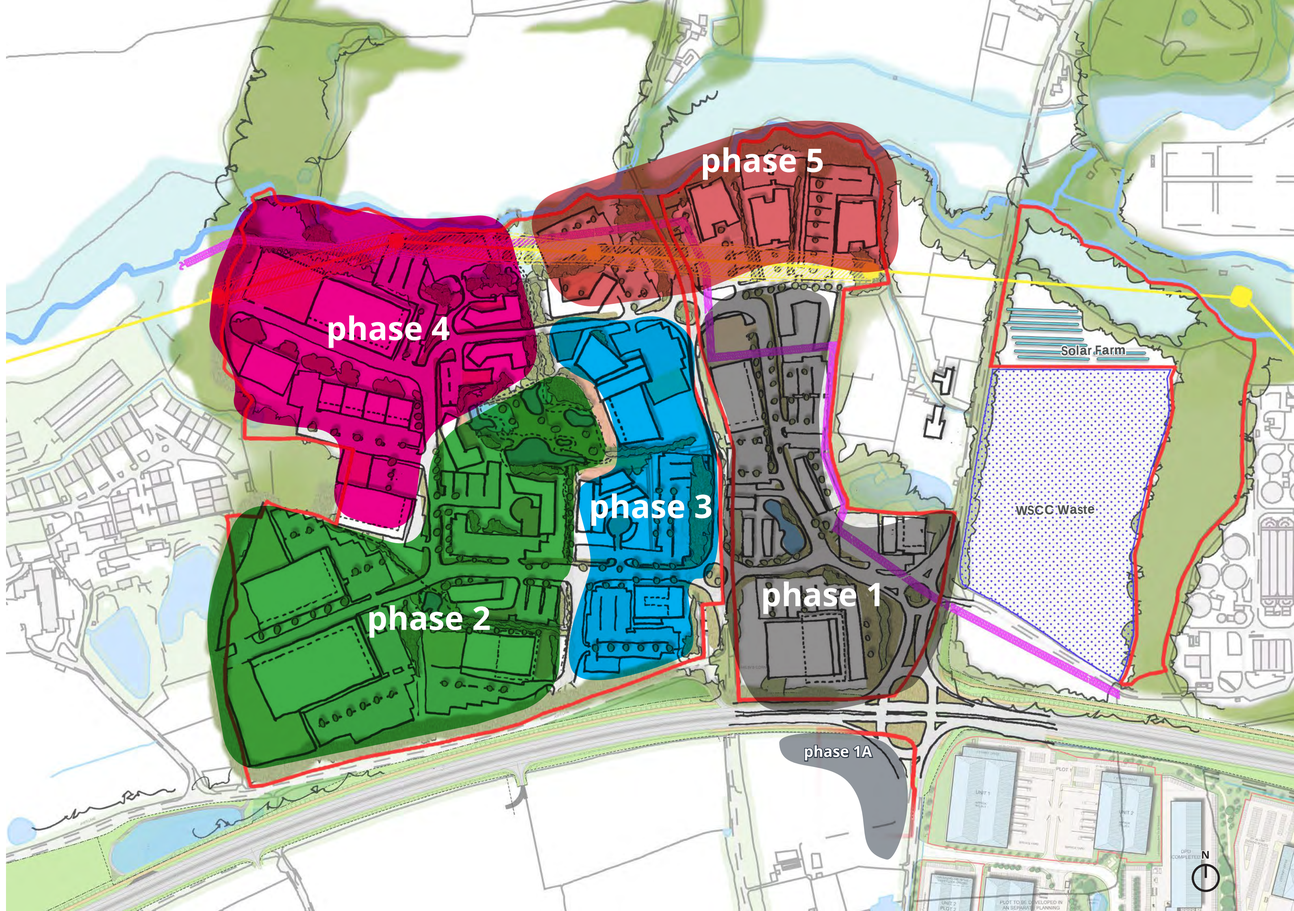
21.4 The illustrative phasing plan accounts for the complex set of interdependencies between construction of utilities, transport, green infrastructure etc. and the micro-delivery of commercial projects that need to establish a "sense of place" and completion. Albeit, the ultimate build-out of the Masterplan will progress over a longer period of time.

21.5 The release of land is anticipated within 0 to 2 years for phase 1, including phase 1a enabling transport works to provide main entrance to the site and upgrade existing highway infrastructure. We anticipate a 10+ year development programme, subject to market demand and highway capacity. This assumes a 2-3 year roll out for each phase aligning with market demand and requirements. Therefore development can be flexible to extend beyond the current Local Plan period, as required by both market demand and highways infrastructure provision.

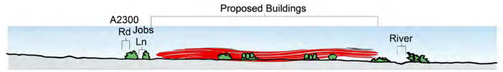
21.6 The phasing for our STP development can therefore be planned around the delivery of key infrastructure in-line with public highway capacity. However, given the transport modelling impacts currently predicted for our proposal and the c.1.4million sqft of development, our phasing remains flexible to ensure latter phases can be delivered to align with junction improvements as they are implemented. This may require partial or whole phases to be delivered outside the plan period and this will be addressed further as the partnership working with the project team, WSCC, MSDC and Highways England is updated.

Fig 21.1 - Aerial drone views looking over site and immediate context

Fig 21.2 (Right) - Highly indicative 'Phasing Diagram Overlay' to illustrative masterplan option



scale within built-context



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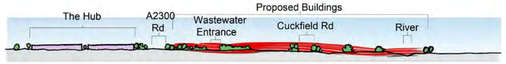

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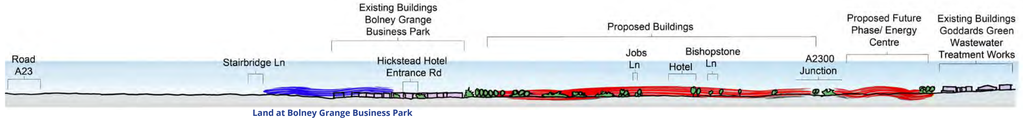
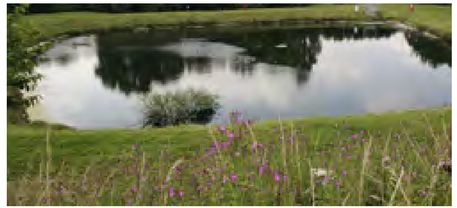


section CC

section DD

Fig 21.3 - Illustrative site sections identifying position of The Site and immediate built form context around.



utilities services strategy

22.1 It is important that any substantial new development can be serviced by the utility companies at reasonable cost within the construction programme. The project team has therefore engaged at this early stage, with key utility providers to consider issues relating to timing, capacity and delivery aligned with our indicative masterplan and quantum of development.

22.2 Our utilities strategy is supported by our technical evidence base, provided by Charles D Smith & Associates. They confirm that, whilst it is envisaged that the implementation of sustainable energy principles will mean that natural gas is not the first choice source of energy for space heating for most buildings, warehouses requiring radiant heating systems and laboratories with certain processes may require a supply of natural gas. Southern Gas Networks have therefore confirmed availability without network reinforcement from a point of connection in Gatehouse Lane.

22.3 Potable water is provided by South-East Water, and a 4" water main already enters the site from Bishopstone Lane. The water company have confirmed that their network can supply this development without reinforcement.

22.4 Southern Water Services are responsible for treatment of wastewater in this area, at the Goddards Green Sewage Treatment Works (STW) directly across Cuckfield Road. They have confirmed that this facility has sufficient capability to accept the predicted flows from this development. The higher level of the STW means that a pumping station would need to be established on the STP development.

22.5 UK Power Networks (UKPN) are aware of the need to provide electricity to several new developments in this area; the Northern Arc (residential), the Hub (commercial) and the proposed STP. This is a favourable situation, since any of these projects have the potential to require an upgrade of the local grid sub-station (33kV), with the result that the cost of the upgrade will be shared by those developments that proceed. UKPN have indicated that the point of connection for the STP would be at the grid sub-station, and that their detailed design will confirm whether the distribution to the STP will be at 33kV or 11kV.

22.6 High speed broadband is essential for a STP development. Virgin Media and Zayo Group UK have fibre within duct networks in the A2300, and Openreach have a fibre network at the Hub (Cuckfield Road). In addition, Vodaphone have a network in third party ducts in the A2300. A resilient, multi-network broadband infrastructure may therefore be designed to support this development.

22.7 The technical details and record of contacts with the utility companies are included in our technical appendices and these include a constraints drawing, showing the locations of existing assets on the development site, and how they are proposed to be diverted or how present locations are to be accommodated in the proposed building layout. Further work and assessments will be undertaken as part of any formal planning process, but this confirms that in regard to Utilities the scale of development is appropriate as supported by our engagement with Utility providers.

innovation & technology

23.1 Previous chapters have reviewed the site location, design and use; however, this chapter looks to expand further on the Innovation and Technology concepts behind this strategy. These proposals are for a Science and Technology Park and a need has already been identified. Indeed it is a recognised fact that the South East has one of the highest levels of investment in R&D in the UK, "with a Gross Expenditure on Research and Development (GERD) as a share of GDP equal to 2.34% in 2015 (Eurostat, 2018), far above the national average of 1.67%" (The European Commission; https:// ec.europa.eu/). However, the Project Newton proposals look beyond simply the businesses and occupiers, to bring the innovation and technology to this site.

23.2 Key educational stakeholders will also bring opportunities for Further and Higher Education to integrate closer with industry needs, outside of the regular educational setting and away from a traditional campus setting, to focus on the vocational and innovative development of specific advancements which are yet carried out in a real world and commercial setting.

23.3 The strategy for Project Newton is to outline the next generation of Science and Technology Parks; a destination that both meets and exceeds today's needs whilst already being aware of, and prepared to, adapt to how technologies, communication, environmental emphasis, travel and society may evolve.

23.4 Examples of this have already been outlined in previous chapters; travel needs and the continued evolution of the 'workplace' are being explored through 'connected green travel hubs'; energy use, generation/production, re-use and waste (perhaps even waste to energy as a re-use strategy) are to be explored on the site in the buildings, the infrastructure and indeed the existing Waste Allocation neighbouring our site allocation boundary.

23.5 The site's primary and secondary roads will all be developed to incorporate suitably sized and accessible service zones and ducting to be able to install fibre links now, but also accommodate future digital communication without severe disruption to services and infrastructure. In the shorter term, the option for enhanced fibre connection to this site should be seen as a catalyst to boost connectivity to the wider region. In the longer term, the infrastructure strategies on this site may influence future developments.

23.6 The physical buildings on the site, the public spaces, and the landscaping itself should be designed to 'react' rather than simply 'record' and smart/intelligent technologies will be utilised to respond to emerging needs and trends in the workplace, travel and transport, climate and environment. The strategy for Project Newton is not just to develop a destination for highly skilled workers and companies, but a destination that supports these industries today and in the future through forward thinking investment and planning.

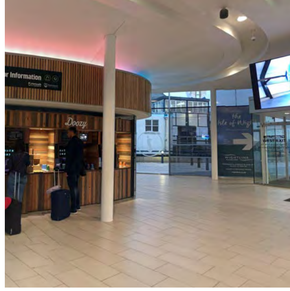


Fig 23.1 (Right) - Aspirational "innovation and technology" precedent images

delivery strategy

24.1 The land ownership for this site is within the control of our two clients, Dacorar (Southern) Limited and Wortleford Trading Company Limited.

24.2 Glenbeigh Developments Ltd (GDL), asset and development managers for Dacorar (Southern) Ltd, have brought forward three major Business Parks and a multitude of medium and smaller development sites, since 2002 and with a significant recession between 2008. These include:

- The Hub (Burgess Hill): Opposite the site, The Hub has recently completed Phase 2. This being a bespoke building of 54,300sqft for Roche Diagnostics. This compliments the DPD facility completed in April this year. The entire park provides for some 500,000sqft of employment space. See: www.thehubburgesshill.co.uk
- Nowhurst Business Park (Horsham): Within the Coast to Capital LEP region, GDL has commenced phase 1 works (demolition and site earthworks) at Nowhurst Business Park (Horsham). This being a resolution for consent granted for over 300,000 sqft of business space on this 25 acre site on the A281 just outside Horsham. The site is cleared and initial site set up works shall be implemented to provide 3 levels of development. Marketing commenced in Autumn 2019. See: www.nowhurstbusinesspark.co.uk
- Cobham Gate (Ferndown, Dorset): This allocated employment site in Ferndown was in several land ownerships. After agreeing a land sale agreement, GDL secured planning for over 400,000 sqft of B1, B2 and B8 space. Phase 1 works were completed in March 2017. This comprised of the provision of a new arm off the existing junction, a new estate road and infrastructure including open pond attenuation in a sensitive area (adjoining an SSSI site) and a pre- let to DPD for their new regional depot. Speculative development started in early 2020 for over 100,000 sqft of units of Trade Counter and small/ medium sized units to match the local demand. See: www.cobhamgate.com

For all other Glenbeigh projects please visit: www.glenbeighltd.com

24.3 Wortleford Trading Company Ltd is a private family operated property company with land and income generating investments in the South East of England.

24.4 The Project Newton site is owned freehold by our two clients above, acting as promoters for the site. Both are experienced property owners and GDL has significant experience of delivering large scale developments, with the necessary access to capital/funding. Both of our clients are committed to progressing this STP development through the planning process with an expectation and funds to progress an outline/hybrid planning consent. This will deal with access in detail and the remaining scheme in outline.

24.5 Our anticipated timing of development is to secure planning permission within 12-18 months of allocation, with the first phase being commenced as soon as practically possible, within 2 years. Following a successful outline planning application, and subject to occupier demand in the form of pre-lets or forward sales, the appropriate full or hybrid planning applications would follow linked to occupier demand

24.6 On receipt of the outline planning consent, detailed design to satisfy WSCC Highways on the S278 to provide access, would commence. Once again, our ability to attract an occupier will be measured against the actual delivery of key infrastructure. With the long lead in time, to design, agree and document the S278/38, this is a critical item requiring an early commitment. Initial partnership works between our project team and WSCC, MSDC and Highways England has already begun and is reflected in our supporting Transport Statement.

24.7 The development will be achieved through securing pre-lettings or forward sale of buildings who satisfy the occupier criteria. Our client will ensure all the necessary phase 1 infrastructure is provided once a pre-letting has been agreed or will facilitate the earlier funding for this in line with market demand.

24.8 Reserved matters applications would be progressed by our clients, linked to specific occupier requirements and our clients would use access to institutional funding to ensure deliverability of each building, in the same way the DPD and Roche buildings were funded at The Hub. It is premature to secure funding for the development until an allocation is achieved and outline consent is secured. However, our client will also explore funding opportunities and seek UK Pension fund interest for specific elements of the park, either speculatively or linked to occupier requirements.


Nowhurst Business Park (Horsham) - Glenbeigh Developments Ltd.

Cobham Gate (Ferndown, Dorset) - Glenbeigh Developments Ltd.


The Hub (Burgess Hill) - Glenbeigh Developments Ltd.

24.9 Whilst the initial identification of a broad location of a STP was within the Adopted District Plan, further assessments of potential site allocations in the emerging Site Allocations Development Plan Document, has ensured that our site has been thoroughly assessed by officers, members and engaged stakeholders and residents. This has provided a transparent decision making process and clarity to both potential occupiers and local residents. It has also provided a level of assurance regarding the creation of successful STP that aligns with market and local aspirations.

24.10 The STP is identified in the District Plan as being required to provide 2500 jobs. In our experience, planning policies can ensure that development can be restricted to STP development and provide a degree of support to fulfil the function of a defined economic area. Other locations within the region have successfully allowed this through the Local Plan Examination process.

24.11 In regard to job numbers, it is possible to use the 1:10 ratio as used by the British Council for offices an indicator for the B1a development, 1:40 for B1b and 1:47 for B1c (Homes England employment density guide) equating to 2325-4753 jobs, compared to the 2500 jobs identified by the LEP. Albeit until new Class E is the permitted use class .

24.12 Further controls through mechanisms such as the use of Article 4 directions or restrictive conditions can ensure that employment generating development within B1 use classes remove any permitted development rights to change to other uses. It is acknowledged that phasing plans are also to be required to have internal approval by MSDC as the STP progresses, as occurred with the Northern Arc.

24.13 In regard to small scale changes, Local Development Orders can also be considered to ensure small scale change can occur without further planning permission. This allows developments to be fit for purpose over time and provides flexibility for specific areas where required, providing reassurance to developers and tenants.

24.14 Alongside planning conditions and policies, lease agreements can also contain user clauses to control the nature of the planning uses within a property. At this stage these mechanisms are cited as a list of possible ways to support an STP but these are not exhaustive or fully considered and discussions with MSDC are ongoing as part of any further development management considerations.

potential stakeholders

25.1 The progression of a Science Technology Park will require the support and engagement of many potential stakeholders. Given the sites connection to the Northern Arc, meetings have been undertaken with Homes England to discuss linkages with the Northern Arc Proposals.

25.2 Consultation & meetings with West Sussex County Council's Waste Department, have indicated that the historic Waste Allocation of 5 hectares is currently identified for non-municipal waste, comprising construction and demolition waste, and commercial and industrial waste.

25.3 Initial approaches have also been made to various stakeholders and further meetings will be arranged as the concept progresses, to ensure continued communication, and engagement. Key stakeholders include:

- Mid Sussex District Council – Economic and Planning departments
- West Sussex County Council – Economic Growth, Highways and Waste departments
- Hurstpierpoint and Sayers Common Parish Council
- Burgess Hill Town Council
- Members of Parliament for Arundel & Mid Sussex
- Educational establishments including the Universities of Brighton and Sussex
- Coast to Capital LEP
- Gatwick Diamond Business forum (GDB)
- Homes England
- Immediate neighbouring property owners

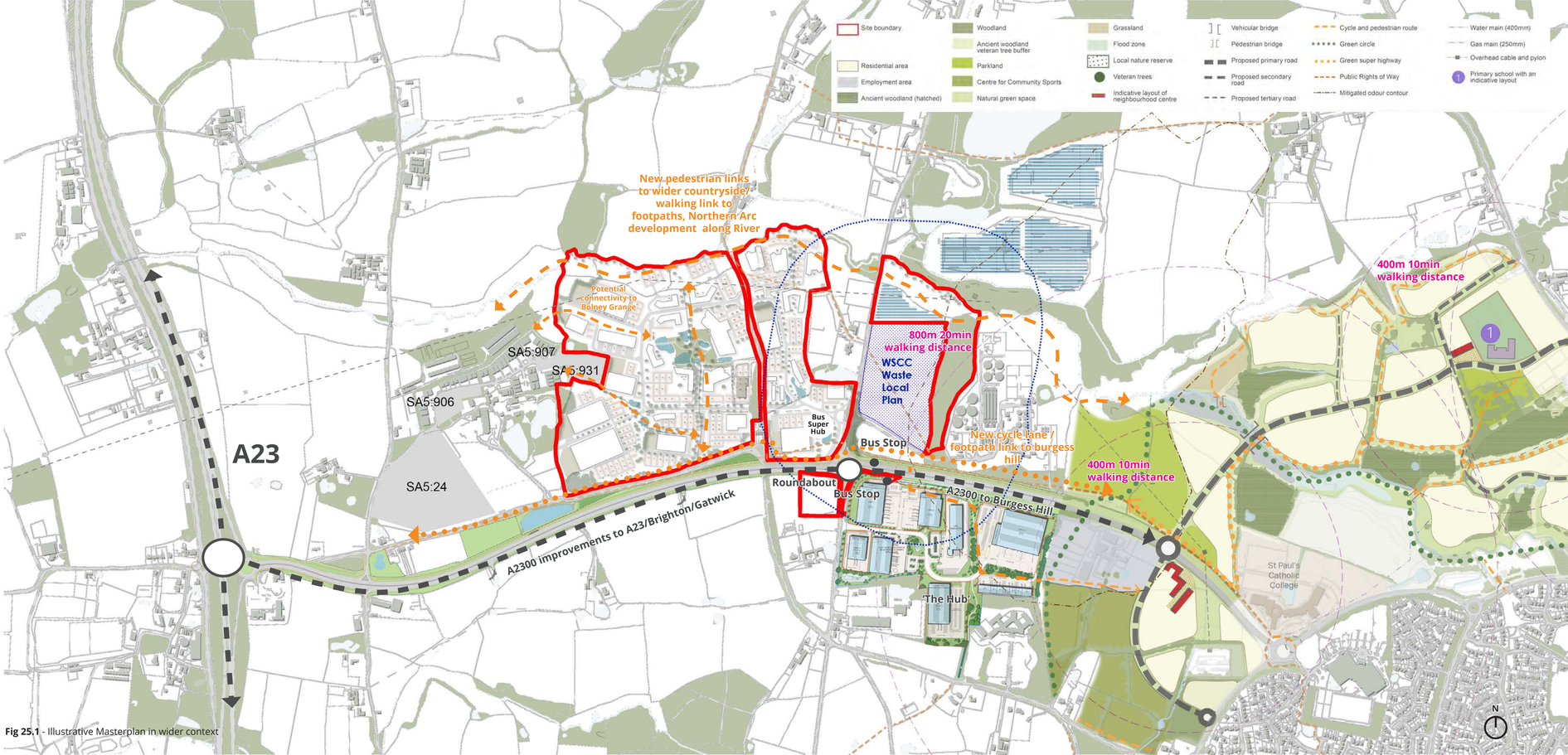


Fig 25.1 - Illustrative Masterplan in wider context

conclusion

26.1 We believe that our Science Technology Park development can bring forward a unique opportunity for a high quality Science and Technology park in the right location.

26.2 Our Masterplan addresses a complex set of interdependencies including construction, utilities, transport, green infrastructure etc. This significant commercial project also needs to establish a “sense of place” even though the ultimate build-out of the Masterplan will progress over a longer period of time. We believe that our phasing can therefore be planned around the delivery of key infrastructure.

26.3 From our extensive market experience, the project team believe that phases of circa. 18,600 to 23,200 sqm (200,000 sqft to 300,000 sqft) are considered to be viable in line with occupier demand as shown on the indicative phasing plan.

26.4 Our clients are committed to delivering our indicative Masterplan scheme subject to an allocation being given in the DPD. Their recent delivery success in the region ensures that our clients are experienced in delivery, development and securing successful lets.

26.5 Our clients are also committed to securing all necessary planning consents to ensure the delivery and development. They will seek pre-lets/ freehold occupiers in line with market demand, and the delivery strategy will comprise:

- Securing the allocation
- Commence pre-let /forward sale marketing campaign (brochure, website, occupier targeting, regional launch event etc)
- Secure hybrid/outline planning consent with highways/access as detail in initial applications.
- Implement initial infrastructure
- Secure occupier demand and in line with Agreement to Lease/Purchase commitments.

26.6 Throughout the development programme, the project team will seek and secure occupier demand and progress planning/reserved matters and the necessary funding for building delivery in line with the approach adopted at the HUB in Burgess Hill.

26.7 The site is surrounded by existing development, both to the West with the existing Bolney Industrial Park and to the East to the new Northern Arc. Its use as a STP would create logical infill.

26.8 The scale and nature of the site to the North ensures that the large scale of development could be accommodated without adversely impacting on the character of the surrounding landscape.

26.9 The extent of land available also ensures that a green crescent can be made to the South of the river, potentially extending to the Northern Arc, enhancing both landscape features, sustainable access on foot and cycles, and utilising the land underneath the pylon.

26.10 Within the site there are also mature established landscape features, such as the river and existing trees to the East and within the central area of the site, that can be retained to ensure that the overall setting of the area provides the quality of environment and focus points for the development.

26.11 The site provides the ability to comprehensively plan for the STP to the North of the A2300, providing significant employment provision in line with MSDC Adopted District Plan (2018)

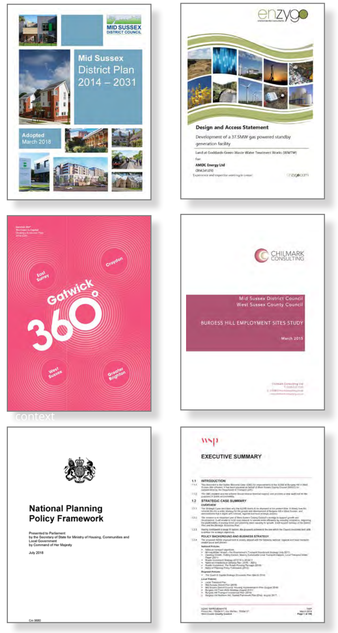
26.12 In summary, we believe that our extensive work already undertaken ahead of allocation ensures a deliverable STP in the right location. We will continue to align our work with emerging regional aspirations and talk to all key stakeholders across the region.

Fig 26.1 - Development of illustrative masterplan

evidence base

27.1 The project team has initiated work in regard to transport, landscaping, ecology, utilities, arboricultural information, agricultural classifications and a number of key environmental factors to ensure that this development can be delivered. We believe that our Masterplan concepts are consistent with any constraints to development.

27.2 Further evidence based assessments will be undertaken as part of the evolution of the initial design concepts, and as discussions with MSDC and stakeholders evolve.



appendices

(all available digitally only)

Appendix I Highways & Transport Technical Note & Pre-application Highways & Transport Overview
Connect Consultants Ltd.

Appendix II Strategic Drainage and Watercourse Assessment
HDR | Bradbrook Consulting

Appendix III Air Quality Assessment
RPS Group Plc.

Appendix IV Landscape Visual Impact Assessment
Pegasus Planning Group Ltd

Appendix V Utilities Strategy
Charles D Smith & Associates

Appendix VI Project Newton, Burgess Hill, West Sussex, Ecological Report (July 2020)
Ecology Solutions

Appendix VII Sustainability Statement
HNW Architects & Vail Williams

Appendix VIII Transport Statement
Connect Consultants Ltd.

Fig 28.1 - Highly conceptual STP Masterplan within wider site context

science

technology

business

environment

connectivity

September 2020

APPENDIX I

GLENBEIGH DEVELOPMENTS LIMITED AND DACORAR SOUTHERN LIMITED

LAND NORTH OF THE A2300, GODDARDS GREEN, BURGESS HILL, WEST SUSSEX

PRE-APPLICATION HIGHWAYS & TRANSPORT OVERVIEW

14TH MAY 2019

1.0 Introduction

1.1 Connect Consultants Limited is a firm of transport planning and highway design consultants that have been instructed by Glenbeigh Developments Limited and Dacorar Southern Limited in relation to the promotion of their land to the north of the A2300 at Goddards Green, West Sussex, for a future Science & Technology Park.

1.2 This is in the context of the Mid Sussex District Plan (Policy DP1) and the proposed site allocations Development Plan Document (DPD), in which Mid Sussex District Council (MSDC) has identified the intention of realising a Science & Technology Park in a location described broadly as being to the west of Burgess Hill.

1.3 MSDC are currently undertaking a site selection exercise for the Science & Technology Park, and have identified specific areas of interest that reflect some of the criteria they will use in their site selection methodology. MSDC has included the following transport-specific criteria:

- *"Accessibility strategy including the role of sustainable transport modes.*
- *Access arrangements to the site.*
- *Wider highway improvements proposed or needed and mitigation required.*
- *Details of joint work to date with the Highway Authority and future intentions."*

1.4 This Technical Note (TN) addresses each of the highways-specific areas of interest listed above, in the context of the proposed Science & Technology Park location to the north of the A2300.

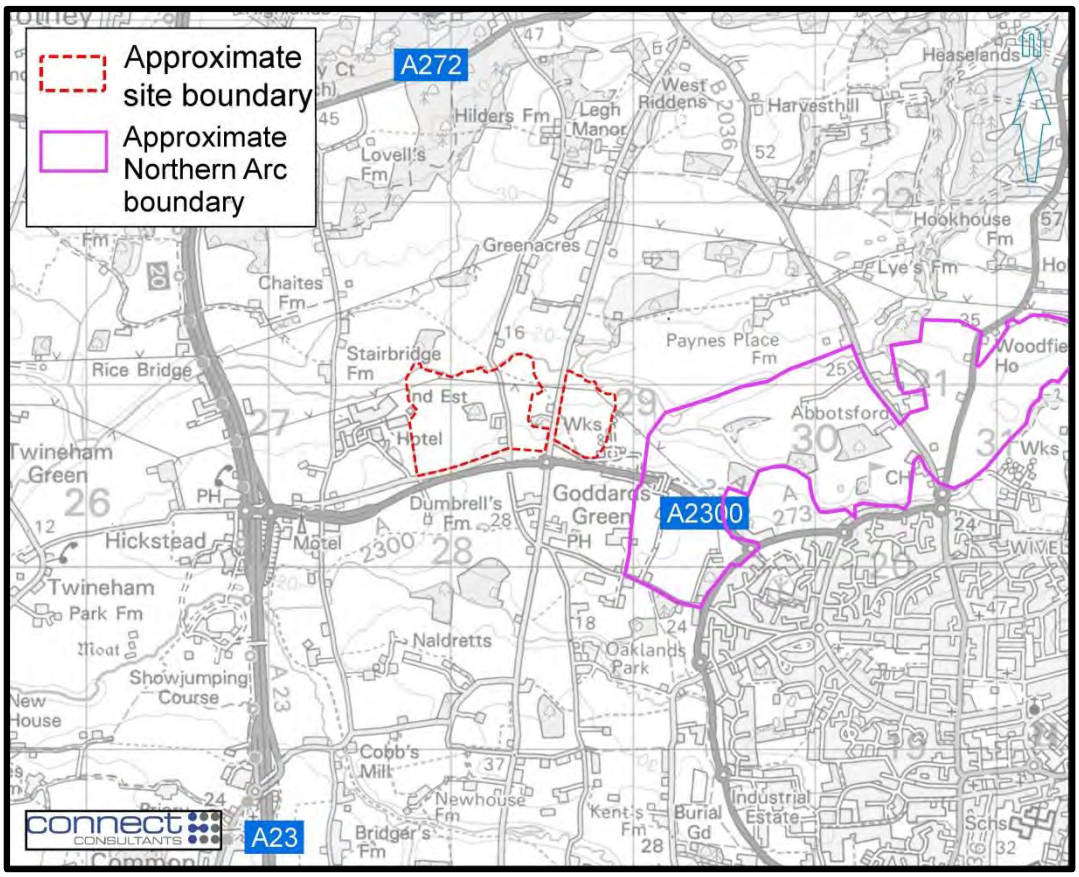
1.5 This TN will also be submitted to West Sussex County Council Highways as part of a pre-application consultation with the Local Highway Authority.

2.0 Site Context

2.1 The proposal site is located to the north of Goddards Green, bounded by the A2300 on its southern side and Cuckfield Road on its eastern side. The site is currently used for agricultural purposes. The A2300 provides a key road link to Burgess Hill to the east and A23 to the west. Cuckfield Road connects to neighbouring settlements to the north and south of the site.

2.2 The location of the proposal site, in the context of the urban area, is presented at Figure 2.1.

Figure 2.1 – Site Location Plan



Source: Promap

2.3 The Burgess Hill area has been the subject of a number of major development proposals in recent years, with further growth in the area planned through the MSDC Local Plan.

2.4 The local committed/planned developments are as follows:

- DM/18/5114 Northern Arc Development – Mixed use development comprising approximately 3,040 dwellings and other facilities, including extensive infrastructure works. The planning application has not been determined at the time of writing.
- DM/18/0509 Freek's Lane Residential Development – 460 dwellings located on land west of Freek's Lane, including associated infrastructure works. The planning application has not been determined at the time of writing.
- 08/01644/OUT Fairbridge Way Residential Development – Outline planning permission was granted on 24th June 2014 for the redevelopment of the Former Sewerage Treatment Works at Fairbridge Way into 325 residential dwellings with associated infrastructure works.

- 13/01618/OUT The Hub Development – Employment development comprising up to 50,000 sq.m. with associated infrastructure works. The site is currently under construction.

2.5 The Local Highway Authority, West Sussex County Council (WSCC), has a planned major improvement scheme known as the *A2300 Corridor Improvement Scheme*, which includes widening of the existing single carriageway to a dual carriageway and implementing associated improvement works on the A23 / A2300 Interchange Roundabouts, the A2300 / Cuckfield Road Roundabout and the A273 / A2300 Roundabout. The scheme is currently in its design and consultation stages.

2.6 Figure 2.2 shows a plan of the area north and west of Burgess Hill, showing the approximate areas of the major planned/committed developments, along with the A2300 Corridor Improvement Scheme.

Figure 2.2 – Proposal Site Context

Source: Google

3.0 Sustainable Access Strategy

3.1 This section of the TN details the accessibility of the proposed development in relation to pedestrian, cycle and non-car modes of transport and outlines potential measures to improve sustainable accessibility to the proposal site.

Pedestrian Access

3.2 The Department for Transport's (DfT) document titled 'Manual for Streets' dated 2007 provides guidance in relation to walk distances. Section 4.4 gives the following advice:-

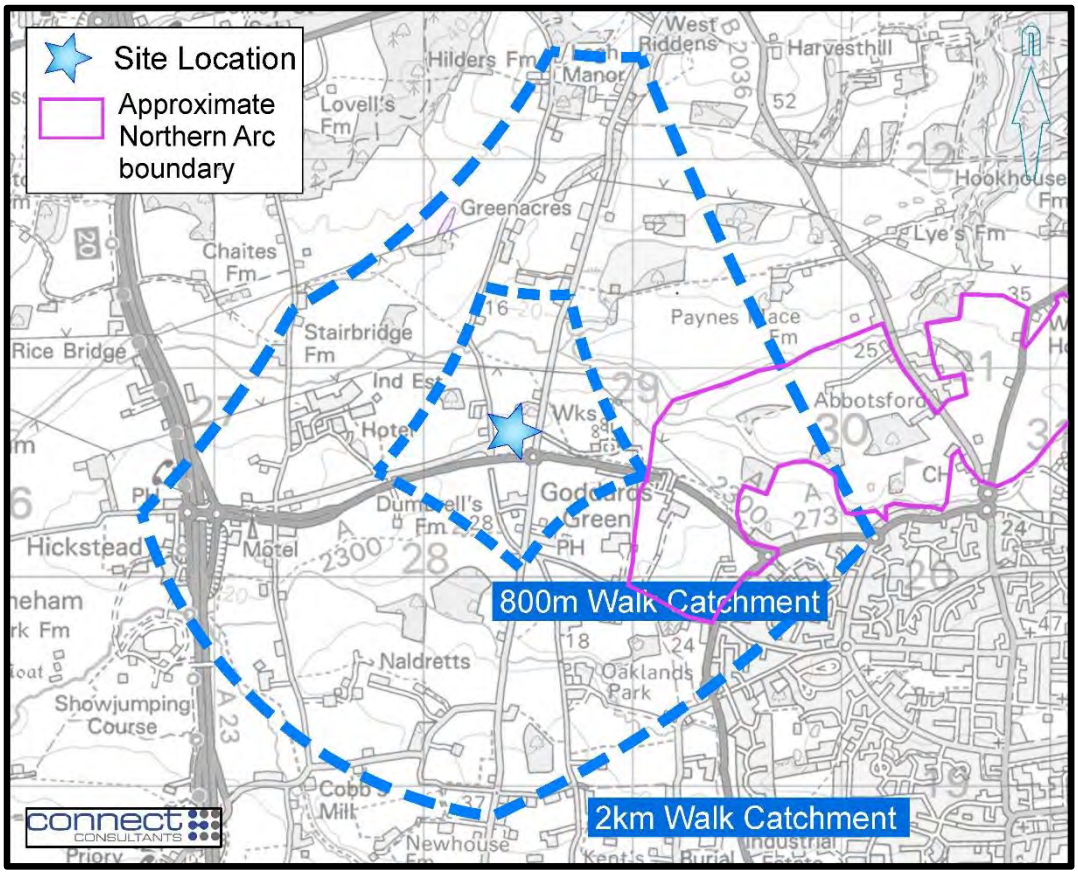
> *"Walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes' (up to about 800 m) walking distance of residential areas which residents may access comfortably on foot".*

3.3 Table 3.2 of The Institute of Highways and Transportation (IHT) guidance document titled 'Providing for Journeys on Foot' identifies a maximum walk distance of 2.0km for commuter, school and sightseeing walk trips, 800m for town centre walk trips and 1.2km for trips elsewhere.

3.4 The actual distance that people will be prepared to walk will vary depending on the trip purpose and other factors such as the presence of road crossings and terrain.

3.5 Based on the maximum walk distance of 800m and 2km, the approximate walk catchments are shown at Figure 3.1 below.

Figure 3.1 – 800m and 2km Walk Catchment



Source: Promap

3.6 The walk catchments above indicate that there are a number of residences within the 800m walk catchment area, including Goddards Green south of the proposal site. The 2km walk catchments cover a section of west Burgess Hill and surrounding villages.

3.7 The western parts of the Northern Arc development site are within walking distance, which means that a significant area of residential land will be within walking distance of this proposed employment site.

3.8 As part of the A2300 Corridor Improvement Scheme, a footway / cycleway will be provided along the route's northern side between the A2300 / A23 interchange and Burgess Hill. The route passes the site's southern boundary.

3.9 The proposal site is located within walking distance of the nearby Hub employment development and its associated sustainable transport links, including a pedestrian and cycle route via Gatehouse Lane. These links will provide a safe, low-trafficked connection between the proposed Science & Technology Park and Burgess Hill.

Cycle Access

3.10 The 2017 National Travel Survey specified average journey lengths by cycle in England of c.5.5km. This suggests that cycling can offer a realistic alternative to car travel, particularly for trips of less than 5km.

3.11 Cycling has the potential to play an important part in sustainable travel to and from the proposed Science & Technology Park, for visitors and staff.

3.12 As part of the A2300 Corridor Improvement Scheme, a footway / cycleway will be provided along the route's northern side between the A2300 / A23 interchange to Burgess Hill, with connections to the National Cycle Network. This route passes along the site's southern boundary, thereby providing the site with a good quality, attractive local and longer distance cycle route.

3.13 Using 5km as an indicator of the average cycling distance, the approximate cycle catchment is shown at Figure 3.2 below.

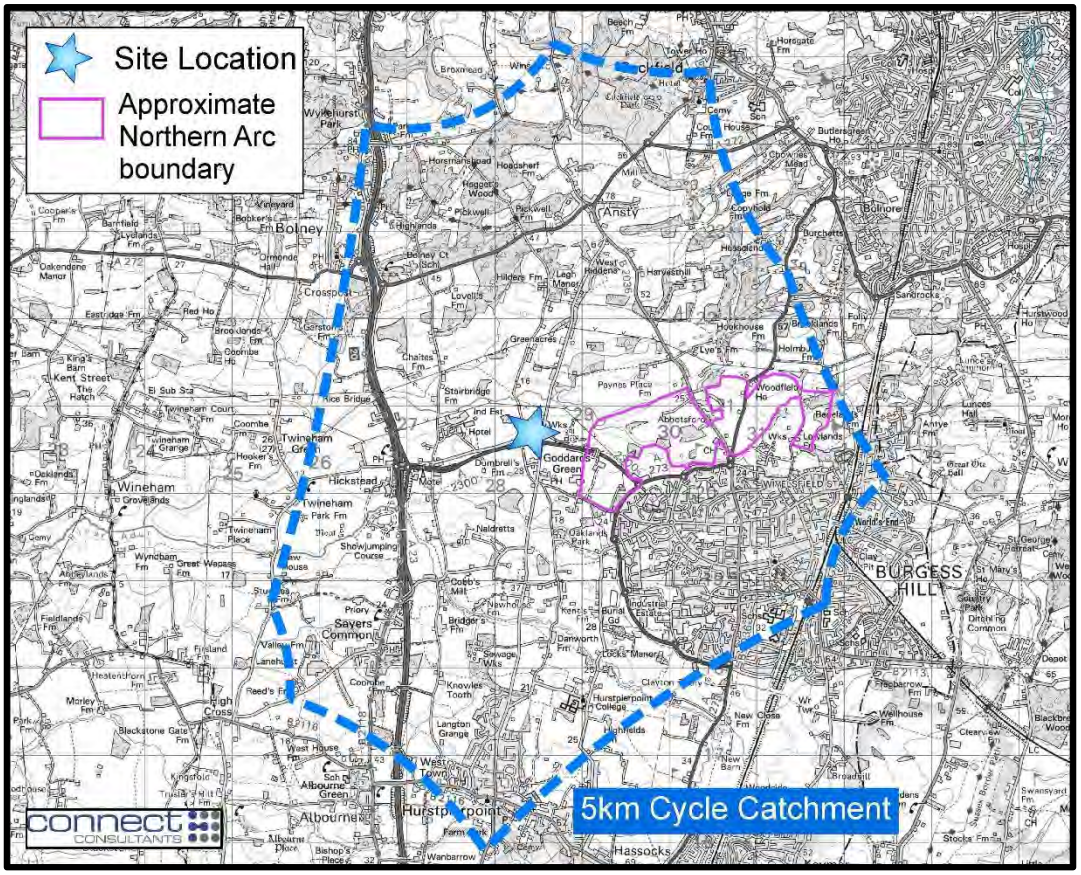
3.14 The 5km cycle catchment includes most of Burgess Hill and settlements to the west of the town, including Hurstpierpoint, Sayers Common, Ansty, and Goddards Green. It also includes the entire Northern Arc site.

3.15 This provides a significant local population within cycle distance of the site.

3.16 As with the pedestrian access strategy, cyclists will also have the opportunity to use the sustainable transport links associated with The Hub development southeast of the proposal site, with links to Burgess Hill. This includes the provision of a signal-controlled pedestrian and cycle crossing over Jane Murray Way, where it intersects with Gate House Lane.

3.17 This will provide a quiet and low-trafficked route via Gatehouse Lane to the proposed Science & Technology Park for pedestrians and cyclists travelling to and from Burgess Hill.

Figure 3.2 – Cycle Catchment Area



Source: Promap

Bus Access

3.18 The publication 'Planning for Public Transport in Developments' produced by the Institution of Highways and Transportation (IHT) specifies that new developments should be located within 400m of the nearest bus stop.

3.19 As part of the permitted Hub development two bus stops will be provided on the A2300 adjacent to the Hub site. The bus stops will be situated approximately 200m and 250m east of the proposed Science & Technology Park site, serving westbound and eastbound routes respectively.

3.20 The stops will serve the existing 100 Route, which provides hourly services between Burgess Hill and Horsham, both of which have train stations, thereby providing the proposed Science & Technology Park with convenient and regular bus access.

3.21 As the proposed Science & Technology Park development programme progresses, the opportunity will be explored to divert, extend or introduce new bus routes into the site, so as further promote bus travel to/from the development.

3.22 With the close proximity of the Northern Arc development, the future Northern Arc bus services could be easily adapted to serve the Science & Technology Park, either by small-scale route diversion, or by users walking between the sites to the nearest bus stops.

Highway Access

3.23 The site lies immediately adjacent to the north side of the A2300, to the northwest of the A2300 / Cuckfield Road roundabout.

3.24 The A2300 connects Burgess Hill to the A23 strategic route, under the authority of Highways England. The A23 links the south coast with the M23, Gatwick Airport, the M25 and London.

3.25 Cuckfield Road provides a local route north and south to the surrounding villages.

4.0 Proposed Access Arrangements

4.1 The site benefits from close proximity to the existing roundabout junction of the A2300 and Cuckfield Road, as well as the priority-controlled junction of Jobs Lane with the A2300.

4.2 The Cuckfield Road roundabout will provide an 'all-movements' access junction both before and after the A2300 dualling as part of the A2300 Corridor Improvement Scheme.

4.3 At this early stage, three preliminary design options have been prepared for the access arrangements of the proposal site, provided in Appendix 1.

Option 1 – Left-in / Left-out Access via Jobs Lane (Drawing No. 18108 – SK190515.1)

4.4 The A2300 / Jobs Lane junction is currently an all-movements T-Junction, however, following the proposed dualling of the A2300, it will become a left-in / left-out junction.

4.5 The Science & Technology Park access could be constructed from Jobs Lane, with vehicles travelling from the A2300 via the left-in / left-out junction.

4.6 This access option would be suitable for a scenario with relatively low volumes of development traffic, as this traffic will need to make U-turns at the A23 / A2300 junction and at the A2300 / Cuckfield Road roundabout.

4.7 This left-in / left-out option has been discounted as it would not provide sufficient capacity for a development of the scale and prestige of the proposed Science & Technology Park, and it would add unnecessary pressure from U-turning traffic at adjoining junctions on the A2300.

Option 2 – All Movements Roundabout Access (Drawing No. 18108 – SK190515.2)

4.8 This option involves locally modifying the alignment of Cuckfield Road immediately north of its roundabout junction with the A2300, along with the provision of a secondary roundabout junction, providing direct access into the Science & Technology Park site.

4.9 The benefit of this option is that all movements are accommodated within the site access, avoiding the need for traffic to U-turn at neighbouring junctions, and consequently improving their capacity and operation.

4.10 This scale and form of junction would be more akin to the standard expected to serve a high-profile development.

4.11 A further benefit of this access option is that it could accommodate the local diversion of both eastbound and westbound bus services from the A2300 and would allow them to efficiently re-join with minimal delay, thus offering the opportunity for much improved bus connectivity within the Science & Technology Park.

Option 3 – High Capacity Access (Drawing No. 18108 – SK190515.3)

4.12 This option offers the same benefits as Option 2, but the A2300 junction is upgraded to a signalised 'hamburger junction' to accommodate higher volumes of traffic. This offers significantly higher capacity than a conventional roundabout and would accommodate a larger scale of development than that which could be accommodated with either access options 1 or 2.

4.13 The provision of A2300 through-lanes will minimise disruption and delay to through-traffic using the A2300.

4.14 This arrangement utilises land both within the proposed site and also the adjoining Hub development, all of which is within the control of Dacorar Southern Limited.

5.0 Wider Highway Improvements

5.1 This section considers the potential need or opportunities for wider highway improvements if required to mitigate the traffic effect of the proposed Science & Technology Park.

5.2 The Transport Assessment (TA) for the Northern Arc planning application (AECOM on behalf of Homes England, December 2018) incorporates traffic data from the Burgess Hill Traffic Model (BHTM), using the SATURN traffic modelling software.

5.3 As well as informing the traffic assessment of the allocated Northern Arc site, the BHTM has been used for the business case for the c.£20m A2300 dualling scheme.

5.4 The BHTM includes in its future traffic forecasts all permitted and allocated developments in Mid Sussex District, and therefore represents the future traffic scenario as envisaged by MSDC.

5.5 The Northern Arc TA includes assessments of a number of the junctions local to the proposed Science & Technology Park site.

5.6 This section reviews the assessments of those local junctions so as to understand the likely future traffic scenario and the potential need for mitigation of the proposed Science & Technology Park.

5.7 The specific junctions that have been reviewed for the purposes of this report are as follows:

- A2300 / Cuckfield Road Roundabout.
- A273 / A2300 / Triangle Way Roundabout.
- A23 / A2300 Junction Interchange Eastern / Western Roundabouts.

A2300 / Cuckfield Road Roundabout

5.8 The Norther Arc TA includes the proposed A2300 dualling scheme within the future baseline scenario, which includes the associated capacity improvement at the Cuckfield Road roundabout. The TA shows that the roundabout will be close to capacity in the 2037 scenario with the full Northern Arc plus committed developments.

5.9 As set out in the previous section, Dacorar Southern Limited controls land on both sides of this roundabout and therefore the ability exists to provide further capacity improvements if required to accommodate the proposed Science & Technology Park traffic.

A273 / A2300 / Triangle Way Roundabout

5.10 The Northern Arc TA also shows that the capacity of the A273 / A2300 / Triangle Way Roundabout would operate at or close to capacity in the 2037 Base + Development scenario.

5.11 The TA of the proposed Northern Arc development does not include any additional mitigation or capacity improvement beyond the improvements forming part of the A2300 Corridor Improvement Scheme.

5.12 It should be noted that the provision of a signal-controlled pedestrian and cycle crossing over Jane Murray Way, where it intersects with Gate House Lane, was agreed as part of The Hub development. This will improve the accessibility of the proposed Science & Technology Park for pedestrians and cyclists travelling to and from Burgess Hill, and may therefore help to reduce the traffic effect at the Triangle Way Roundabout.

5.13 Additional capacity improvements or mitigation measures will be explored and provided, if they are identified as being required through any future planning application or traffic assessment work in support of the Science & Technology Park.

A23 / A2300 Junction Interchange Eastern / Western Roundabouts

5.14 The A2300 corridor scheme includes capacity improvements to this interchange. This was included in the Northern Arc TA, which predicts that the roundabouts will operate at or close to capacity in the 2037 Base + Development scenario.

5.15 On behalf of Dacorar Southern Limited, Connect Consultants is in dialogue with Highways England seeking to understand whether any aspirations exist for future large-scale improvements to this interchange. As the proposals for the Science & Technology Park progress, dialogue with HE and WSCC will continue in order to identify whether any additional improvements or mitigation will be required in this location.

6.0 Conclusions

6.1 This TN has been prepared to support the promotion land to the north of the A2300 at Goddards Green, West Sussex, for a future Science & Technology Park, as identified in the Mid Sussed District Plan.

6.2 Sustainable Access: The proposed site has good non-car accessibility with pedestrian and cycle links to Burgess Hill and the local area, as well as nearby frequent bus services between Burgess Hill and Horsham, both of which have train stations. The site is within walking distance of the Northern Arc development. Opportunities exist for bus services to enter the site.

6.3 Access Options: The site benefits from close proximity to the existing roundabout junction of the A2300 and Cuckfield Road, as well as the priority-controlled junction of Jobs Lane with the A2300. Three preliminary access design options have been prepared; the left-in / left-out junction option has been discounted as unsuitable for a development of this scale, with two forms of all-movements junctions remaining as options, demonstrating that the site can be readily accessed from the highway network.

6.4 Wider Highway Improvements: The predicted future operation of key local junctions has been considered in the context of the expected quantum of committed and planned development in the Burgess Hill area. Additional capacity improvements or mitigation measures will be explored and provided, if they are identified as being required through any future planning application or traffic assessment work in support of the Science & Technology Park.

6.5 Joint Working: Connect Consultants has been in initial dialogue with both WSCC Highways and Highways England. This TN has been prepared to inform pre-application consultation with WSCC Highways, with whom a meeting will be arranged as soon as possible after its submission.

6.6 In light of all of the above, the site is deliverable from a highways and transport perspective.

APPENDIX 1 – PRELIMINARY SITE ACCESS OPTIONS

A1

LEGEND

PROPOSED SITE BOUNDARY

EXISITING HIGHWAY BOUNDARY

rev.	amendment	by	date
-	-	-	-

connect CONSULTANTS

78 BROAD STREET, CHIPPING SODBURY, BRISTOL. BS37 6AG
Tel: 01454 320 220 Fax: 01454 320 099
Web: www.connect-consultants.com Email: bristol@connect-consultants.com

QUALITY MANAGEMENT SYSTEM ISO 9001 : 2015 FS 594947

client
DACORAR (SOUTHERN) LIMITED

project
PROPOSED DEVELOPMENT
GODDARDS GREEN SCIENCE PARK
GODDARDS GREEN

title
POSSIBLE A2300 LEFT IN / LEFT OUT
SITE ACCESS WITH
WSCC DUAL-CARRIAGEWAY SCHEME

scale	drawn by	checked by
1:1250	B.W.L	S.J.J

date	status
MAY 2019	INFORMATION

drawing number
18108 - SK190515.1

rev.

A1

LEGEND

PROPOSED SITE BOUNDARY

EXISITING HIGHWAY BOUNDARY

N

rev.	amendment	by	date
-	-	-	-

connect CONSULTANTS

78 BROAD STREET, CHIPPING SODBURY, BRISTOL. BS37 6AG
Tel: 01454 320 220 Fax: 01454 320 099
Web: www.connect-consultants.com Email: bristol@connect-consultants.com

client
DACORAR (SOUTHERN) LIMITED

project
PROPOSED DEVELOPMENT
GODDARDS GREEN SCIENCE PARK
GODDARDS GREEN

title
POSSIBLE ALL MOVEMENTS ROUNDABOUT
SITE ACCESS FROM A2300
WITH WSCC DUAL CARRIAGEWAY SCHEME

scale	drawn by	checked by
1:1250	B.W.L	S.J.J

date	status
MAY 2019	INFORMATION

drawing number 18108 - SK190515.2 rev. --

A1

LEGEND

PROPOSED SITE BOUNDARY

EXISITING HIGHWAY BOUNDARY

LAND BEYOND THE SITE IN CONTROL OF DACORAR SOUTHERN LIMITED

rev.	amendment	by	date
-	-	-	-

connect CONSULTANTS

78 BROAD STREET, CHIPPING SODBURY, BRISTOL. BS37 6AG
Tel: 01454 320 220 Fax: 01454 320 099
Web: www.connect-consultants.com Email: bristol@connect-consultants.com

QUALITY MANAGEMENT SYSTEM ISO 9001 : 2015 FS 594947

client
DACORAR (SOUTHERN) LIMITED

project
PROPOSED DEVELOPMENT
GODDARDS GREEN SCIENCE PARK
GODDARDS GREEN

title
POSSIBLE ALL MOVEMENTS
HIGH CAPACITY ROUNDABOUT ACCESS
FROM A2300 WITH WSCC
DUAL-CARRIAGEWAY SCHEME

scale	drawn by	checked by
1:1250	B.W.L	S.J.J

date	status
MAY 2019	INFORMATION

drawing number	rev.
18108 - SK190515.3	--

MID SUSSEX DISTRICT COUNCIL DRAFT SITE ALLOCATIONS DPD PUBLIC CONSULTATION

HIGHWAYS AND TRANSPORT TECHNICAL NOTE IN RESPECT OF LAND NORTH OF THE A2300, GODDARDS GREEN, BURGESS HILL, WEST SUSSEX

14TH NOVEMBER 2019

1.0 Introduction

1.1 Connect Consultants Limited is a firm of transport planning and highway design consultants that have been instructed by Glenbeigh Developments Ltd and Wortleford Trading Company Ltd in relation to the promotion of their land to the north of the A2300 at Goddards Green, West Sussex, for a future Science & Technology Park, known as Project Newton.

1.2 This is in the context of the Mid Sussex District Council Draft Site Allocations DPD (Regulation 18) Public Consultation, in which Mid Sussex District Council (MSDC) has identified the Project Newton site, on the north of the A2300, as the preferred location for a Science & Technology Park (S&TP).

1.3 This Technical Note (TN) has been prepared in response to the highways and transport evidence base published by MSDC alongside the Draft DPD, which draws on strategic traffic modelling undertaken on behalf of MSDC by SYSTRA.

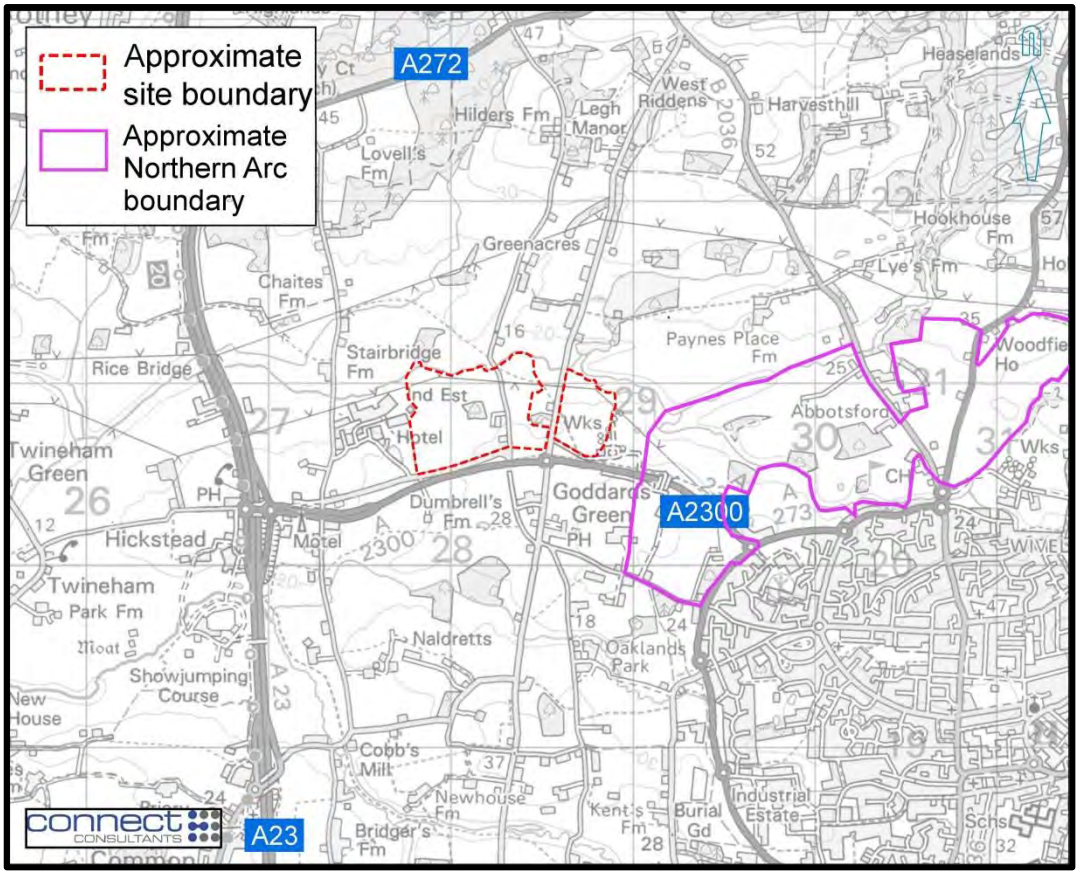
1.4 A subsequent TN will be prepared by Connect Consultants following the completion of additional strategic traffic modelling, which SYSTRA has been instructed to undertake on behalf of Project Newton.

2.0 Site Context

2.1 The proposal site is located to the north of Goddards Green, bounded by the A2300 on its southern side and bisected by Cuckfield Road on its eastern side. The A2300 provides a key road link to Burgess Hill to the east and A23 to the west. Cuckfield Road connects to neighbouring settlements to the north and south of the site.

2.2 The location of the proposal site, in the context of the urban area, is presented at Figure 2.1.

Figure 2.1 – Site Location Plan



Source: Promap

2.3 Figure 2.2 shows the area north and west of Burgess Hill, showing the approximate areas of local major planned/committed developments, along with the proposed A2300 Corridor Improvement Scheme.

Figure 2.2 – Proposal Site Context

Source: Google

3.0 Mid Sussex Transport Study

3.1 To support the Site Allocations DPD, Mid Sussex District Council commissioned SYSTRA to run a strategic highway model to inform and update the Mid Sussex Transport Study (MSTS). This identifies the impact of proposed site allocations on the strategic and local transport networks, as well as analysis on the proposed environmental and road safety impact, in compliance with National Planning Policy Guidance on transport evidence bases for plan-making.

3.2 The purpose of the transport study is to inform housing and employment site allocations and:

1) Assess the capacity performance at local road network links/junctions for proposed Site Allocations DPD development scenarios;

2) Inform the consideration of the sustainable transport options and assumptions to be incorporated into the Site Allocations DPD evidence base; and the Mid Sussex Infrastructure Delivery Plan;

3) Address the requirements of West Sussex County Council (WSCC) and Highways England (HE), both of whom aim for a sustainable approach to transport with the common objective of managing travel demand to minimise congestion, delays and adverse environmental / safety impact;

4) Be in general conformity with current Government planning practice guidance on transport evidence bases in plan making and in line with current best practice; and

5) Identify forecast changes in traffic flow on roads entering the Ashdown Forest, as a result of proposed housing and commercial development in Mid Sussex and provide results in a format that can be readily interpreted and used for the air quality (i.e. eutrophication by nitrogen deposition) and ecological interpretation work.

3.3 A total of eight future development scenarios were tested against a 2031 Reference Case Scenario including up-to-date highway infrastructure and development commitments and background growth, acting as a baseline for assessing the impact of proposed site allocation development.

Selection of S&TP North Site compared to South Site

3.4 Scenarios 2 and 3 of the MSTS were used for the comparative assessment of the northern and southern sites for the S&TP allocation, whereby the Project Newton site to the north of the A2300 is included in Scenario 2, and the site to the south of the A2300 is included in Scenario 3.

3.5 The MSTS focussed on Scenario 2c, which includes the upgrading of the A2300/Cuckfield Road roundabout to a 'hamburger' roundabout, which is one of the three proposed vehicular access options suggested in pre-application discussions between the Project Newton team and WSCC.

3.6 Scenario 2c and Scenario 3 are identical in terms of assumed future development and infrastructure, save for the location and scale of the S&TP, and the associated access arrangements to each site option.

3.7 If it is assumed that the scale and mix of uses of the S&TP is the same for each of the two site options, it is realistic and reasonable to expect that the traffic impact across the wider District area will be broadly the same for both options. The key differences between the two site locations will likely be realised at the more local junctions, were the effect of different routeing of the development traffic is more pronounced.

3.8 Notwithstanding the above, the scale and mix of uses of the S&TP differs between Scenario 2c and Scenario 3, with Scenario 2c assessing a larger quantum of S&TP development on the north site and Scenario 3 assessing a smaller quantum S&TP on the south site.

3.9 In traffic terms, the Scenario 2c S&TP (north site) has 2,936 vehicle trips in the AM peak hour and 2,440 vehicle trips in the PM peak hour.

3.10 The Scenario 3 S&TP (south site) has only 1,776 vehicle trips in the AM peak hour and 1,587 vehicle trips in the PM peak hour; 1,160 fewer vehicles than Scenario 2c in the AM peak, and 853 fewer vehicles in the PM peak.

3.11 In other words, the south site is assessed with c.35-40% less traffic than the north site.

3.12 Despite the significant difference in scale and traffic movements associated with the two options, the MSTS Scenarios 2c and 3 show that the Project Newton (north) site (Scenario 2c) will have less traffic impact than the south site.

3.13 The term 'traffic impact' is measured in this instance by the number of junctions at which the modelling predicts a 'severe' or 'significant' impact.

3.14 A 'severe' impact is defined by SYSTRA in this context as a junction with any approach arm experiencing either of the following:

- a junction with an increase in ratio of flow to capacity (RFC) of 10% or more to an RFC of 95% or more in any period in any Scenario; or
- an increase in average delay of one minute or more to an average delay of two minutes or more in any period in any Scenario.

3.15 A 'significant' impact is defined by SYSTRA as a junction with any approach arm experiencing the following:

- a junction with an increase in ratio of flow to capacity (RFC) of 5% or more to an RFC of 85% or more in any period in any Scenario.

3.16 The overarching conclusion is that while Scenario 2c results in 9 'significant' impacts compared to 7 in Scenario 3, Scenario 2c has only 11 'severe' impacts compared 12 'severe' impacts in Scenario 3. This distinction contributed to the selection of the northern site as the preferred site.

3.17 As the north and south site options were not assessed on a like-for-like basis, it is probable that the results of the traffic impact comparison are skewed in favour of the smaller development quantum of the south site, and it is therefore likely that a true like-for-like assessment would demonstrate that there is a greater difference between the two, in favour of the Project Newton site.

3.18 Connect Consultants has analysed the SYSTRA modelling reports and the associated outputs to better understand the differences in modelled junction performance between the two scenarios with the different S&TP locations.

3.19 The results of our analysis are summarised in a table in Appendix A, which sets out a list of the modelled junctions at which there are 'significant' and 'severe' impacts in either Scenario 2c (assessing the S&TP north site) or Scenario 3 (assessing the S&TP south site).

3.20 As would be expected, the impact at many junctions is the same for both scenarios, but for those junctions at which there are differences between the two scenarios, the table includes notes and observations about the detailed elements of the modelling results which lead to the reported differences.

3.21 There are five junctions at which the northern site is shown to have a greater impact than the southern site, of which three are 'significant' and two are 'severe'.

3.22 The details of the modelling results at those specific junctions reveal that Scenario 2c is reported as being in a worse-performing category than Scenario 3 due to only very minor differences in the modelling output.

3.23 For example, at the B2028/B2037 Copthorne junction, Scenario 2c has just a 1% higher RFC on one approach than Scenario 3, which pushes Scenario 2c over the threshold from 'OK' to 'significant', despite there being no associated increase in queues or delay.

3.24 In another example, at the A23/A281 eastbound on-slip junction, Scenario 2c has delay that is 45 seconds longer than Scenario 3, which pushes Scenario 2c from 'significant' to 'severe', but the equivalent queue length is only three vehicles compared to two vehicles in Scenario 3.

3.25 Whilst only five very small differences in junction performance have led to Scenario 2c being allocated a 'worse' category than Scenario 3, it must be borne in mind that this is on the basis of Scenario 2c assessing a significantly greater amount of development traffic.

3.26 In other words, even though Scenario 2c has significantly more development traffic than Scenario 3, its modelled traffic performance is not commensurately more severe than that of Scenario 3.

3.27 The Project Newton team has commissioned SYSTRA to undertake an additional round of strategic traffic modelling to include a more realistic like-for-like assessment, in which the two potential locations of the S&TP are compared using the same scale and mix of uses in both locations; the only difference being the sites' access arrangements and the associated difference in traffic distribution.

3.28 It is likely that the additional modelling will show a greater difference in traffic impact in favour of the Project Newton site.

3.29 The additional modelling will also provide the predicted S&TP traffic flows and distribution, based on the most up-to-date MSTS development assumptions.

3.30 A subsequent TN will be prepared and submitted once the additional modelling has been completed. The TN will set out the results of the like-for-like traffic impact comparison, and will also include a junction capacity assessment of the proposed Project Newton access junction.

Assessment of the Refined Scenarios Incorporating the Project Newton Site.

3.31 The MSTS Scenarios 7 and 8 represent the assessment of the refined, most up-to-date scenarios which have informed the Draft Site Allocations DPD. Both of these scenarios include the Project Newton site to the north of the A2300 as the preferred S&TP allocation.

3.32 Both Scenarios 7 and 8 include the same assumptions about the S&TP in terms of the location, scale, mix of uses, and number of traffic movements; the differences between the two scenarios are associated with potential residential development sites within the District.

3.33 Scenarios 7 and 8 are assessed initially without any traffic mitigation beyond the planned and committed improvements included in the Reference Case; an additional 'with mitigation' assessment has been undertaken of each of Scenarios 7 and 8, which tests the ability of various mitigation measures to remove 'severe' impacts at junctions.

Without Mitigation

3.34 The SYSTRA modelling report "*Transport Impact of Scenarios 7 and 8*" notes that both scenarios generate significant additional traffic, notably on the A2300 and surrounding roads, and the A23/A2300 junction.

3.35 This is attributed by SYSTRA to the traffic associated with the S&TP, and the recommendation is made by SYSTRA that mitigation measures should focus on the impact at the A23 / A2300 junction.

3.36 Scenarios 7 and 8 are noted to have similar levels of impact on the section of the A23 between M23 junction 9 and the A23 / A273 junction at Pyecombe.

3.37 The traffic impact on the A23 is noted as being tidal, with the southbound carriageway being impacted in the AM and the northbound carriageway in the PM. Again, this is attributed by SYSTRA to being largely due to traffic commuting to/from the S&TP.

3.38 A total of eight junctions are predicted to have 'severe' impacts in both Scenarios 7 and 8:

- A272 / B2036, Ansty
- A23 / A2300 Southbound On-Slip, Burgess Hill
- A23 / A2300 Eastern Roundabout, Burgess Hill
- A2300 / Northern Arc Spine Road, Burgess Hill
- Junction Road / B2113, Burgess Hill
- A273 / B2116 (Stonepound), Hassocks
- A23 / A281 Eastbound On-Slip, Pyecombe
- Valebridge Road / Junction Road / Leylands Road, Burgess Hill

With Mitigation

3.39 The SYSTRA report focusses initially on sustainable measures as the most effective form of mitigating highway impacts. These sustainable measures and their effect are reflected in the modelling in terms of percentage reductions of the traffic associated with specific development sites.

3.40 The proposed sustainable mitigation for the S&TP is assumed to reduce car trips to/from the site by 3%, via three measures identified in the SYSTRA modelling report as:

- Improved PT interchange Burgess Hill
- Bus Shelters within development with RTI (Real Time Information)
- Bus Services to Burgess Hill and station

3.41 Physical highway mitigation measures are subsequently proposed and assessed in the modelling to directly address the 'severe' impacts which are not resolved by the sustainable mitigation measures.

3.42 The physical highway mitigation measures closest to and most relevant to the S&TP site are proposed as:

- A23 / A2300 southbound on-slip: Improvements to slip road and merge, but SYSTRA note that this is not included in the modelling "*due to limited options*".
- A23 / A2300 eastern roundabout: Free flow for A23 southbound off-slip to A2300 and partial signalisation.
- A2300 / Cuckfield Road: 'Hamburger' roundabout as per the preferred option for the S&TP access junction, however, this is included in the 'without mitigation' scenario.

3.43 The results of the 'with mitigation' assessment show that the number of 'severe' impacts is reduced from eight to just two junctions:

- A272 / B2036, Ansty
- A23 / A2300 southbound on-slip, Burgess Hill

3.44 It is noted in the SYSTRA commentary that the A23 / A2300 southbound on-slip merge was not addressed by physical highway mitigation due to limited options without major works on the A23, rather, the mitigation focussed on releasing a bottleneck at the A23 / A2300 junction eastern roundabout. The releasing of the bottleneck is noted to contribute to the 'severe' impact at the southbound on-slip merge, which is predicted predominantly in the PM peak hour.

3.45 Of the predicted 650 vehicles using the southbound on-slip in the PM peak hour, 175 are from the S&TP.

3.46 SYSTRA notes that a 10% reduction in the predicted future traffic (i.e. 65 fewer) on the southbound on-slip could remove the 'severe' impact.

4.0 Commentary in Support of the Project Newton S&TP

4.1 The SYSTRA modelling of Scenarios 7 and 8 assumes that the three sustainable mitigation measures, as proposed in the modelling, will reduce S&TP traffic by 3%.

4.2 As set out in the Project Newton Positioning Statement, which accompanies the Project Newton Representation, the Project Newton Sustainable Access Strategy is far broader and more comprehensive than the three measures assumed in the modelling, and is likely to achieve a significantly greater mode shift towards sustainable travel than the 3% assumed in the SYSTRA modelling. It is envisaged at mode-shift of at least 10% will be realised.

4.3 The western parts of the adjacent Northern Arc development site are within walking distance of the Project Newton site, and the Project Newton masterplan includes numerous links and connections, which means that a significant area of residential land, as well as bus stops within the Northern Arc development, will be within walking distance.

4.4 There are also links to the adjoining Bolney Grange Business Park, providing additional non-car permeability with the surrounding land uses.

4.5 As part of the A2300 Corridor Improvement Scheme, a footway / cycleway will be provided along the route's northern side between the A2300 / A23 interchange and Burgess Hill. The route passes the Project Newton site's southern boundary, thereby providing the site with a good quality, attractive, local and longer-distance pedestrian/cycle route.

4.6 The Project Newton site is located within walking distance of the nearby Hub employment development and its associated sustainable transport links, including a pedestrian and cycle route to Burgess Hill via Gatehouse Lane, and the provision of a signal-controlled pedestrian and cycle crossing over Jane Murray Way in Burgess Hill, where it intersects with Gate House Lane. These links will provide a safe, low-trafficked connection between the Project Newton site and Burgess Hill.

4.7 There is a significant local population located within cycling distance of the site including most of Burgess Hill, Hurstpierpoint, Sayers Common, Ansty, and Goddards Green. The entire Northern Arc site is also within cycling distance.

4.8 Connect Consultants is engaged in ongoing discussions with Metrobus, the local bus operator, to explore opportunities to provide an exemplar 'superhub' immediately adjacent to the Project Newton site's junction with the A2300, which would include bus facilities along with flexible working space, a café/restaurant, cycle shop/repair facility, taxi pickup/drop off point etc., so that it would be a vibrant work and meeting place as well as the focus for sustainable travel to and from the site.

4.9 The superhub would be close enough to the Northern Arc development for there to be a synergy between the public transport strategies for the two developments.

4.10 Metrobus has suggested that as well as enhancing existing services near the site, it would be possible to introduce a new Fastway service to build on the success of the 10, 20 and 100 services, to provide a new service between Gatwick, Crawley, Burgess Hill and Brighton.

4.11 In this way, the Project Newton Sustainable Access Strategy will provide additional benefits to the wider population which would achieve a wider-reaching regional mode-shift than just the S&TP users.

4.12 As such, it is entirely feasible that the 10% reduction of predicted future traffic using the A23 / A2300 southbound on-slip, as cited by SYSTRA, will be realised in the advent of the Project Newton S&TP.

4.13 In addition to the Sustainable Access Strategy, we are in dialogue with Highways England (HE) with regard to their aspirations for future large-scale improvements to the A23 / A2300 interchange. As the proposals for the Science & Technology Park progress, dialogue with HE and WSCC will continue in order to identify whether any additional improvements or mitigation will be required in this location.

4.14 The Project Newton site will be delivered through a phasing strategy; experience suggests that five phases comprising approximately 20,000sq.m will be delivered over a period of ten years.

4.15 It is acknowledged that the timing and scale of the Project Newton phases will be dependent upon the delivery of third-party infrastructure, in particular the delivery of the planned A2300 Corridor Improvement Scheme, and also the mechanisms and ability to deliver the public transport strategy.

4.16 The Project Newton Phasing Strategy will incorporate flexibility in terms of scale and timing of each phase, in conjunction with traffic modelling and transport assessment, and through ongoing engagement with WSCC, Highways England, and Metrobus, to ensure that each phase can be acceptably accommodated and is appropriately mitigated.

5.0 Conclusions

5.1 Mid Sussex District Council commissioned SYSTRA to run a strategic highway model to inform and update the Mid Sussex Transport Study (MSTS) to support the Site Allocations DPD.

5.2 MSTS Scenarios 2c and 3 were used for the comparative assessment of the northern and southern sites for the S&TP allocation, whereby the Project Newton site to the north of the A2300 is included in Scenario 2c, and the site to the south of the A2300 is included in Scenario 3.

5.3 The south site is assessed with c.35-40% less traffic than the north site.

5.4 Despite the larger quantum of S&TP development assessed in Scenario 2c, the modelling predicts that the Project Newton site will have fewer severe impacts than the southern site, and at some of the junctions were Scenario 2c is shown to be worse than Scenario 3, the categorisation is based on negligible differences in performance.

5.5 Project Newton has commissioned SYSTRA to undertake an additional round of strategic traffic modelling to include a more realistic like-for-like assessment, which will likely show a greater difference in traffic impact in favour of the Project Newton site.

5.6 A subsequent TN will be prepared and submitted once the additional modelling has been completed.

5.7 MSTS Scenarios 7 and 8 represent the assessment of the refined, most up-to-date scenarios which have informed the Draft Site Allocations DPD. Both of these scenarios include the Project Newton site to the north of the A2300 as the preferred S&TP allocation.

5.8 The SYSTRA modelling assumes that the three sustainable mitigation measures, as proposed in the modelling, will reduce S&TP traffic by 3%.

5.9 The results of the 'with mitigation' assessment show that the number of 'severe' impacts is reduced from eight to just two junctions:

- A272 / B2036, Ansty
- A23 / A2300 southbound on-slip, Burgess Hill

5.10 SYSTRA notes that a 10% reduction in the predicted future traffic (i.e. 65 fewer vehicles) on the A23/A2300 southbound on-slip could remove the 'severe' impact.

5.11 The proposed Project Newton Sustainable Access Strategy is far broader than the three measures assumed in the modelling, and will provide additional benefits to the wider population which would achieve a wider-reaching regional mode-shift than just the S&TP users.

5.12 By virtue of the site's proximity to the Northern Arc development, there will be a synergy between the public transport strategies for the two developments.

5.13 As such, it is entirely feasible that the 10% reduction of predicted future traffic using the A23 / A2300 southbound on-slip, as cited by SYSTRA, will be realised in the advent of the Project Newton S&TP.

5.14 The Project Newton Phasing Strategy will incorporate flexibility in terms of scale and timing of each phase, in conjunction with traffic modelling and transport assessment, and through ongoing engagement with WSCC, Highways England, and Metrobus, to ensure that each phase can be acceptably accommodated and is appropriately mitigated.

5.15 In light of all of the above, there is no doubt that the Project Newton site should be allocated as the preferred S&TP site.

APPENDIX A – ANALYSIS OF MSTS JUNCTION IMPACT RESULTS

List of modelled junctions at which there are 'significant' and 'severe' impacts in either Scenario 2c (assessing the S&TP north site) or Scenario 3 (assessing the S&TP south site)

Junction ID	Area	Name	Scenario 2c Impact	Scenario 3 Impact	Observations on the differences in results between the two scenarios
N1	Copthorne	A264/A2220 Copthorne	Significant	Significant	
N4	Copthorne	B2028/B2037 Copthorne	Significant	OK	The only difference being that Scenario 2c shows a total of 1849 vehicles through the junction in the PM peak hour, which is only 12 vehicles more than in Scenario 3 (even though Scenario 3 generates 853 fewer vehicles in the PM peak than Scenario 2c). This difference of 12 vehicles results in a difference of only 1% of the RFC on the B2037 (west) approach, and no difference in the predicted queue lengths or delay at the junction. The 1% difference places Scenario 2c into the 'significant' category'.
N7	Crawley Down	B2028 Turners Hill Road / Wallage Lane	Severe	Severe	
N8	Turners Hill	B2110/B2028 Turners Hill	OK	Severe	Despite Scenario 2c generating c.35-40% more traffic than Scenario 3.
N10	West Hoathly	Selsfield Road/Vowels Lane	Significant	Significant	
C1	Handcross	B2114 Junction, Handcross	Significant	OK	The only difference being that Scenario 2c shows a total of 1794 vehicles through the junction in the AM peak hour, which is only 51 vehicles more than in Scenario 3 (even though Scenario 3 generates 1160 fewer vehicles in the AM peak than Scenario 2c). This difference of 51 vehicles results in a difference of only 7% of the RFC on the B2110 (west) approach (79% in Scenario 3; 86% in Scenario 2c), and no difference in the predicted queue lengths or delay at the junction. The 7% difference in RFC places Scenario 2c into the 'significant' category'.
C3	Slough Green	B2115 Junction, Slough Green	Significant	Significant	
C4	Haywards Heath	Borde Hill Lane/Copyhold Lane	Severe	Severe	
C5	Haywards Heath	B2114/B2036 Whitemans Green	Significant	Significant	
C6	Haywards Heath	B2036/Ardingly Rd, Whitemans Green	Severe	Severe	
C7	Haywards Heath	A272/B2036	Severe	Severe	
C9	Cowfold	A281 south junction, Cowfold	OK	Significant	Despite Scenario 2c generating c.35-40% more traffic than Scenario 3.
C10	Bolney	A23/A272 Bolney Road	Severe	Severe	
C11	North Chailey	A272/A275 North Chailey	Severe	Severe	
C12	Haywards Heath	A273/Isaacs Lane/Traustein Way	Significant	OK	The difference between the two is that Scenario 2c shows a total of 2832 vehicles through the junction in the PM peak hour, which is 137 vehicles more than in Scenario 3 (even though Scenario 3 generates 853 fewer vehicles in the PM peak than Scenario 2c). This difference of 137 vehicles results in Scenario 2c showing the PM peak RFC on the A273 (w) approach which is 14% higher than Scenario 3, which equates to queue lengths which are only 1 vehicle longer, and delay which is only 1 second longer. The increase in RFC places Scenario 2c into the 'significant' category.
S1	Burgess Hill	A23/A2300 southboung on-slip	OK	Severe	Despite Scenario 2c generating c.35-40% more traffic than Scenario 3.
S2	Burgess Hill	A23/A2300 eastern roundabout	Severe	Severe	
S3	Burgess Hill	A2300/Cuckfield Road	Significant	Severe	Despite Scenario 2c generating c.35-40% more traffic than Scenario 3.
S6	Burgess Hill	Junction Road/B2113, Burgess Hill	Severe	OK	The difference between the two is that Scenario 2c shows a total of 1328 vehicles through the junction in the AM peak hour, which is only 11 vehicles more than in Scenario 3 (even though Scenario 3 generates 1160 fewer vehicles in the AM peak than Scenario 2c). This difference of only 11 vehicles results in Scenario 2c showing AM peak delay on the B2113 (s) approach which is 55 seconds longer than Scenario 3, queue lengths which are 2 vehicles longer, and RFC 3% higher. The increase in delay places
S7	Hurstpierpoint	B2117/B2116 Hurstpierpoint	Severe	Severe	
S8	Hassocks	A273/B2116 Hassocks (Stonepound)	Severe	Severe	
S9	Pyecombe	A23/A281 eastbound on-slip	Severe	Significant	Scenario 2c shows a total of 4324 vehicles through the junction in the PM peak hour, which is 20 vehicles fewer than in Scenario 3 (even though Scenario 2c generates 853 more vehicles in the PM peak than Scenario 3). Despite Scenario 2c having fewer vehicles through this junction than in Scenario 3, the results show that in Scenario 2c the RFC is 3% higher and the delay is 45 seconds longer on the A23 (southbound) than in Scenario 3. Despite this equating to queue lengths only one vehicle longer in Scenario 2c than in Scenario 3, it places Scenario 2c in the 'severe' category.
S10	Ditchling	B2112/B2116 Ditchling	Significant	Significant	

APPENDIX II

HDR | Bradbrook Consulting

Strategic Drainage and Watercourse Assessment

Project Newton -
Proposed Science and Technology Park, Goddards Green

Date:	November 2019	**Issue:**	2
Reference:	19-109_R01	**Status:**	Planning
Prepared by:	PWE	**Date:**	November 2019
Authorised by:	NRB	**Date:**	November 2019
Issuing office:	BKM		

DOCUMENT CONTROL

Issue	Date	Status	BC Author	BC Approval	Notes
V1	15/11/2019	draft	15/11/2019_PWE	15/11/2019_RLM	-
V2	19/11/2019	planning	19/11/2019_PWE	19/11/2019_RLM	Minor updates

1.0 INTRODUCTION AND SITE DESCRIPTION

This report has been produced for Glenbeigh Developments and Dacaror Southern Ltd to assess current and potential future hydrological conditions at the site of a proposed Science and Technology Park (STP) in the Goddards Green area of West Sussex. The site is located to the north of the A2300, either side of Cuckfield Road, at indicative post code BN6 9HG and centred on OS grid reference TQ 284 208.

It comprises three land parcels which at present predominantly comprise agricultural fields with small clusters of mature / established trees and field boundaries defined by hedgerows. It covers a total area of about 49 hectares and at its maximum measures just over 1000 m east-west by about 570 m north-south.

Several ponds are situated in the central portion of the site, and overhead power lines supported by steel pylons cross its northern sector.

The STP is understood to comprise a mix of building types covering B1a office, B1b R&D and B1c light industrial uses. These would be located in the central and western of the three land parcels. The eastern-most land parcel, located to the east of Cuckfield Road, is not expected to be occupied by new buildings but may be developed for a solar energy farm.

2.0 PRESENT DAY TOPOGRAPHY AND HYDROLOGY

Present day ground levels fall from a high of about 22 mAOD on the southern boundary to a low of about 13 mAOD on the northern boundary. The River Adur flows from east to west along this northern boundary. Enclosed in Appendix A is Bradbrook drawing 600/P1 illustrating existing site contours and levels, based on publicly available LiDAR data.

It is concluded that a significant proportion of surface water runoff currently flows overland into the River Adur, which effectively lies in a valley with land rising again to the north. It is also possible that the river receives a degree of baseflow generated from infiltration into the site's underlying soils – parts of the site are mapped to be underlain by a Secondary aquifer associated with river terrace deposits.

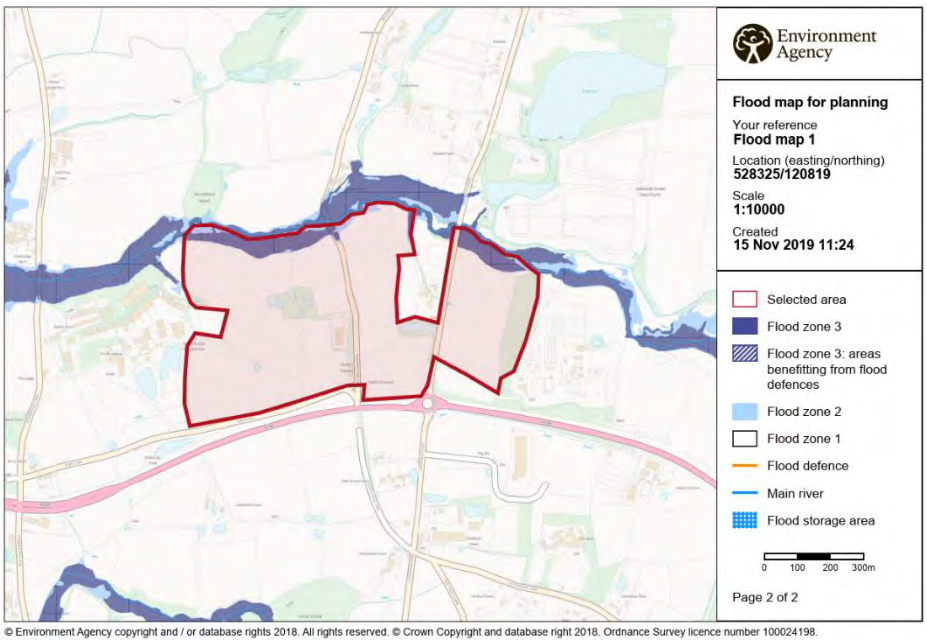
The underlying solid geology of the Weald Clay Formation is an Unproductive Stratum (a non-aquifer). This lithology is broadly described as comprising dark grey thinly-bedded mudstones. A thin ribbon of alluvium overlies the Weald Clay at the northern edge of the site, parallel with the River Adur.

The ponds situated in the central part of the site, which are proposed to be retained within the new development masterplan, are also believed to be fed by surface runoff. A ditch bisects the site from south to north, directing runoff into the ponds and also linking pond outflow into the River Adur.

3.0 FLOOD RISK STATUS

Current Environment Agency 'flood map for planning' records indicate the River Adur causes flooding along a narrow margin of the site parallel with the watercourse. Flooding is indicated to encroach a maximum of about 60 m onto the northern edge of the site. The map identifies most of this to be defined as Flood Zone 3 – meaning there is a greater than 1 in 100 probability of river flooding in this location in any year. Small areas are located within Zone 2, which can be considered to be at 'moderate' risk – meaning between 1 in 100 and 1 in 1000 annual probability of flooding from the river.

The great majority of the site is therefore outside Flood Zones 2 and 3 and is defined as being located within Flood Zone 1. This designation applies to land at low risk of flooding, meaning less than 1 in 1000 annual probability:



Environment Agency flood map for planning (November 2019).

Bradbrook Consulting has also obtained Environment Agency 'Product 4' flood risk data applicable to the site (enclosed as Appendix B). This provides details (where available) regarding flood zones, defences and storage areas, areas benefiting from defences, statutory main river designations, historic flood event outlines and data from EA computer river models.

The data provides modelled flood levels for various return period events, for a number of node points situated predominantly along the site's northern boundary.

Where parts of the site are situated within the modelled flood plain, development levels will be set taking this data into account to ensure no loss of flood storage capacity within the overall site demise. At present the development masterplan envisages such areas to be used for car parking, i.e. lower sensitivity land use. It is proposed that where possible ground levels will not be raised, so that land is not lifted out of the pre-development flood zone. However where changes in ground level do become necessary, level-for-level flood compensation will be provided. In this way there will be no change in the fluvial flood risk profile at either the site or at neighbouring properties.

4.0 SURFACE WATER DRAINAGE STRATEGY

As noted above, new build development is currently proposed for the central and western land parcel only. These cover a combined plan area of 36.4 hectares. The following greenfield (i.e. pre-development) runoff rates have been calculated:

	1 in 1 year storm	1 in 100 year storm
Runoff rate per hectare	4.8 l/s	17.9 l/s
Total runoff (36.4 hectare site)	174.7 l/s	651.6 l/s

In its developed condition a significant proportion of the site will be surfaced with impermeable ground cover, increasing the rate of surface water runoff. Engineered systems will therefore be introduced to ensure runoff from the new development does not exceed greenfield rates, thereby mitigating any attendant risk of surface water flooding. This runoff will be directed into the River Adur at the applicable greenfield rates, and central to this will be the adoption of Sustainable Drainage Systems (SuDS). SuDS aim to store surface water at source, decreasing flow rates to watercourses and by improving water quality.

The SuDS components to be utilised will include both soft and hard-engineered features, and shall act at various scales. The overall system will include regional controls, such as attenuation ponds, attenuation swales and underground storage. Consideration will also be given to source control measures such as green roofs and bioretention systems. Infiltration devices (soakaways) will also be adopted if ground conditions allow.

Similarly, rainwater harvesting systems will be installed where appropriate to allow the efficient collection, storage and re-use of non-potable water.

The following design principles will apply:

- SuDS shall be designed in accordance with standard industry guidance.
- SuDS are to be provided within each development package, to initiate the management of surface water as close to source as possible.
- SuDS are to be integrated into infrastructure corridors and strategic open spaces designated in the Masterplan.
- SuDS are to be designed sensitively to augment the landscape and wherever possible provide biodiversity and amenity benefits.
- SuDS are to be designed to allow for effective maintenance. All components shall be located where they will be accessible to a responsible management body.

Space for SuDS components has been allocated into the masterplan, specifically in relation to the existing ponds – which are to be retained in the new development. These ponds will be managed sensitively to provide amenity and biodiversity benefits, as well as attenuation capacity.

Permeable surfacing may be used where appropriate on footpaths, cycle paths, private access roads and parking areas. When the permeable surfacing is paved, water passes through the gaps in between the paving blocks or through the blocks themselves. If the surface is unpaved, water passes through the surfacing material. Unpaved permeable surfaces could take the form of filter strips. These may be located alongside impermeable surfaces, from which runoff is discharged. Once it has filtered through the surface, water is temporarily stored in the sub-base and gradually released to the downstream system.

5.0 DRAINAGE CONVEYANCE

It will be necessary to collect and transport surface water from its source to the ultimate point of discharge into the River Adur using a variety of conveyance features. Appropriate SuDS components used for conveyance may also contribute to source control, attenuation and water quality.

Swales are the preferred option for water conveyance due to their provision of biodiversity and amenity benefits. However swales would only be used where they can be integrated with the landscape design and their character will suit the surroundings, with soft, natural features.

They will provide a beneficial contribution to a biodiverse environment through being planted with a variety of vegetation.

Swales designed primarily for conveyance will have fewer check dams and shorter, smoother vegetation than attenuation swales. They will be trapezoidal in profile for good hydraulic performance and the efficient passage of water.

Due to their open, linear features, crossing points are required where they intersect with access routes, which will require careful design for future maintenance. Therefore swales are better suited to locations where fewer crossing points would be required, such as alongside buffer zones or perimeter roads encircling a development plot.

6.0 DESIGN FOR EXCEEDANCE

The drainage systems will be designed to operate without flooding in design rainfall events up to the 1 in 30 year return period. Design events beyond this standard, up to the 1 in 100 year plus 30% climate change return period, will be designed to ensure that surface water exceedance ponding is contained and managed within the site.

Flow control devices or capacity-managed conveyance features may be strategically positioned throughout the drainage network in conjunction with overflows, to encourage surface water to leave the drainage network at designated positions, and consequently be managed by exceedance features.

Exceedance flow routes will be designed for all systems which are designed to flood in higher return period design events. Areas designed for exceedance storage will be clearly defined and will not be located within the fluvial floodplain, as this area is required to accommodate floodwater from the River Adur.

7.0 FOUL DRAINAGE

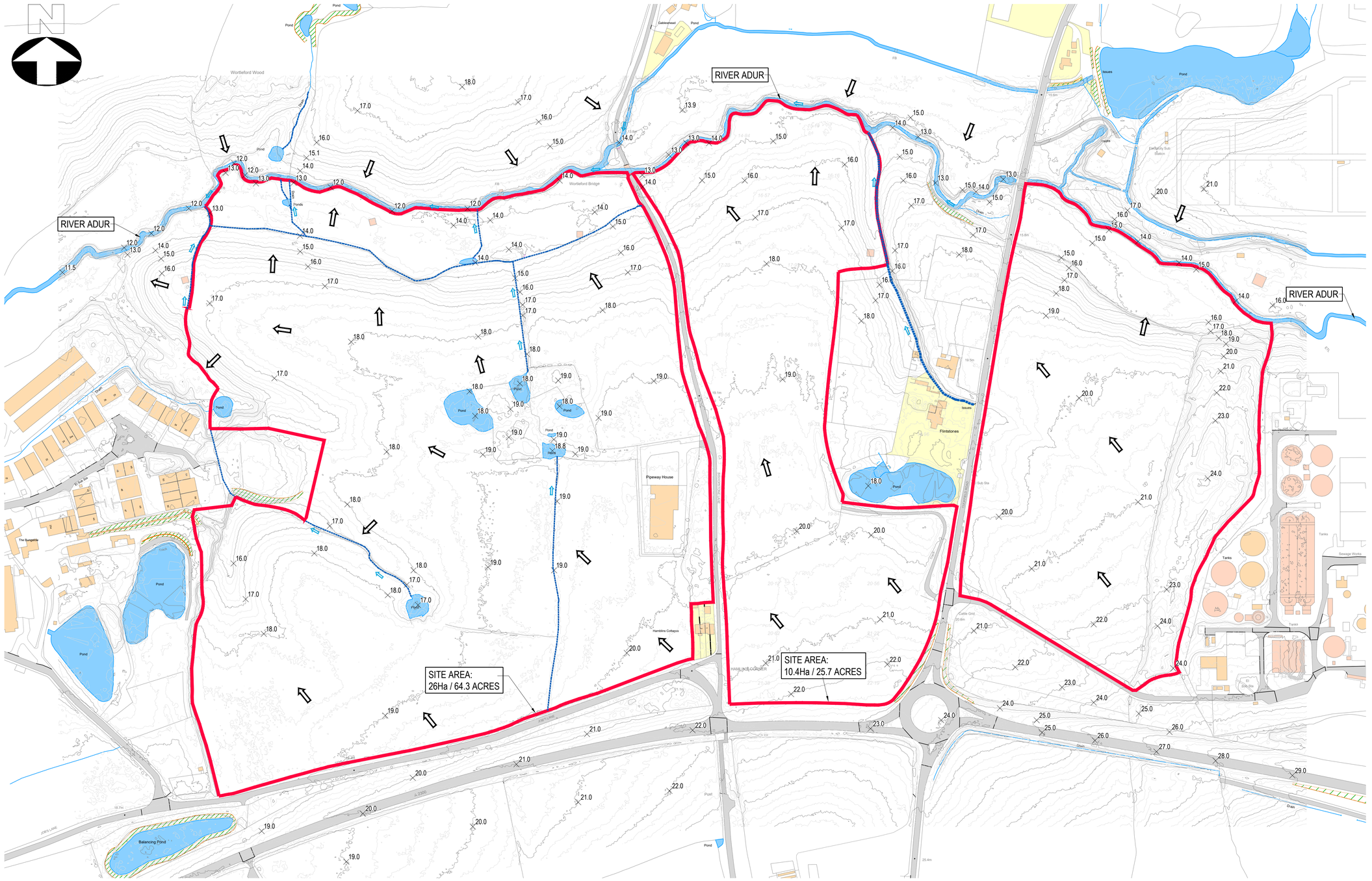
Foul water drainage is proposed to be directed into the Southern Water public sewer network and into the treatment works situated immediately beyond the site's eastern boundary.

A pre-development enquiry will be submitted to Southern Water to agree the strategy at the earliest opportunity.

It is understood that a pumped foul sewer currently crosses the site; any associated easement will need to be incorporated into the masterplan layout.

APPENDIX A

EXISTING SITE CONTOURS AND LEVELS



NOTES:

1. SITE CONTOURS AND LEVELS REPRODUCED FROM LiDAR DATA RECOVERED FROM ONLINE RESOURCES. ALL LEVELS TO BE VERIFIED BY A ONSITE TOPOGRAPHY SURVEY.
2. SITE FEATURES INC. WATERCOURSES CAPTURED FROM OS PLAN. SITE FEATURES TO BE VERIFIED BY ONSITE TOPOGRAPHY SURVEY.

Rev.	Tech	Date	Description
P1	NDH	15.11.19	FIRST ISSUE.

Bradbrook Consulting

Berkhamsted Office
Bourne House
Prince Edward Street
Berkhamsted
Herts, HP4 3EZ
United Kingdom

T: +44 (0)20 8669 1903
E: info@bradbrookconsulting.com
W: www.bradbrookconsulting.com

Client: glenbeigh DEVELOPMENTS LTD

Project Title:
PROJECT NEWTON
BURGESS HILL

Drawing Title:
EXISTING SITE CONTOURS AND LEVELS

Purpose of Issue:
Information ○ Preliminary ● Approval ○ Tender ○ Construction ○ Record Copy ○

First Issue Date	Drawn By	Scale	Checked
Nov 2019	NDH	1:2000 @ A1	PWE

Drawing Number	Rev.
19-109D / 600	P1

APPENDIX B

EA PRODUCT 4 FLOOD DATA

Paul Edwards
Bradbrook Consulting
240 Blackfriars Road
London
SE1 8NW

Our ref: SSD147169
Date: 06/11/2019

Dear Paul Edwards,

Enquiry Regarding Product 4 for Flood Risk Assessment for Land East And West Of Cuckfield Road And North Of The A2300, Goddards Green, West Sussex, BN6 9HG.

Thank you for your enquiry which was received on 15 October 2019.

We respond to requests under the Freedom of Information Act 2000 and Environmental Information Regulations 2004. The information is attached.

The information on Flood Zones in the area relating to this address is as follows:

The site is in an area located within Flood Zone 1,2 and 3 as shown on our Flood Map for Planning (Rivers and Sea).

Note - This information relates to the area that the above named property is in and is not specific to the property itself as it is influenced by factors such as the height of door steps, air bricks or the height of surrounding walls. We do not have access to this information and is not currently used in our flood modelling.

Flood Zone definitions can be found at www.gov.uk/guidance/flood-risk-and-coastal-change#Table-1-Flood-Zones

Flood Defences
There are no formal raised flood defences in the vicinity of the site.

Model Information
The model used was the Upper Adur (Eastern Branch) Model Maintenance which was completed by Hyder Consulting in 2011 with updated climate change runs completed by JBA Consulting in 2016.

Flood History
We hold no record of previous flooding events affecting this site.

Please note our records are not comprehensive and may not include all events. I recommend contacting the Lead Local Flood Authority, **West Sussex County Council** or the Local Authority, **Mid Sussex District Council** for a more comprehensive flood history check.

FRA advisory text

Name	Product 4
Description	Detailed Flood Risk Assessment Map for **Land East And West Of Cuckfield Road And North Of The A2300, Goddards Green, West Sussex, BN6 9HG.**
Licence	Open Government Licence
Information Warning - OS background mapping	*The mapping of features provided as a background in this product is © Ordnance Survey. It is provided to give context to this product. The Open Government Licence does not apply to this background mapping. You are granted a non-exclusive, royalty free, revocable licence solely to view the Licensed Data for non-commercial purposes for the period during which the Environment Agency makes it available. You are not permitted to copy, sub-license, distribute, sell or otherwise make available the Licensed Data to third parties in any form. Third party rights to enforce the terms of this licence shall be reserved to OS.*
Attribution	Contains Environment Agency information © Environment Agency and/or database rights. Contains Ordnance Survey data © Crown copyright 2018 Ordnance Survey 100024198.

Data Available Online

Many of our flood datasets are available online:

- Flood Map For Planning (Flood Zone 2, Flood Zone 3 ,Flood Storage Areas, Flood Defences, Areas Benefiting from Defences)
- Risk of Flooding from Rivers and Sea
- Historic Flood Map
- Current Flood Warnings

Please get in touch if you have any further queries or contact us within two months if you'd like us to review the information we have sent.

Yours sincerely,

Tom Lamboo
FCRM Officer, PSO West Sussex | Solent and South Downs
Environment Agency | Guildbourne House, Chatsworth Road, Worthing, West Sussex, BN11 1LD

Flood Map for Planning (Rivers and Sea). Centred BN6 9HG. Created 06/11/2019.

Environment Agency

1: 10,000

0 Metres 250

N W E S

Flood Map for Planning (Rivers & Sea)

- Defences
- Flood Storage Areas
- Areas benefiting from flood defences
- Flood Zone 3
- Flood Zone 2

Flood Map Areas (assuming no defences)

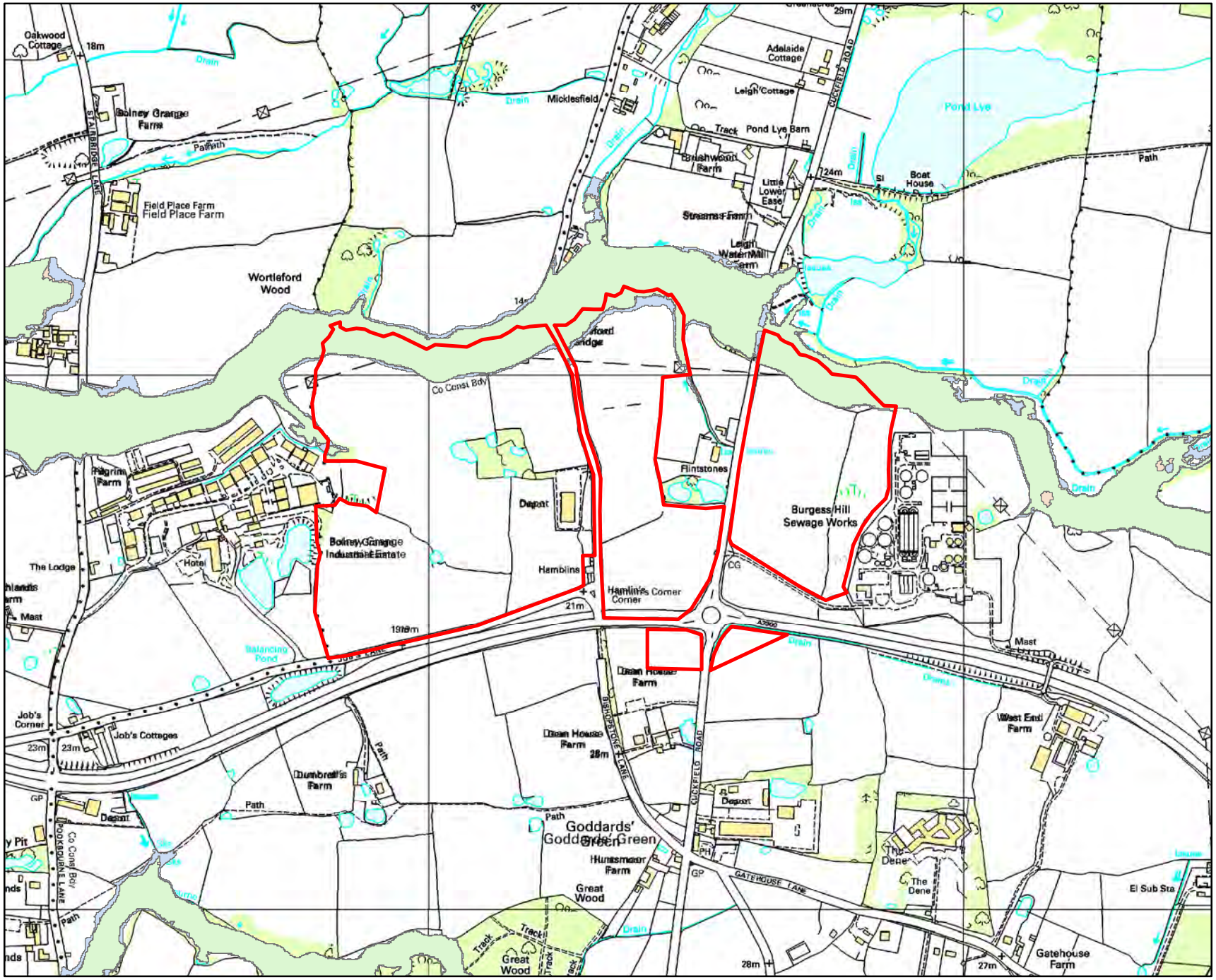
Flood Zone 3 shows the area that could be affected by flooding:

- from the sea with a 1 in 200 or greater chance of happening each year
- or from a river with a 1 in 100 or greater chance of happening each year.

Flood Zone 2 shows the extent of an extreme flood from rivers or the sea with up to a 1 in 1000 chance of occuring each year.

Contact Us: National Customer Contact Centre, PO Box 544, Rotherham, S60 1BY. Tel: 03708 506 506 (Mon-Fri 8-6). Email: enquiries@environment-agency.gov.uk

Modelled Flood Outlines Plus Climate Change Allowences (Undefended Fluvial). Centred BN6 9HG.
Created 06/11/2019.



N

Environment Agency

Legend

- Site_Boundary
- 1% AEP Plus Climate Change (35%) (Undefended Fluvial)
- 1% AEP Plus Climate Change (45%) (Undefended Fluvial)
- 1% AEP Plus Climate Change (105%) (Undefended Fluvial)

Annual Exceedance Probability (AEP) The probability of a flood of a particular magnitude, or greater occurring in any given year.

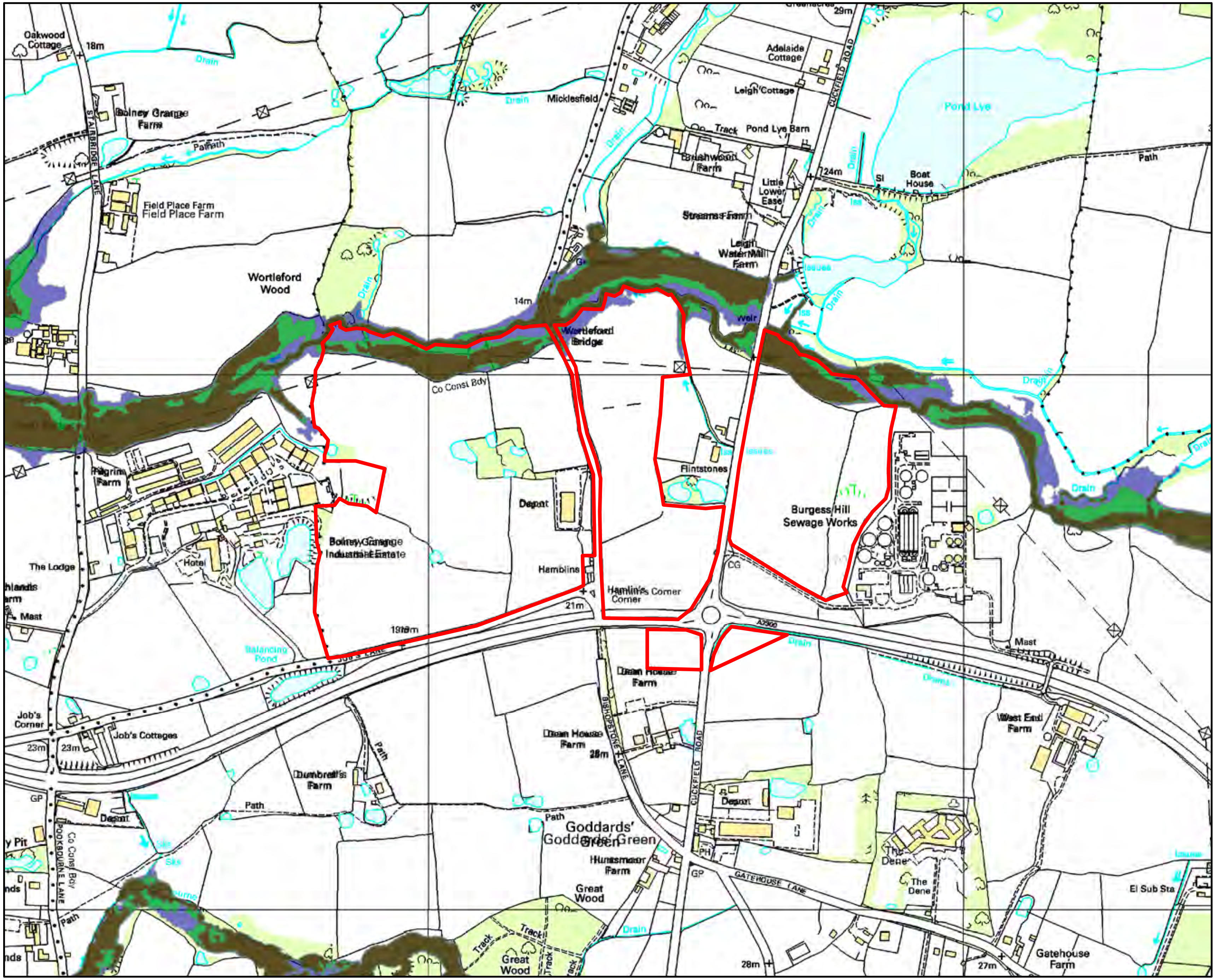
Climate Change (CC) for fluvial models is based on an increase in river flows of 35, 45 & 105% for undefended scenarios.

Defended scenarios only show the superseded 20% increase in flows

Scale: 1:10,000

0 0.225 0.45
Kilometers

Modelled Flood Outlines (Undefended Fluvial). Centred BN6 9HG. Created 06/11/2019.



N

Legend

- Site_Boundary
- 5% AEP (Undefended Fluvial)
- 1% AEP (Undefended Fluvial)
- 0.1% AEP (Undefended Fluvial)

Annual Exceedance Probability (AEP) The probability of a flood of a particular magnitude, or greater occurring in any given year.

Climate Change (CC) for fluvial models is based on an increase in river flows of 35, 45 & 105% for undefended scenarios.

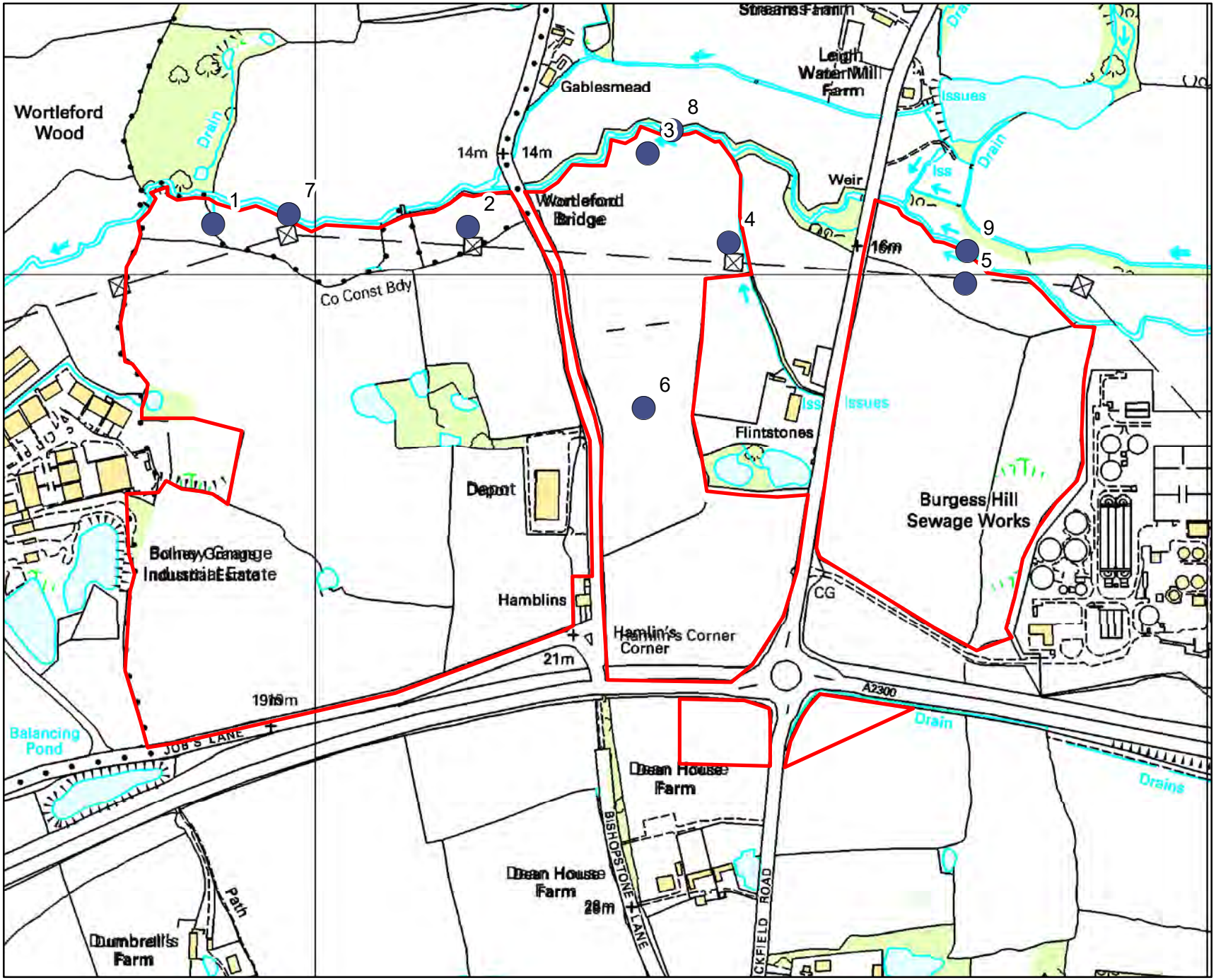
Defended scenarios only show the superseded 20% increase in flows

Scale: 1:10,000

0 0.225 0.45
Kilometers

Contact us: National Customer Contact Centre, PO Box 544, Rotherham, S60 1BY. Tel: 03708 506 506. Email:enquiries@environment-agency.gov.uk

FRA Site Boundary & Node Points Map. Centred BN6 9HG. Created 06/11/2019.



Environment Agency

N

Legend

- Site_Nodes
- Site_Boundary

Scale: 1:6,000

0 0.125 0.25

Kilometers

Product 4 Flood Risk Data Requested by: Bradbrook Consulting

Site: Land East and West Of Cuckfield Road and North Of The A2300, Goddards Green, West Sussex, BN6 9HG.

Table 1: Water Levels: Fluvial Undefended

	NGR		Modelled Flood Levels in Metres AOD					
			Undefended Annual Exceedance Probability					
Node Ref	Eastings	Northings	5%	1%	1% +CC (35%)	1% +CC (45%)	1% +CC (105%)	0.1%
1	527886	121057	-	-	14.09	14.14	14.37	-
2	528172	121054	-	-	14.60	14.64	14.89	-
3	528373	121136	-	-	15.00	15.05	15.26	-
4	528464	121036	-	-	15.18	15.22	15.42	-
5	528729	120990	-	-	15.82	15.85	16.01	-
6	528368	120851	-	-	-	-	-	-
7	527970	121068	13.92	14.15	14.33	15.03	15.80	14.41
8	528400	121162	14.71	14.87	14.37	15.07	15.83	15.11
9	528732	121027	15.57	15.69	14.59	15.29	15.99	15.86

Table 2: Water Depths: Fluvial Undefended

	NGR		Modelled Flood Depths in Metres					
			Undefended Annual Exceedance Probability					
Node Ref	Eastings	Northings	5%	1%	1% +CC (35%)	1% +CC (45%)	1% +CC (105%)	0.1%
1	527886	121057	-	-	0.65	0.79	1.03	-
2	528172	121054	-	-	0.67	0.73	0.94	-
3	528373	121136	-	-	0.10	0.18	0.37	-
4	528464	121036	-	-	0.27	0.30	0.43	-
5	528729	120990	-	-	0.79	0.82	0.97	-
6	528368	120851	-	-	-	-	-	-
7	527970	121068	-	-	1.43	1.70	2.00	-
8	528400	121162	-	-	1.56	1.72	2.18	-
9	528732	121027	-	-	1.58	1.88	2.29	-

All levels taken from: Adur Eastern Branch (2012) with new climate change allowances (2016)

Produced on: 06/11/2019

There is no additional information or health warnings for these levels/depths or the model from which they have been produced.

Office Address: Guildbourne House, Chatsworth Road, Worthing BN11 1LD.
Customer services line: 03708 506 506. Email: enquiries@environment-agency.gov.uk
www.gov.uk/government/organisations/environment-agency

Risk of flooding from Surface Water. Centred BN6 9HG. Created 06/11/2019.

Environment Agency

1: 10,000

0 Metres 250

N W E S

Likelihood of flooding from Surface Water

- High (>=3.3%)
- Medium (3.3% - 1%)
- Low (1% - 01%)
- Very Low

Likelihood of flooding from Surface Water

High:	Greater than or equal to 3.3% (1 in 30) chance in any given year
Medium:	Less than 3.3% (1 in 30) but greater than or equal to 1% (1 in 100) chance in any given year
Low:	Less than 1% (1 in 100) but greater than or equal to 0.1% (1 in 1,000) chance in any given year
Very Low:	Less than 0.1% (1 in 1,000) chance in any given year

This information is shown on the Risk of Flooding from Surface Water map on GOV.UK.

Contact Us: National Customer Contact Centre, PO Box 544, Rotherham, S60 1BY. Tel: 03708 506 506 (Mon-Fri 8-6). E-mail: enquires@environment-agency.gov.uk

Use of Environment Agency Information for Flood Risk Assessments

Important

The Environment Agency are keen to work with partners to enable development which is resilient to flooding for its lifetime and provides wider benefits to communities. If you have requested this information to help inform a development proposal, then we recommend engaging with us as early as possible by using the pre-application form available from our website:

https://www.gov.uk/government/publications/pre-planning-application-enquiry-form-preliminary-opinion

We recognise the value of early engagement in development planning decisions. This allows complex issues to be discussed, innovative solutions to be developed that both enables new development and protects existing communities. Such engagement can often avoid delays in the planning process following planning application submission, by reaching agreements up-front. We offer a charged pre-application advice service for applicants who wish to discuss a development proposal.

We can also provide a preliminary opinion for free which will identify environmental constraints related to our responsibilities including flooding, waste, land contamination, water quality, biodiversity, navigation, pollution, water resources, foul drainage or Environmental Impact Assessment.

In preparing your planning application submission, you should refer to the Environment Agency's Flood Risk Standing Advice and the Planning Practice Guidance for information about what flood risk assessment is needed for new development in the different Flood Zones. This information can be accessed via:

https://www.gov.uk/flood-risk-assessment-standing-advice
http://planningguidance.planningportal.gov.uk/

You should also consult the Strategic Flood Risk Assessment or other relevant materials produced by your local planning authority.

You should note that:

1. Information supplied by the Environment Agency may be used to assist in producing a Flood Risk Assessment (FRA) where one is required, but does not constitute such an assessment on its own.

2. This information covers flood risk from main rivers and the sea, and you will need to consider other potential sources of flooding, such as groundwater or surface water runoff. Information produced by the local planning authority referred to above may assist here.

3. Where a planning application requires an FRA and this is not submitted or is deficient, the Environment Agency may raise an objection.

Solent & South Downs Area

Pre-application Advice Note

September 2019

This document sets out the environmental issues we will consider when providing our planning application consultation advice to Local Councils. It can be used by applicants, developers and consultants at the pre-planning stage.

Fluvial Flood Risk

Development must be safe and should not increase the risk of flooding.

You can view a site's flood zone on the Flood Map for Planning on our website: https://flood-map-for-planning.service.gov.uk

If your proposed development is located within flood zone 2 or 3 you should consult the Flood Risk and Coastal Change pages of the National Planning Policy Guidance (NPPG) http://planningguidance.communities.gov.uk/blog/guidance/flood-risk-and-coastal-change/

Here you can determine whether the flood risk vulnerability of your proposed development and the flood zone are compatible. You can also establish if there are flood risk sequential test and exception test requirements for your proposed development. In the first instance we recommend the developer/applicant liaises with the Local Planning Authority (LPA) to undertake the Sequential Test in accordance with the National Planning Policy Framework (NPPF).

If your proposed development is located within flood zone 2 orf 3 and its vulnerability and flood zone are considered acceptable under the NPPG then a site specific Flood Risk Assessment (FRA) is required to support any subsequent planning application. This is required by paragraph 163 of the NPPF: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf

Guidance on the content of a site specific FRA can be found in the NPPG and online: https://www.gov.uk/guidance/flood-risk-assessment-for-planning-applications

More detailed flood risk modelling data is available to help you produce a FRA please contact our Customers and Engagement team at SSDenquiries@environment-agency.gov.uk.

Climate Change Allowances

On 19 February 2016, we published new guidance for planners and developers on how to use climate change allowances in a site-specific FRA: https://www.gov.uk/guidance/flood-risk-assessments-climatechange-allowances

Groundwater Quality

Development must not cause pollution to the water environment.

Source Protection Zones

We have defined Source Protection Zones (SPZs) for 2000 groundwater sources such as wells, boreholes and springs used across the country for public drinking water supply. These zones are more sensitive to contamination from activities that might cause pollution in the area. The closer the activity, the greater the risk.

SPZ1s are the areas designated as most at risk from contamination and development activities and in these areas we may consider it inappropriate for development to discharge foul or surface water into the ground.

To see if your proposed development is located within a Source Protection Zone, please use our online map: https://magic.defra.gov.uk/

Contaminated Land

The NPPF takes a precautionary approach to land contamination. Before the principle of development can be determined, land contamination should be investigated to see whether it could preclude certain development due to environmental risk or cost of remediation. Where contamination is known or suspected, a desk study, site investigation, remediation and other works may be required to enable safe development.

Pollution

If the proposed development use has the potential to pollute ground or surface water receptors then an assessment to establish whether the risk of pollution is acceptable or can be mitigated will be required within any planning application.

Foul Drainage

When drawing up wastewater treatment proposals for any development, the first presumption is to provide a system of foul drainage discharging into a public sewer to be treated at a public sewage treatment works (those provided and operated by the water and sewerage companies). This should be done in consultation with the sewerage company of the area prior to the submission of a formal planning application.

If connection to a public sewage treatment plant is not feasible, a package sewage treatment plant may be considered. If you would like further advice please call 03708 506 506.

Cemeteries

The development of new cemeteries in areas where groundwater vulnerability is high should be avoided, except where the thickness and nature of the unsaturated zone, or the impermeable formations beneath the site, protect groundwater; or where the long-term risk is mitigated by appropriate engineering methods.

Main Rivers

Ecology

In accordance with the National Planning Policy Framework (NPPF), any development proposal should avoid significant harm to biodiversity and seek to protect and enhance it. Opportunities to incorporate biodiversity in and around the development will be encouraged.

Your scheme should be designed with a naturalised buffer zone of at least 8 metres from the main river to protect and enhance the conservation value of the watercourse and ensure access for flood defence maintenance.

This buffer zone should be managed for the benefit of biodiversity for example by the planting of locally appropriate, UK native species. The buffer zone should be undisturbed by development with no fencing, footpaths or other structures. This buffer zone will help provide more space for flood waters, provide improved habitat for local biodiversity and allows access for any maintenance requirements.

To identify any Main Rivers in proximity to your proposed development please see our Main Rivers Consultation Map: http://apps.environment-agency.gov.uk/wiyby/151293.aspx

Culverting

The Environment Agency is likely to oppose culverting as it is damaging to the ecological integrity of the river channel and its corridor and acts as a barrier to the movement of wildlife, including fish and may also increase flood risk. If the proposal will impact an existing culvert the Environment Agency may oppose planning consent for development either over, or within 8 metres of an existing culvert. Wherever possible, existing culverts should be removed and the river channel and bankside habitat reinstated to restore the ecological continuity of the river channel and its corridor.

Water Framework Directive (WFD)

Any marine works below MHWS require an assessment of possible impacts on Water Framework Directive (WFD) . The assessment should include all elements of the works that fall within, or have the potential to affect, a WFD water body and any of the protected areas therein (including Bathing Waters and Shellfish Waters).

The WFD assessment should follow the 'Clearing the Waters for All' guidance available at https://www.gov.uk/guidance/water-framework-directive-assessment-estuarine-and-coastal-waters

Where appropriate, a WFD Assessment should assess any potential impacts and demonstrate that the required enhancements will be delivered. In some cases the requirements of a WFD assessment can be incorporated into an Environmental Impact Assessment (EIA). Any development that has the potential to cause deterioration in classification under WFD or that precludes the recommended actions from being delivered in the future is likely to be considered unacceptable to us.

Permits & Consents

Environmental Permitting Regulations

To see if your proposed development requires an Environmental Permit under the Environment Permitting Regulations please refer to our website: https://www.gov.uk/guidance/check-if-you-need-an-environmental-permit

From 6 April 2016 an Environmental Permit is required for any proposed works or structures, in, under, over or within 8 metres of the top of the bank of designated Main River, and within 16 metres of a tidal defence.

Ordinary Watercourse Consent

The prior written consent of the relevant Lead Local Flood Authority is required for the erection of any flow control structures, culverting or diversion of ordinary watercourses, including streams, land drains and ditches.

Marine Licence

A marine licence may be required for any activities at the mean high water spring tide up to the territorial limit.This also includes the waters of every estuary, river or channel where the tide flows at mean high water spring tide.

Any development must demonstrate how adverse impacts on migratory fish, bathing waters, shellfish waters, designated sites, protected and priority species and habitats will be avoided, minimised, mitigated and if necessary compensated for. Works within or affecting a Water Framework Directive (WFD) waterbody will need to demonstrate that compliance with WFD objectives will be achieved. 'Clearing the Waters for All' provides guidance on how the impacts on WFD should be addressed, and should be used when preparing an assessment, including the screening and scoping of activities. https://www.gov.uk/guidance/water-framework-directive-assessment-estuarine-and-coastal-waters

Further pre-application options

The information provided above details generic information which may or may not be applicable to your development. We are able to provide more detailed and bespoke advice and answer technical questions for a charged fee of £100 per person per hour +VAT.

If you are interested in finding out more about this service, please email:

planningssd@environment-agency.gov.uk

We can explain this service and provide you with a bespoke quote for further pre-application advice that you may require please see .gov - https://www.gov.uk/government/publications/pre- planning-application-enquiry-form-preliminary-opinion

Please note

Please note that the view expressed in this letter by the Environment Agency is in response to the enquiry only and does not represent our final view in relation to any future planning application made in relation to this site.

We reserve the right to change our position in relation to any such application.

As part of this preliminary response we have not technically reviewed any documents. This opinion is based on the information submitted and current planning policy and guidance.

If you have any questions please contact the Solent & South Downs Sustainable Places team:

planningssd@environment-agency.gov.uk

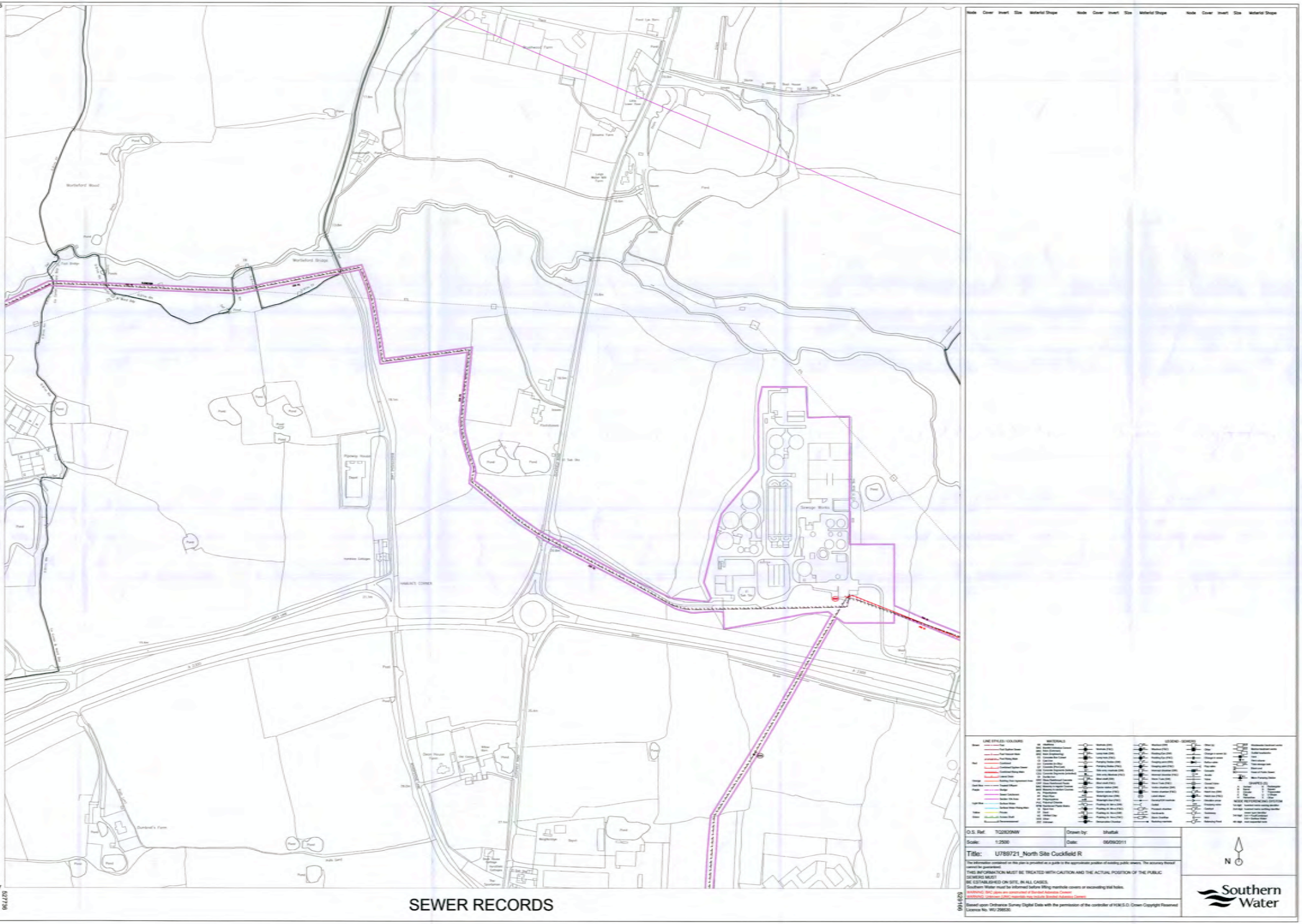
To make a request for data

Please submit your request for data to ssdenquiries@environment-agency.gov.uk. You should get the information within 20 working days. We will tell you when to expect the information if we need more time.

There are many datasets available online at www.data.gov.uk including flood maps, historic landfill, waste exemptions, consented discharges to controlled waters, and much more.

APPENDIX C

SOUTHERN WATER SEWER MAP



SEWER RECORDS

APPENDIX III

Memo

Date: 19 November 2019
Project Reference: JAP11062

6-7 Lovers Walk
Brighton, East Sussex
BN1 6AH
T +44 1273 546 800

Document Status					
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Approval for issue					
J. Pullen		[redacted]			2019-11-19

Site Allocation DPD – Science and Technology Park at Land North of the A2300
Air Quality Statement

1.1 As part of the DPD assessment, Air quality modelling was carried out by Wood to assess Scenarios 7 and 8 from the Transport Modelling. Both of these scenarios considered the Project Newton site.

1.2 Taking Wood's Air Quality Assessment at face value, there are not expected to be any exceedences of the annual-mean nitrogen dioxide (NO_2) objective of 40µg.m^{-3} at sensitive human receptors within Stonepound Crossroads Air Quality Management Area (AQMA) for Scenarios 7 and 8, and impacts are predicted to be 'negligible'. As these modelled scenarios include the Project Newton development, it can be inferred that the Project Newton development would not have a significant air quality effect on receptors within the Stonepound Crossroads AQMA. Nevertheless, this AQMA is approximately 5 km south of the proposed development site and air quality impacts at sensitive human receptors in the vicinity of the site would require assessment as part of the hybrid planning application.

1.3 An air quality assessment was undertaken by RPS for the planning application for The Hub employment development, which would be situated adjacent to the Project Newton development site. Baseline air quality levels for the site were established and shown to be well below the

relevant air quality objectives for human health. The suitability of the Project Newton site for its proposed use, in air quality terms, is therefore unlikely to be a concern.

1.4 With regard to the Ashdown Forest ecological site, the predicted change in traffic flows associated with proposed site allocations could adversely impact on sensitive habitats and species within the ecological site. Wood's Non-Technical Summary (para 3.4.) advises that further assessment by qualified ecologists is required as part of the HRA to ensure the appropriate mitigation is proposed by them, where necessary. As well as the Ashdown Forest SAC, SPA and SSSI, there are other nature designations which may be affected by the scheme, the closest being Ditchling Common SSSI located approximately 4.4 km to the east. Depending on the traffic generation and spatial distribution of traffic associated with the scheme, detailed assessment of air quality impacts at various ecological receptors will be required as part of the hybrid planning application.

1.5 In particular, the air quality assessment that will be undertaken to support the planning application will focus on the following elements:

- Construction phase – an evaluation of the temporary effects from fugitive construction dust and construction-vehicle exhaust emissions; and the
- Operational phase – an evaluation of the impacts of the development traffic and, if relevant, building emissions on human-health and ecological receptors in the local area.

1.6 Where air quality effects on ecological receptors cannot be screened out as insignificant based on the results of the air quality assessment alone, the predicted impacts will be passed to the project's ecologist for determination of the significance of the effect. Depending on the significance of the effects, mitigation may be considered appropriate to manage air quality impacts at nature designations.

1.7 Should adverse air quality impacts be predicted at human receptors, mitigation measures will be recommended to ensure the residual construction phase and operational phase air quality effects are not significant.

Contact
Rosemary Challen
Senior Air Quality Consultant
RPS Consulting Services Ltd
6-7 Lovers Walk
Brighton
BN1 6AH
T: +44(0) 1237 546 800
E: [redacted]

APPENDIX IV

Nov 19 | HD | P18-2325

LANDSCAPE TECHNICAL NOTE

SCIENCE AND TECHNOLOGY PARK, BURGESS HILL

DACORAR SOUTHERN LTD / GLENBEIGH DEVELOPMENTS LTD AND WORTLEFORD TRADING COMPANY LTD

TOWN & COUNTRY PLANNING ACT 1990 (AS AMENDED)
PLANNING AND COMPULSORY PURCHASE ACT 2004

Prepared by: Hilary Degnan, CMLI, Landscape Director

Pegasus Group

Pegasus House | Querns Business Centre| Whitworth Road | Cirencester | Gloucestershire | GL7 1RT

T 01285 641717 | **F** 01285 642348 | **W** www.pegasusgroup.co.uk

Birmingham | Bracknell | Bristol | Cambridge | Cirencester | East Midlands | Leeds | Liverpool | London | Manchester

PLANNING | DESIGN | ENVIRONMENT | ECONOMICS

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1. INTRODUCTION

1.1 This Landscape Technical Note has been prepared by Pegasus Group on behalf of Dacorar Southern Ltd/Glenbeigh Developments Ltd and Wortleford Trading Company Ltd. It sets out the findings of a preliminary visual effects study to inform the options for the height of potential development at the potential Science and Technology Park (STP), on land to the north of A2300 at Burgess Hill ('the site').

1.2 The site of the STP is broadly divided into western and eastern parcels of land, separated by Bishopstone Lane. Existing industrial, commercial or leisure development is located immediately to the west of the STP and also between the eastern and western parcels.

1.3 This Technical Note has been prepared following a combination of initial desk-based studies, a Site visit and the preparation of photomontages showing the potential development blocks at various heights.

1.4 Site visits were carried out in October 2018, February and March 2019 to ascertain the extent of general views towards the Site from the surrounding area.

2. APPROACH

2.1 An initial development concept masterplan and wider 'Positioning Statement' for a potential Science and Technology Park (STP) on land to the north of the A2300 has been prepared by other consultants for Dacorar Southern Ltd/Glenbeigh Developments Ltd and Wortleford Trading Company Ltd (refer to **Masterplan** at **Appendix 1**). The indicative layout encompasses buildings with a variety of footprint sizes with the floor areas referenced within the Positioning Statement limiting building heights *typically* to 3 storeys. Pegasus Group were asked to undertake a visual study to inform the masterplanning process for the Site with regard to the relative visual effects of buildings at a range of potential heights.

2.2 Consideration has, therefore, been given to the potential visual effects of buildings at three, four and five storeys tall (notionally 15m, 19m and 23m tall) situated at the building locations shown on the initial development concept to help inform decisions on the future masterplan detail and design.

Desk-based studies

2.3 To aid understanding of the potential visual effects of development at the STP, a series of computer-generated Zones of Theoretical Visibility (ZTV) have been created. In order to inform analysis of these studies and to provide a visual context, a comparison has been made with the previously consented commercial development at The Hub, Goddards Green, which lies immediately south of the A2300.

2.4 Computer generated ZTVs are a useful first step in understanding the potential visibility of proposed development. They indicate locations within the landscape surrounding a development from where there is a potential direct line of sight from the proposed development/structure to a theoretical viewer.

2.5 The suite of ZTVs prepared for this Technical Note are all produced on the following basis:

- The indicative footprint of buildings within the potential STP to the north of the A2300;
- The previously consented development at The Hub, Goddards Green (based on Masterplan drawing reference 30425-FE-67B);

- Digital Surface Model based on Ordnance Survey (OS) Terrain 5 data combined with OS Open Map Local data providing details of mapped woodlands and buildings; and,

- A notional viewer height of 1.7m tall.

2.6 It should be noted that the ZTVs do not account for the potential screening effects of vegetation (such as hedgerows, individual or small groups of trees) which are not included in the OS mapping data. As such, the ZTVs provide a useful initial indication of areas of potential visibility towards the proposed development, but actual visibility is subject to verification during a site visit.

2.7 Similarly, whilst a ZTV may indicate that there is a direct line of site between a potential visual receptor (viewer) and the proposed development, the assessment of the effect of any perceptible change in the view is made through professional judgement. This includes consideration of the distance between the viewer and the proposed development, how much of (or even whether) the proposed development is likely to be readily perceived, and, the existing visual context of other built form/vegetation etc.

2.8 With regard to the potential STP, the initial ZTVs show the theoretical visual impact of development of building footprints at a uniform height across the whole of the potential development. In reality, potential building/storey heights would be likely to vary across the park, depending on a range of factors, including visual sensitivity.

2.9 These initial ZTVs were used to identify a series of representative, publicly accessible locations (such as public rights of way (PRoW) and highways) from where development at the potential STP could theoretically be visible.

Field-based Studies

2.10 Visits to the location of the potential STP and the surrounding landscape were carried out in October 2018, February and March 2019. During the site visits, the representative publicly accessible locations, identified through the initial ZTV studies, were visited in order to take baseline photography and to ascertain the wider visual scenario.

Photomontages and Analysis

2.11 Following the site visits, six representative viewpoints were selected for the preparation of photomontages. These vary in orientation and distance from the site.

2.12 The photomontages have been produced based on the footprints of the buildings shown on the indicative development concept for the STP. As with the initial ZTVs, the photomontages show development across the whole STP site at three, four and five storeys high. In reality, it is anticipated that the height of individual buildings would vary across the site.

3. ANALYSIS OF COMPUTER GENERATED ZTVS

3.1 The suite of ZTVs at **Appendix 2** has been generated in order to understand the effects of development at three, four and five storeys (notionally 15m, 19m and 23m tall) across the potential STP:

- Screened Zone of Theoretical Visibility Plan (DRWG No: P18-2325_01);
- Viewpoint Location Plan and Cumulative Screened Zone of Theoretical Visibility Plan (15m) (DRWG No: P18-2325_02);
- Cumulative Screened Zone of Theoretical Visibility Plan (19m`) (DRWG No: P18-2325_03);
- Cumulative Screened Zone of Theoretical Visibility Plan (23m) (DRWG No: P18-2325_04); and,
- Cumulative Screened Zone of Theoretical Visibility Plan (Additional Visibility compared to Goddards Green) (DRWG No: P18-2325_05).

3.2 The **Screened Zone of Theoretical Visibility Plan** illustrates the potential effect of development at the STP in isolation. The location of the previously consented development at The Hub, Goddards Green is shown on the plan for reference purposes only, but the theoretical visual effects of the development are not included within this ZTV.

3.3 As noted earlier in this report, this computer generated ZTV (and similarly all the others too) calculates the potential visibility of the proposed development based on a combination of land contours, and existing woodland and built form which is included in the OS mapping data. The ZTV does not, for example, pick up additional unmapped vegetation, such as smaller stands of trees or hedgerows including the maturing band of trees and other vegetation located along the A2300 to the south of the site.

3.4 The grey zones in the ZTV show areas of land where it would be theoretically possible to view development at 15m or taller, based on the location of buildings shown in the initial development concept for the potential STP. These zones are most frequent within a 2km radius of the site, as shown on the plan. With reference to the PRoW and the roads network shown on the OS base plan, many of the grey zones cover land which is not publicly accessible.

3.5 The ZTV also shows the boundaries of the South Downs National Park (SDNP) (with the majority of it more than 5km to the south and south-east of the Site) and the High Weald Area of Outstanding Natural Beauty (AONB) located to the north of the site (with the majority of the AONB located more than 2km from the site.

3.6 With regard to the AONB, there are more distant scattered small pockets of grey zones from which it is theoretically possible to see development at 15m or more on the site. Within the SDNP, there is a small pocket of theoretical visibility from elevated land close to Ditchling.

3.7 The blue and yellow zones on the ZTV show the small additional areas of theoretical visibility which would be caused by raising the development height to four (19m tall) and five (23m tall) storeys respectively for each of the buildings shown on the initial development concept. As with the 15m tall buildings, not all the areas of theoretical visibility occur in publicly accessible land.

3.8 The **Viewpoint Location Plan and Cumulative Screened Zone of Theoretical Visibility Plan (15m)** illustrates the theoretical visual effects of potential buildings on the STP 15m or taller combined with the theoretical visual effects of the previously consented development at The Hub, Goddards Green.

3.9 The grey zones represent the areas from which only a 15m or taller building could theoretically be seen from. The pink zones show the areas from which only 15m tall buildings on The Hub could theoretically be seen from. The green zones indicate areas from which both the STP buildings and The Hub buildings could theoretically be seen from.

3.10 Considering all the zones from which buildings at The Hub could theoretically be seen from (the pink and green zones combined), there are relatively few locations (grey zones) from which 15m tall development at the STP would only (theoretically) be seen in isolation from the previously consented development at The Hub. These grey zones largely occur in relative proximity to the STP.

3.11 At more distant locations, there are relatively small areas of additional visibility, and they often occur close to areas which theoretically could see the buildings at The Hub. Often these additional grey areas do not occur in publicly accessible locations.

3.12 There are no areas of theoretical visibility for either the STP or The Hub, Goddards Green located within the High Weald AONB within 2km of the site. Similarly, there are no areas of theoretical visibility within the SDNP within 5km of the site.

3.13 From the majority of more distant areas of potential visibility within both the High Weald AONB and the SDNP, the ZTV indicates that 15m tall buildings on the STP could theoretically be seen in addition to the previously consented buildings at The Hub. However, the extent that such buildings would be readily perceived within the wider landscape from these locations is discussed late in this report in the context of the site visits.

3.14 The **Cumulative Screened Zone of Theoretical Visibility Plan (19m)** illustrates the theoretical visual effects of potential buildings on the STP 19m or taller combined with the theoretical visual effects of the previously consented development at The Hub, Goddards Green.

3.15 The blue zones represent the areas from which only a 19m or taller building could theoretically be seen from. The pink zones show the areas from which only 15m tall buildings on The Hub could theoretically be seen from. The green zones indicate areas from which both the STP buildings and The Hub buildings could theoretically be seen from.

3.16 As with the cumulative ZTV for 15m tall buildings on the STP, the majority of areas of potential visibility identified in the ZTV relate to buildings at The Hub (the pink and green zones).

3.17 As illustrated by the Screened Zone of Theoretical Visibility Plan, raising the height of buildings on the STP to 19m creates only limited additional areas of visibility above and beyond those identified from 15m tall buildings.

3.18 It remains the case that there is no theoretical visibility of either the buildings at The Hub or 19m tall buildings at the STP within 2km of the High Weald AONB or 5km of the SDNP.

3.19 The **Cumulative Screened Zone of Theoretical Visibility Plan (23m)** illustrates the theoretical visual effects of potential buildings on the STP 23m or taller combined with the theoretical visual effects of the previously consented development at The Hub, Goddards Green.

3.20 The yellow zones represent the areas from which only a 23m or taller building could theoretically be seen from. The pink zones show the areas from which only 15m tall buildings on The Hub could theoretically be seen from. The green zones indicate areas from which both the STP buildings and The Hub buildings could theoretically be seen from.

3.21 Increasing the height of buildings at the STP to 23m tall inevitably slightly extends the areas of potential visibility, as is shown by the yellow areas on the Screened Zone of Theoretical Visibility Plan (on which only buildings at the STP are considered). With regard to the 23m Cumulative Screened ZTV with The Hub, many of the areas from which only buildings at the STP are theoretically visible relate to locations without public access.

3.22 It remains the case that there is no theoretical visibility of either the buildings at The Hub or 23m tall buildings at the STP within 2km of the High Weald AONB or 5km of the SDNP.

3.23 The **Cumulative Screened Zone of Theoretical Visibility Plan (Additional Visibility compared to Goddards Green)** illustrates the theoretical extent of visual effects of potential buildings on the STP at 15m, 19m and 23m tall, excluding areas from which 15m tall buildings at the Hub would also be visible from.

3.24 The grey zones represent the areas from which a 15m or taller building could theoretically be seen from. The blue zones show the additional areas of theoretical visibility resulting from an increase in height of the buildings to 19m. The yellow zones show the additional areas of theoretical visibility resulting from an increase in height of the buildings to 23m.

3.25 Understandably, the most extensive areas of additional visibility tend to be closest to the proposed STP site itself, although large parts of these areas are not publicly accessible.

3.26 With regard to the High Weald AONB and the SDNP, there is no visibility within 2km or 5km respectively. Whilst there are more distant, isolated pockets of theoretical visibility, the extent to which built form at the STP site is readily perceived at these distances and any context of existing built form is discussed later in this document.

4. PHOTOVIEWS AND PHOTOMONTAGES

Photoviews

4.1 Following analysis of the ZTV studies, a selection of representative viewpoints was selected to help establish the existing context of views towards the STP site. These locations were visited during the three site visits undertaken for this Technical Note. A photographic record was made during the site visits (refer to **Photographs 1 to 14** at **Appendix 3** and the **Viewpoint Location Plan and CSTV (15m)** at **Appendix 2**).

4.2 Photoviews taken from Viewpoints 1 to 14 are all taken from publicly accessible locations within the wider area or within the site.

4.3 Photographs taken from **Viewpoints 1 to 6** have been used as the basis for photomontages of the potential development and are discussed later in this document.

4.4 Photoviews A to E at **Viewpoint 7** are taken from are taken from the PRoW which traverses the eastern parcel of the STP. This broadly 360 degree panoramic view highlights the extensive belts of mature trees which largely surround this part of the site or lie within the immediate vicinity. They substantially preclude views towards distant, more elevated land such as that within the High Weald AONB and the SDNP.

4.5 Viewpoints 8 to 14 are from PRoW and locations on the roads network at varying distances from the site. They are also taken from a wide variety of orientations towards the site.

4.6 **Viewpoints 8 to 11** are within 850m of the potential STP. These views typically demonstrate the perception of a largely rural and well wooded context of the site away from the network of major roads and larger settlements. Existing built form, which is visible from these locations, primarily consists of small numbers of residential properties. In several of these views, the electricity pylons and associated overhead wires, which also traverse the site of the potential STP, are prominent and detract from the view.

4.7 Although some of these locations are in relatively close proximity to the industrial estate and hotel complex to the west of the potential STP, the existing built form of the complex is largely hidden from view by intervening vegetation. This

indicates that the well-wooded nature of the surrounding landscape helps to accommodate larger scale built form with limited effects on visual amenity.

4.8 **Viewpoints 12 to 14** are located on PRoW between 2.3km and 3.8km distance from the potential STP. Again, the well-wooded nature of the surrounding landscape helps to conceal or filter views of built form.

4.9 From more elevated and distant locations such as Viewpoint 14 within the High Weald AONB, potential development would tend to be screened or heavily filtered within the wider, well-wooded landscape. This is also demonstrated by the ZTVs prepared for this study. If the site of the proposed STP in reality formed part of this wider view, it is considered that it would not be readily noticeable at the distances involved. It would also be seen in the wider context of development within the wider landscape, including settlements, such as Burgess Hill.

4.10 During the site work for this study, we also visited elevated locations around Ditchling from which the ZTV studies indicated that there could be theoretical visibility of the potential STP, along with the previously consented development at The Hub, Goddards Green. These elevated locations are within the SDNP and lie at more than 5km from the site. It is considered that, at these distances, development at either The Hub, Goddards Green or at the potential STP would not be readily perceivable in the panoramic views which already contain views of settlements and other scales of built form.

Photomontages

4.11 Representative Viewpoints 1 to 6 are from publicly accessible (PRoW and roads) locations around 200m to 1km from the site. These viewpoints were selected to prepare photomontages of the potential development STP. The photomontages are set out **Appendix 4**.

4.12 The photomontages have been prepared to show the proposed built form based on the building footprints shown on the initial development concept masterplan for the potential STP. To aid interpretation and analysis, the buildings have been shown at the same three, four and five storey heights used for the ZTVs (respectively grey, blue and yellow blocks). As noted before, it is not intended that five storey development would be proposed across the whole STP.

4.13 For comparison, the previously consented development at The Hub, Goddards Green is also shown as orange blocks in the photomontages (at 15m tall), where visible in the view.

4.14 **Viewpoint 1** is located on PRoW 102CR approximately 1km to the north-east of the site. From this location even five storey development on the building footprints located in the initial concept masterplan for the potential STP would not be visible. The intervening mature tree cover conceals the potential development to five storeys, the location of which is shown by the blue outline. It is anticipated that, even in winter months the successive layers of mature tree cover between the Viewpoint and the site, would continue to screen or at worst heavily filter the built form. Any glimpse would be seen within the context of the upper parts of the previously consented 15m tall development at The Hub, Goddards Green (shown as orange block forms on the photomontage).

4.15 **Viewpoint 2** is located on PRoW 12Hu approximately 340m to the north-east of the site.

4.16 The photomontage demonstrates that all potential 3 storey development on the northern part of the STP within the initial concept masterplan would be substantially screened by intervening vegetation. Small areas of 4 storey development (indicated by the blue block forms on the photomontage) would just be visible over the existing tree canopies. This would be seen either side of the electricity pylon and overhead wires break the skyline and which are clearly visible from this location. Development at five storeys would be more visible, but views would be still be partially filtered by intervening tree cover in high summer (the baseline photography was undertaken at the end of October when leaves had already started to fall).

4.17 It is considered that three storey development on the northern part of the STP could be readily accommodated without harm to the visual amenity at this footpath location. Four storey development would be substantially screened in summer months and would represent a limited degree of visual influence. Five storey development would be more apparent and careful consideration would need to be given to its location within the STP, potentially limiting it to the southern parts of the site.

4.18 **Viewpoint 3** is located on PRoW 29CR approximately 200m to the north of the site. The existing view is of arable and pasture fields, separated by strong bands

of tree and other vegetation cover. Whilst mature tree cover comprises much of the skyline, this is heavily punctuated by multiple electricity pylons and associated overhead lines.

4.19 The buildings visible in Viewpoint 3B and those to the right of Viewpoint 3A are located in the western parcel of the potential STP. The individual existing mature trees and other vegetation along the western parcel's northern boundary provide limited screening/filtering to the three storey (grey block forms – 15m tall) and four storey (blue block forms – 19m tall) buildings located towards the northern edge of the parcel. The five storey elements of the buildings (yellow block forms – 23m tall) partially appear above the intervening mature tree canopies. There is scope and space for the planting of additional native forest-scale (20m+) trees of appropriate species within the STP site, as indicated on the initial concept masterplan. With time, the trees would mature to screen or heavily filter views of three storey buildings. However, it is anticipated that the upper parts of four storey buildings may be glimpsed between the domed tops of the canopies of mature trees. It is therefore recommended that buildings on the northern edge of the western parcel are largely restricted to three storeys, with careful consideration given to the precise location of any four or five storey buildings elsewhere within the site.

4.20 The remaining buildings visible in the centre of Viewpoint 3A are located in the northern part of the eastern parcel of the STP. The four and five storey elements of these buildings are clearly visible above the intervening tree canopies, whilst parts of the three storey elements are also seen where the intervening tree canopies are lower. There is scope to add additional native forest-scale trees of appropriate species to the northern and western edges of the eastern parcel and, with time, this would provide additional screening for three storey buildings. It is recommended that buildings on the northern parts of the eastern parcel of the STP are restricted to three storeys, and that careful consideration is given to the effect of taller buildings located elsewhere in the STP on this viewpoint. The effects of the gently rising topography to the south of the site would also need careful consideration.

4.21 **Viewpoint 4** is located at the crossroads of the A2300 with Stairbridge Lane/Pookbourne Lane, approximately 580m to the south-west of the site. The terraced housing seen in this view is located to the south of Job's Lane which runs

broadly parallel with the A2300, to the north of the slightly elevated landform/vegetated bund along the edge of the A2300.

4.22 In the photomontage from this location, only a small section of potential five storey (yellow block form) development on the STP is glimpsed between well-vegetated bund along the A2300. In contrast, the upper parts of 15m tall previously consented development on The Hub, Goddards Green (the orange block form) may be glimpsed above existing vegetation cover further east along the A2300. It should be noted that this photomontage does not incorporate the potential growth of any structural planting across The Hub site.

4.23 Based on the photomontage, it is considered that three and four storey development at the potential STP would have no effect on the visual amenity of people using the A2300 at this point. Given the existing and previously consented context of this view, it is considered that the brief glimpse of potential five storey development on the STP would not have a material effect on visual amenity of road users at this location.

4.24 **Viewpoint 5** is located at the roundabout at the junction of the A2300 and Cuckfield Road opposite the south-eastern corner of the site. The view looks towards the south-eastern corner of the eastern parcel of the potential STP. A belt of native trees screens views into the site. These relatively young trees have the potential to grow considerably taller than their existing stature, as indicated by the height of the mature tree to the left of the photomontage. With time, it is anticipated that these trees would be capable of screening or heavily filtering potential three and four storey development on the STP. Five storey development would be more likely to be glimpsed through the upper canopies of mature trees. However, given the roadside location of this part of the STP, opposite the previously consented development at The Hub, Goddards Green, it may be considered appropriate to have a prominent or 'landmark' building here.

4.25 **Viewpoint 6** is located at the junction of the A2300 and the private access road to Dumbrell's Farm opposite the south-western corner of the STP. A band of maturing vegetation along the edge of the A2300 provides a dense screen even in winter (this photograph was taken in February 2019). These trees have the potential to grow considerably taller at maturity. The potential STP site is located to the north of Job's Lane which lies immediately to the north of the vegetation along the A2300.

4.26 As demonstrated by the photomontage, much of the potential three storey development on the STP would be screened or heavily filtered by the existing vegetation cover. However, there would be a more extensive view of three storey development located on the south-east corner of the STP – although it should be noted that with time the maturing roadside vegetation would grow taller and would be likely to screen much of this development too.

4.27 Views of potential four and even five storey development on the STP would similarly be largely screened as the intervening vegetation develops. The more visible building to the right of this view, further along the A2300 is the potential 'landmark' building referred to at Viewpoint 5 above.

5. SUMMARY AND CONCLUSIONS

5.1 In summary, the ZTV studies prepared for this Technical Note demonstrate that the theoretical visibility of three storey development at the potential STP would be largely limited to within 2km of the site. The addition of four and five storey elements across the whole STP would only slightly extend the theoretical visibility. It should also be noted that the extent of actual visibility could be lessened by subtle changes in local topography or by the additional screening properties of trees or hedgerows not identified within the relevant OS mapping data.

5.2 There would be no theoretical visibility of the proposed development within 2km of the High Weald AONB or within 5km of the SDNP. There are isolated pockets of more distant theoretical visibility within these designated landscapes, but the site work undertaken for this Technical Note has confirmed that development on the potential STP would not be readily perceptible at these distances or would form a small part of a wider view from elevated ground which already includes substantial amounts of built form and settlements.

5.3 Comparison has also been made with the extent of theoretical visibility of the potential STP and with that previously consented at The Hub, Goddards Green. Typically, development of up to five storeys at the potential STP would slightly extend the existing locations from which there is already theoretical visibility of The Hub, Goddards Green. Many of the 'new' areas of theoretical visibility occur in locations from which there is no public access.

5.4 A series of representative photoviews from publicly accessible locations at varying distances and orientations to the potential STP have been reviewed to understand the receiving environment of any potential new development. The visual enclosure and screening provided in these views by the existing mature trees within the wider landscape is noted, particularly with regard to existing large scale development at the industrial estate to the west of the potential STP site.

5.5 Six of the representative photoviews have been used as the basis for the creation of photomontages to show the extent of views of three, four and five storey development at the potential STP. Analysis of these photomontages has indicated that three storey development (notionally 15m tall) could be accommodated across the site with limited adverse effects on visual amenity from these locations. In places, this assessment is subject to judicious planting of additional

native forest-scale tree cover of appropriate species at locations within the site as well as the time for it to mature.

5.6 Similarly, four storey development (notionally 19m tall) could also be accommodated in terms of effects on visual amenity from most of the representative locations considered in this Technical Note. However, careful consideration would be needed to include four storey development on the northern edges of the STP.

5.7 Five storey development (notionally 24m tall) would naturally be more visible from locations within the receiving landscape, subject to angle of view, extent of tree cover etc. Analysis of the photomontages has identified that there are locations from which even five storey development on the STP would be hidden from sight. Conversely, there may be locations from which a taller or 'landmark' building may be considered an acceptable feature within the landscape, such as at the south-east corner of the site, opposite the previously consented 15m commercial development at The Hub, Goddards Green.

APPENDIX 1

Initial development concept masterplan

New pedestrian links to wider countryside/ walking link to footpaths, Northern Arc development along River

800m 20min walking distance

400m 10min walking distance

Bus Stop

New cycle lane / footpath link to burgess hill

400m 10min walking distance

Roundabout

Bus Stop

A2300 to Burgess Hill

A2300 to A23/Brighton/Gatwick

'The Hub'

St Paul's Catholic College

Jane Murray Way

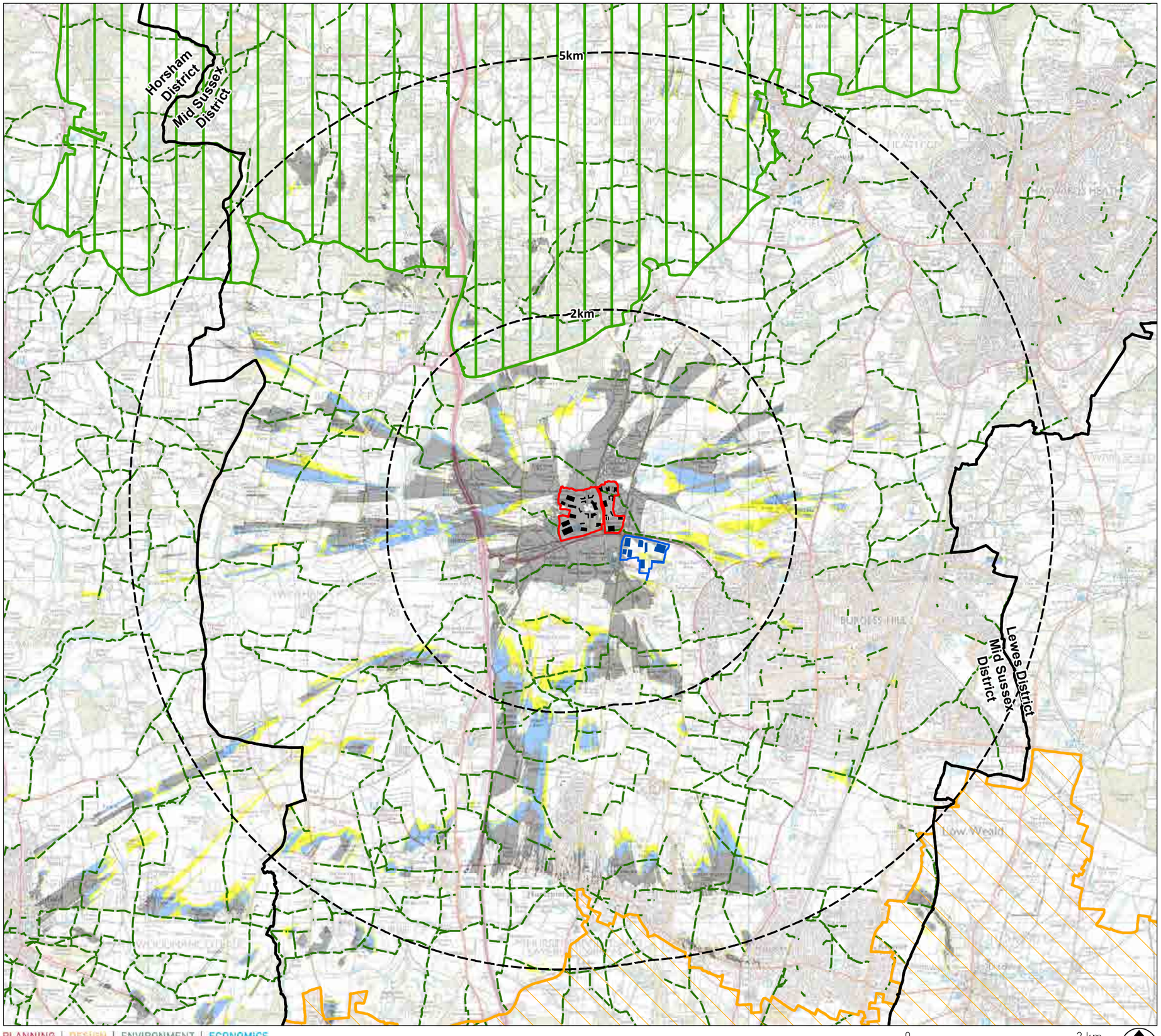
A273

Leisure Centre

APPENDIX 2

Zones of Theoretical Visibility:

- Screened Zone of Theoretical Visibility Plan (DRWG No: P18-2325_01);
- Viewpoint Location Plan and Cumulative Screened Zone of Theoretical Visibility Plan (15m) (DRWG No: P18-2325_02);
- Cumulative Screened Zone of Theoretical Visibility Plan (19m`) (DRWG No: P18-2325_03);
- Cumulative Screened Zone of Theoretical Visibility Plan (23m) (DRWG No: P18-2325_04); and,
- Cumulative Screened Zone of Theoretical Visibility Plan (Additional Visibility compared to Goddards Green) (DRWG No: P18-2325_05).



KEY

- Site Boundary
- Proposed Buildings
- Goddards Green Site Boundary (13/01618/OUT)
- Goddards Green Proposed Buildings (based on Masterplan drwg 30425-FE-67B)
- Local Authority Boundary
- Area of Outstanding Natural Beauty (AONB)
- National Park
- Public Right of Way
- Screened ZTV - 15m Development Visible
- Screened ZTV - Additional Visibility when raised to 19m
- Screened ZTV - Additional Visibility when raised to 23m

Screened ZTV Production Information -
- DTM data used in calculations is OS Terrain 5 that has been combined with OS Open Map Local data for woodland and buildings to create a Digital Surface Model (DSM).

- Indicative Woodland and Building heights are modelled at 15m and 8m respectively.
- Viewer height set at 1.7m
- Calculations include earth curvature and light refraction

N.B. This Zone of Theoretical Visibility (ZTV) image illustrates the theoretical extent of where the development will be visible from, assuming 100% visibility, and includes the screening effect from vegetation and buildings, based on the assumptions stated above.

Revisions:
First Issue- 22/10/2018 AD

Screened Zone of Theoretical Visibility Plan

Science & Technology Park, Burgess Hill

Client:	Dacorar Southern Ltd and Wortleford Trading Co Ltd		
DRWG No:	**P18-2325_01**	Sheet No: -	REV: -
Drawn by:	AD	Approved by:	HD
Date:	22/10/2018		
Scale:	1:45,000 @ A3		

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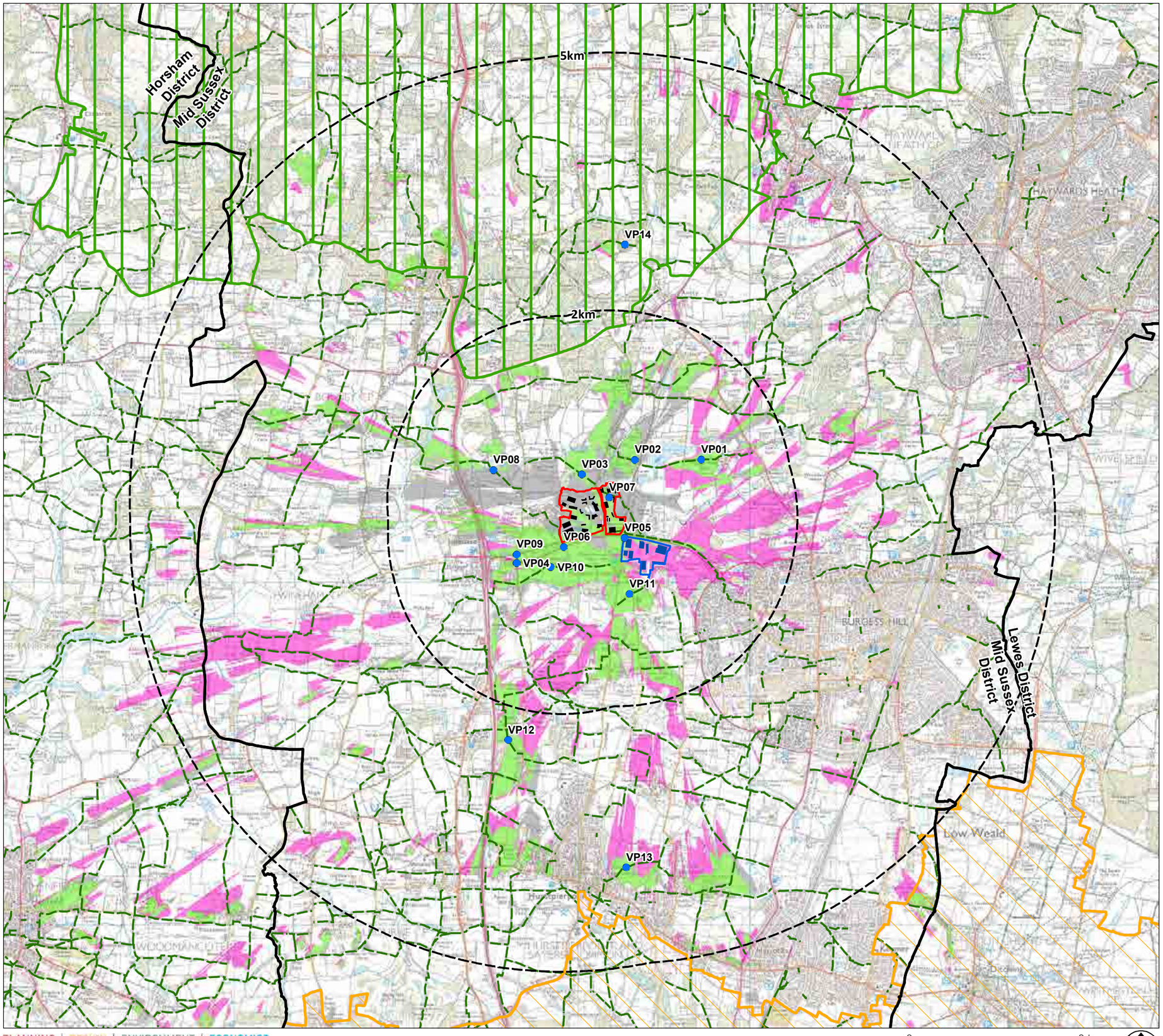

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0 2 km

N

KEY

- Site Boundary
- Proposed Buildings
- Goddards Green Site Boundary (13/01618/OUT)
- Goddards Green Proposed Buildings (based on Masterplan drwg 30425-FE-67B)
- Local Authority Boundary
- Viewpoint Location
- Area of Outstanding Natural Beauty (AONB)
- National Park
- Public Right of Way
- Screened ZTV - Only Science & Tech Park Visible (15m)
- Screened ZTV - Only Goddards Green Visible (15m)
- Screened ZTV - Both Schemes Visible

Screened ZTV Production Information -
- DTM data used in calculations is OS Terrain 5 that has been combined with OS Open Map Local data for woodland and buildings to create a Digital Surface Model (DSM).

- Indicative Woodland and Building heights are modelled at 15m and 8m respectively.
- Viewer height set at 1.7m
- Calculations include earth curvature and light refraction

N.B. This Zone of Theoretical Visibility (ZTV) image illustrates the theoretical extent of where the development will be visible from, assuming 100% visibility, and includes the screening effect from vegetation and buildings, based on the assumptions stated above.

Revisions:
First Issue- 03/04/2019 AD/JS

Viewpoint Location Plan Over Cumulative SZTV (15m)

Science & Technology Park, Burgess Hill

Client:	Dacorar Southern Ltd and Wortleford Trading Co Ltd		
DRWG No:	**P18-2325_02**	Sheet No: -	REV: -
Drawn by:	AD/JS	Approved by:	HD
Date:	03/04/2019		
Scale:	1:45,000 @ A3		

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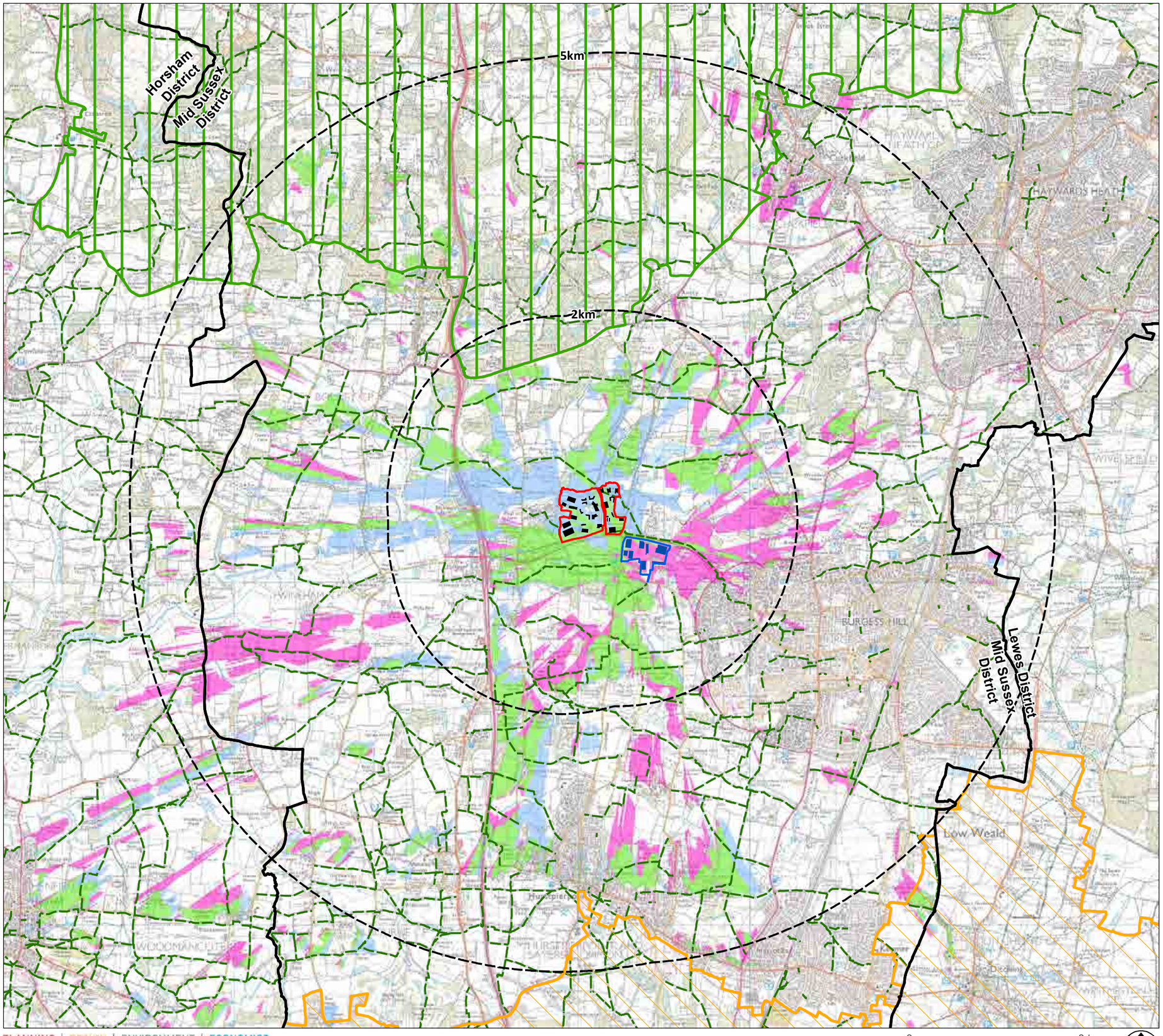

KEY

- Site Boundary
- Proposed Buildings
- Goddards Green Site Boundary (13/01618/OUT)
- Goddards Green Proposed Buildings (based on Masterplan drwg 30425-FE-67B)
- Local Authority Boundary
- Area of Outstanding Natural Beauty (AONB)
- National Park
- Public Right of Way
- Screened ZTV - Only Science & Tech Park Visible (19m)
- Screened ZTV - Only Goddards Green Visible (15m)
- Screened ZTV - Both Schemes Visible

Screened ZTV Production Information -
- DTM data used in calculations is OS Terrain 5 that has been combined with OS Open Map Local data for woodland and buildings to create a Digital Surface Model (DSM).

- Indicative Woodland and Building heights are modelled at 15m and 8m respectively.
- Viewer height set at 1.7m
- Calculations include earth curvature and light refraction

N.B. This Zone of Theoretical Visibility (ZTV) image illustrates the theoretical extent of where the development will be visible from, assuming 100% visibility, and includes the screening effect from vegetation and buildings, based on the assumptions stated above.

Revisions:
First Issue- 22/10/2018 AD

Cumulative Screened Zone of Theoretical Visibility Plan (19m)

Science & Technology Park, Burgess Hill

Client:	Dacorar Southern Ltd and Wortleford Trading Co Ltd		
DRWG No:	**P18-2325_03**	Sheet No: -	REV: -
Drawn by:	AD	Approved by:	HD
Date:	22/10/2018		
Scale:	1:45,000 @ A3		

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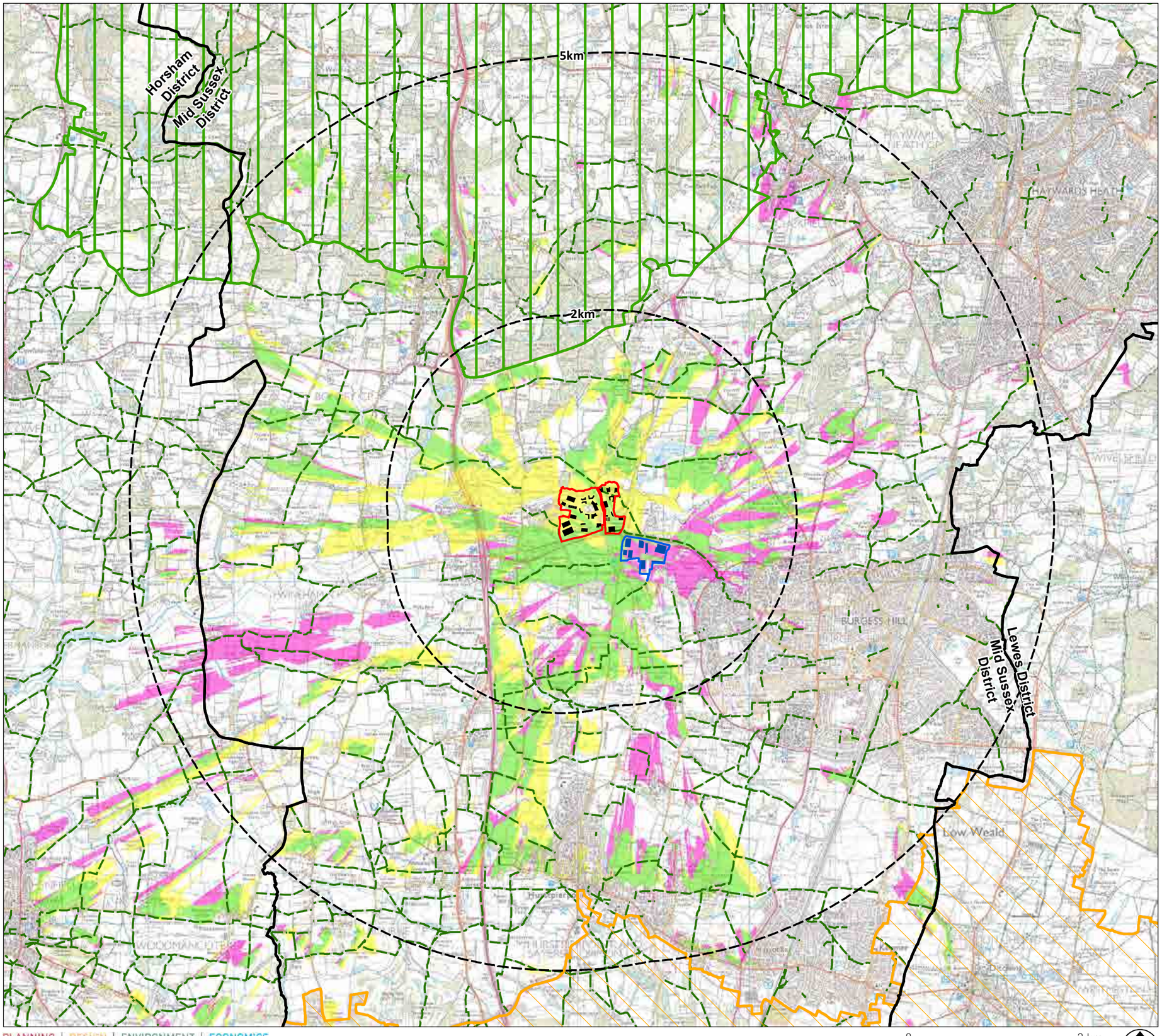

KEY

- Site Boundary
- Proposed Buildings
- Goddards Green Site Boundary (13/01618/OUT)
- Goddards Green Proposed Buildings (based on Masterplan drwg 30425-FE-67B)
- Local Authority Boundary
- Area of Outstanding Natural Beauty (AONB)
- National Park
- Public Right of Way
- Screened ZTV - Only Science & Tech Park Visible (23m)
- Screened ZTV - Only Goddards Green Visible (15m)
- Screened ZTV - Both Schemes Visible (15m)

Screened ZTV Production Information -
- DTM data used in calculations is OS Terrain 5 that has been combined with OS Open Map Local data for woodland and buildings to create a Digital Surface Model (DSM).

- Indicative Woodland and Building heights are modelled at 15m and 8m respectively.
- Viewer height set at 1.7m
- Calculations include earth curvature and light refraction

N.B. This Zone of Theoretical Visibility (ZTV) image illustrates the theoretical extent of where the development will be visible from, assuming 100% visibility, and includes the screening effect from vegetation and buildings, based on the assumptions stated above.

Revisions:
First Issue- 22/10/2018 AD

Cumulative Screened Zone of Theoretical Visibility Plan (23m)

Science & Technology Park, Burgess Hill

Client:	Dacorar Southern Ltd and Wortleford Trading Co Ltd		
DRWG No:	**P18-2325_04**	Sheet No: -	REV: -
Drawn by:	AD	Approved by:	HD
Date:	22/10/2018		
Scale:	1:45,000 @ A3		

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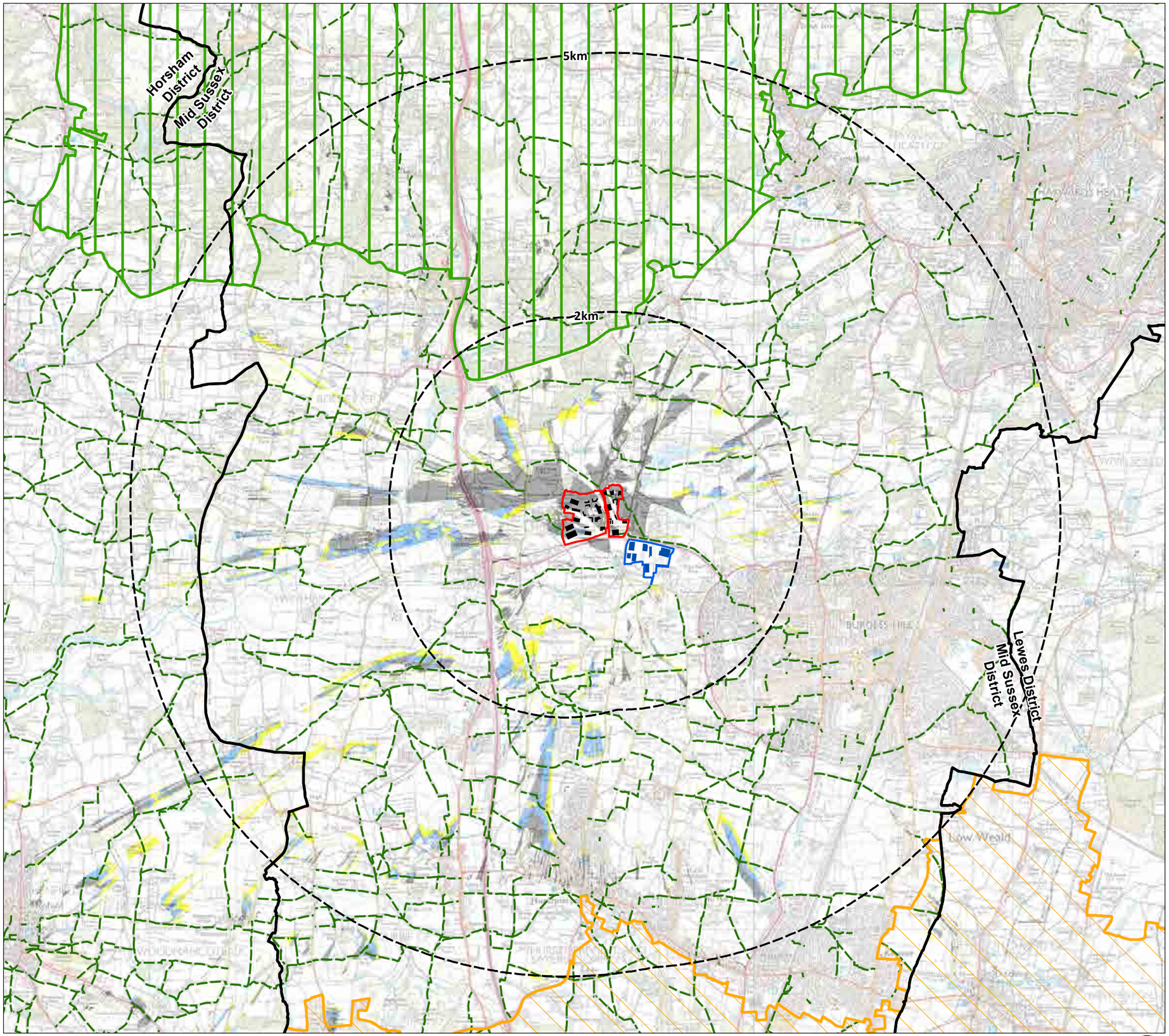

KEY

- Site Boundary
- Proposed Buildings
- Goddards Green Site Boundary (13/01618/OUT)
- Goddards Green Proposed Buildings (based on Masterplan drwg 30425-FE-67B)
- Local Authority Boundary
- Area of Outstanding Natural Beauty (AONB)
- National Park
- Public Right of Way
- Additional Visibility at 15m Height (when compared to Goddards Green at 15m)
- Additional Visibility at 19m Height (when compared to Goddards Green at 15m)
- Additional Visibility at 23m Height (when compared to Goddards Green at 15m)

Screened ZTV Production Information -
- DTM data used in calculations is OS Terrain 5 that has been combined with OS Open Map Local data for woodland and buildings to create a Digital Surface Model (DSM).

- Indicative Woodland and Building heights are modelled at 15m and 8m respectively.
- Viewer height set at 1.7m
- Calculations include earth curvature and light refraction

N.B. This Zone of Theoretical Visibility (ZTV) image illustrates the theoretical extent of where the development will be visible from, assuming 100% visibility, and includes the screening effect from vegetation and buildings, based on the assumptions stated above.

Revisions:
First Issue- 03/04/2019 AD/JS

Cumulative Screened Zone of Theoretical Visibility Plan (Additional Visibility compared to Goddard's Green)

Science & Technology Park, Burgess Hill

Client:	Dacorar Southern Ltd and Wortleford Trading Co Ltd		
DRWG No:	**P18-2325_05**	Sheet No: -	REV: -
Drawn by:	AD/JS	Approved by:	HD
Date:	03/04/2019		
Scale:	1:45,000 @ A3		

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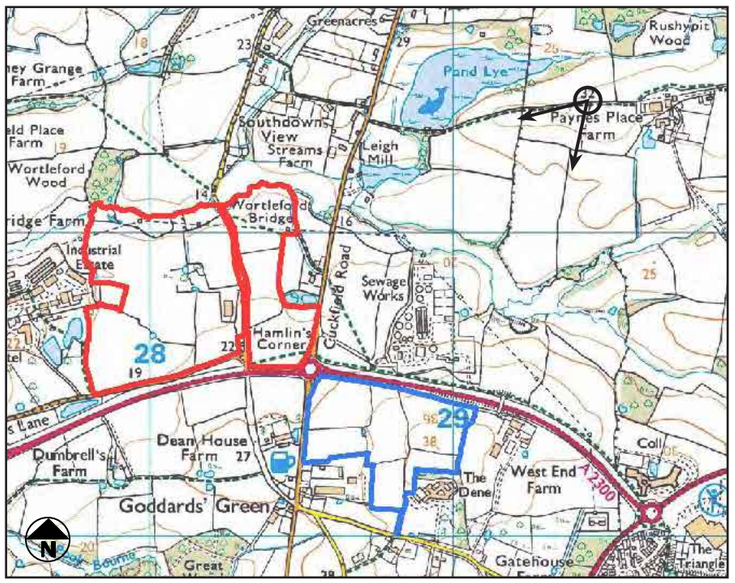
APPENDIX 3

Photoviews 1 to 14

VIEWPOINT 1

View from PRoW 102CR near Paynes Place Farm, looking south west



Camera make & model	- Canon EOS 5D	Viewpoint height (AOD)	- 32m
Date & time of photograph	- 26/10/2018 @ 08:48	Distance from site	- 1010m
OS grid reference	- 529436, 121429		

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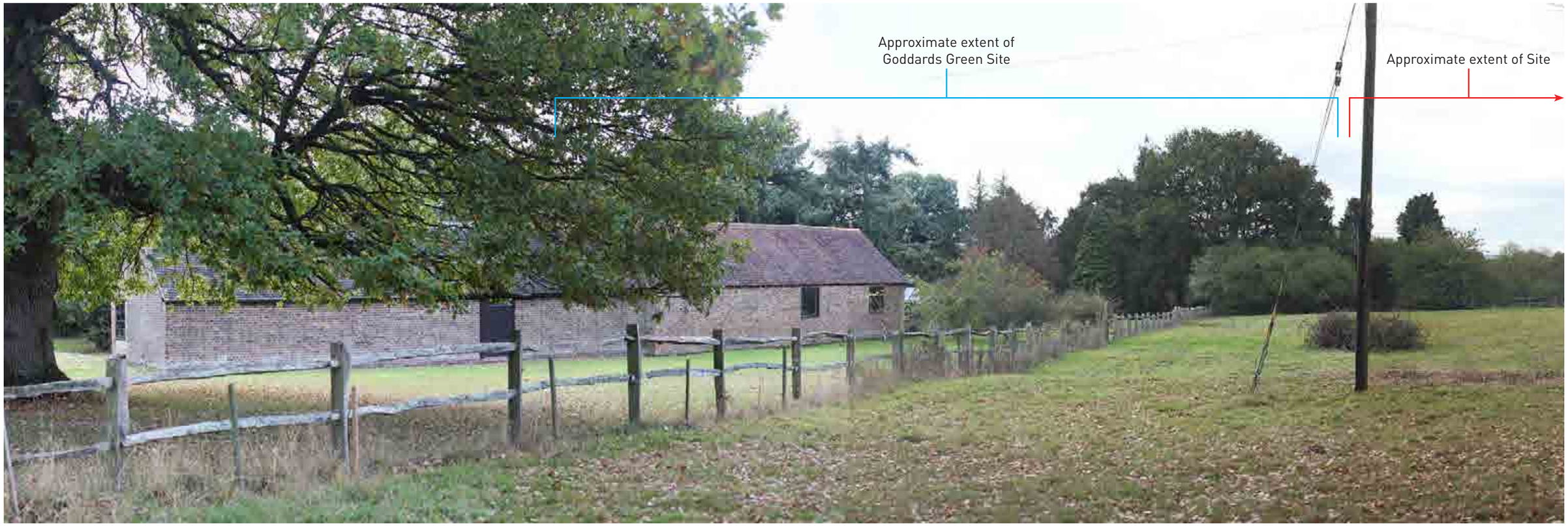
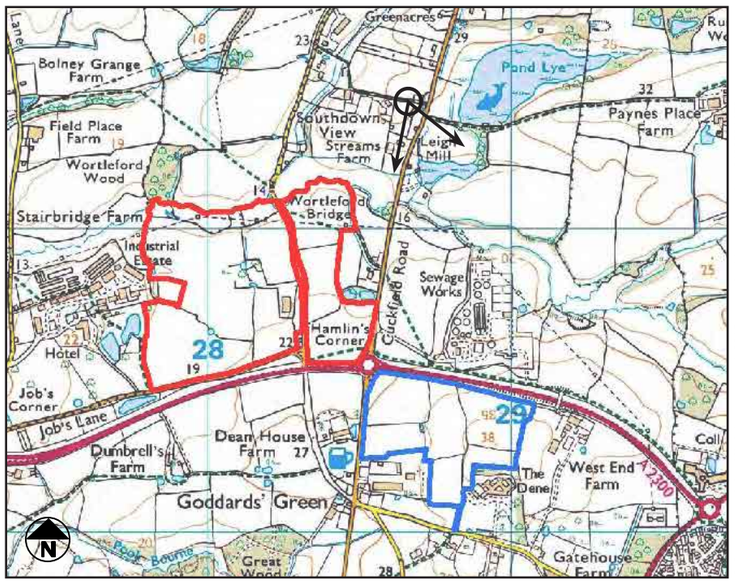


VIEWPOINT 2A

View from PRoW 12Hu looking south west



Camera make & model	- Canon EOS 5D	Viewpoint height (AOD)	- 25m
Date & time of photograph	- 26/10/2018 @ 09:04	Distance from site	- 341m
OS grid reference	- 528660, 121425		

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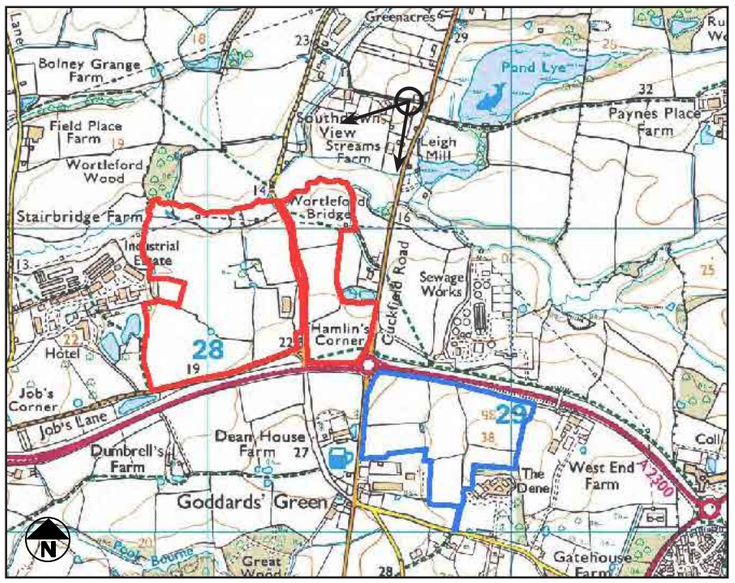
VIEWPOINT 2B

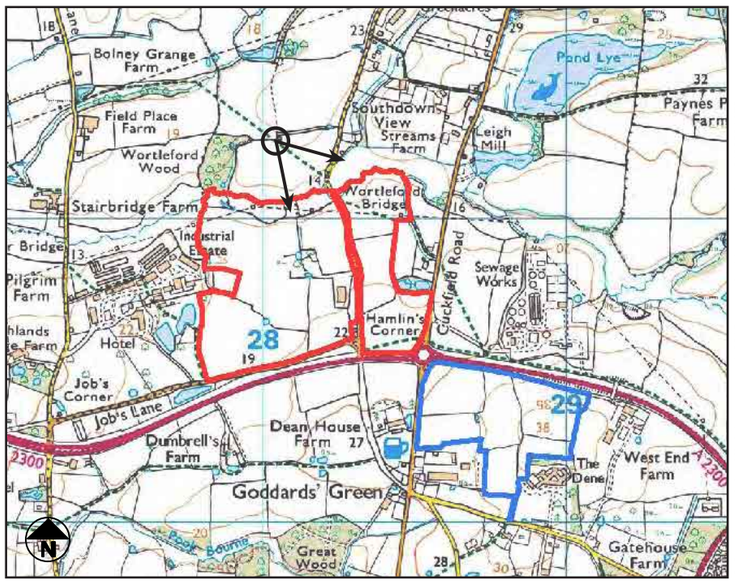
View from PRoW 12Hu looking south west



Camera make & model	- Canon EOS 5D	Viewpoint height (AOD)	- 25m
Date & time of photograph	- 26/10/2018 @ 09:04	Distance from site	- 341m
OS grid reference	- 528660, 121425		

VIEWPOINT 3A

View from PRoW 29CR looking south



Camera make & model	- Canon EOS 5D	Viewpoint height (AOD)	- 21m
Date & time of photograph	- 26/10/2018 @ 09:18	Distance from site	- 194m
OS grid reference	- 528043, 121256		

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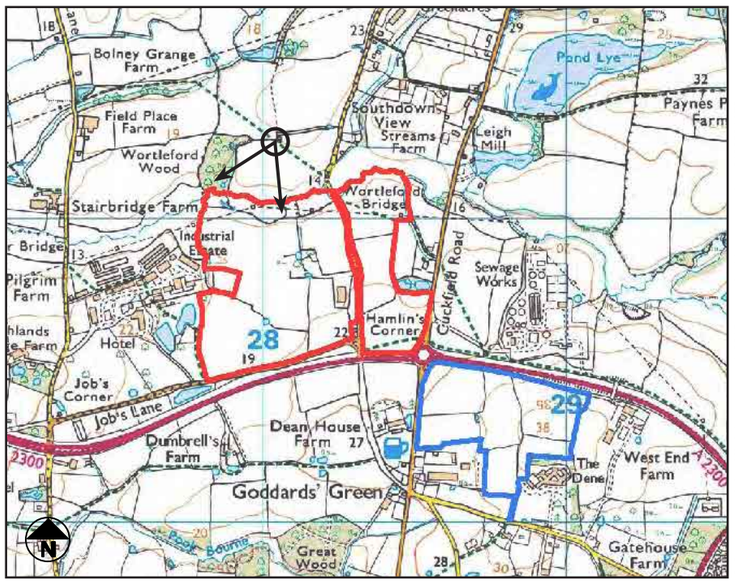
VIEWPOINT 3B

View from PRoW 29CR looking south



Camera make & model	- Canon EOS 5D	Viewpoint height (AOD)	- 21m
Date & time of photograph	- 26/10/2018 @ 09:18	Distance from site	- 194m
OS grid reference	- 528043, 121256		

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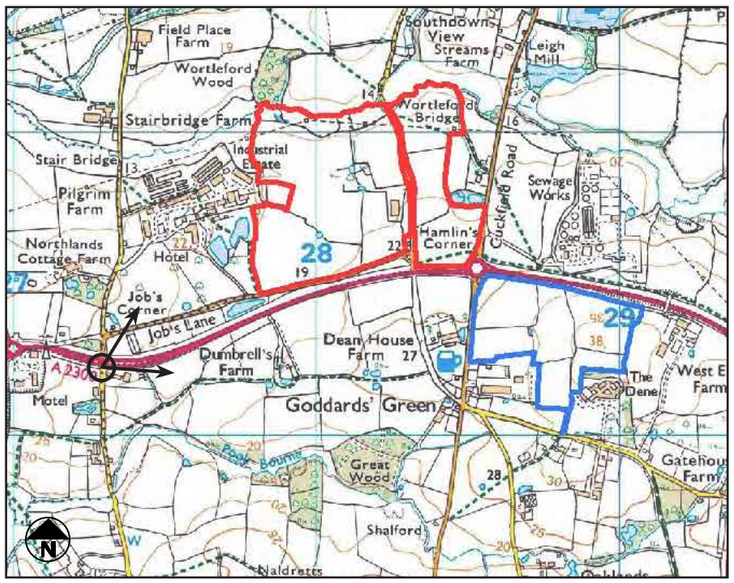
VIEWPOINT 4

View from A2300 looking north east



Camera make & model	- Canon EOS 5D	Viewpoint height (AOD)	- 23m
Date & time of photograph	- 26/10/2018 @ 12:05	Distance from site	- 583m
OS grid reference	- 527285, 120224		

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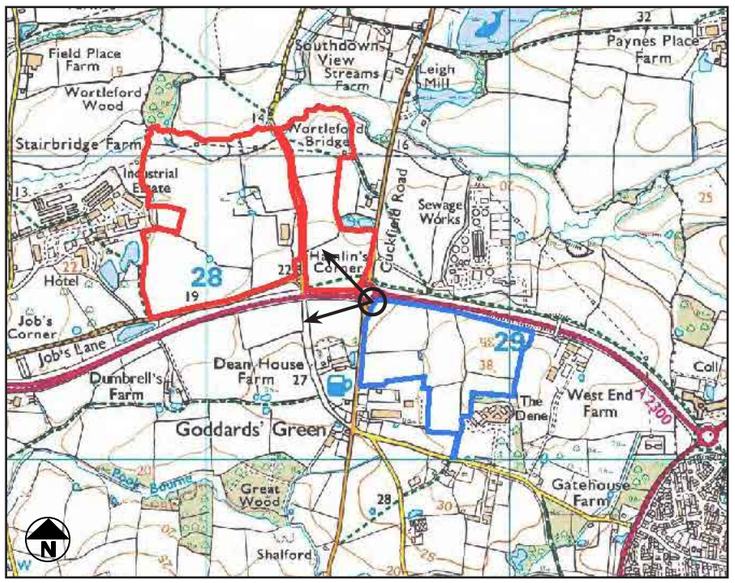
VIEWPOINT 5A

View from roundabout at Cuckfield Road/A2300 looking north west



Camera make & model	- Canon EOS 5D	Viewpoint height (AOD)	- 24m
Date & time of photograph	- 26/10/2018 @ 11:57	Distance from site	- 69m
OS grid reference	- 528543, 120519		

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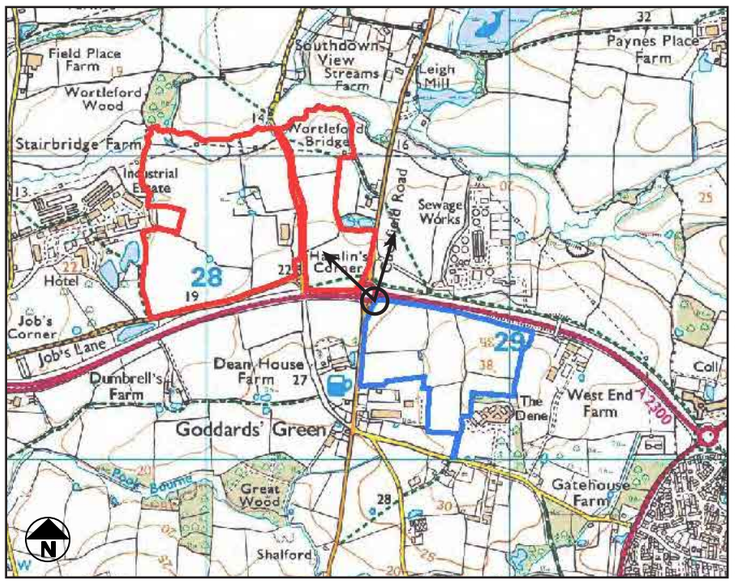
VIEWPOINT 5B

View from roundabout at Cuckfield Road/A2300 looking north west



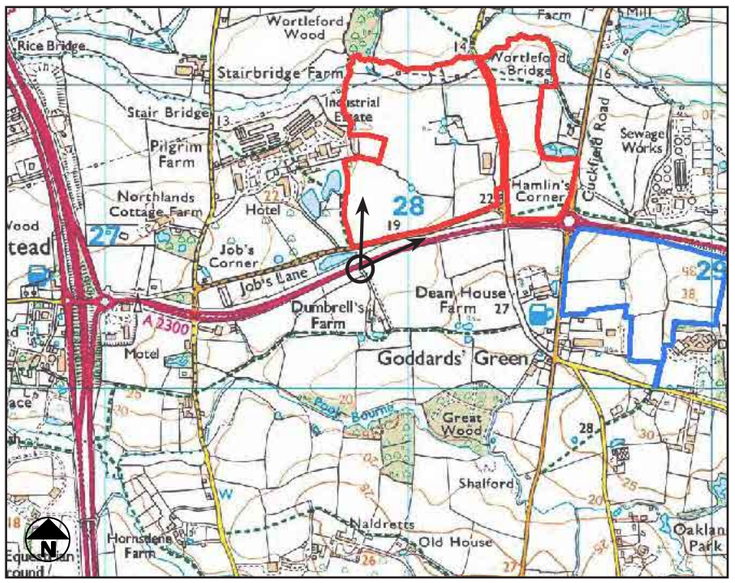
Camera make & model	- Canon EOS 5D	Viewpoint height (AOD)	- 24m
Date & time of photograph	- 26/10/2018 @ 11:57	Distance from site	- 69m
OS grid reference	- 528543, 120519		

PLANNING | DESIGN | ENVIRONMENT | ECONOMICS

Pegasus Environment

VIEWPOINT 6

View from junction of A2300 and entrance to Dumbrell's Farm, looking north east



Camera make & model	- Canon EOS 5D	Viewpoint height (AOD)	- 18m
Date & time of photograph	- 26/10/2018 @ 12:15	Distance from site	- 317m
OS grid reference	- 527683, 120179		

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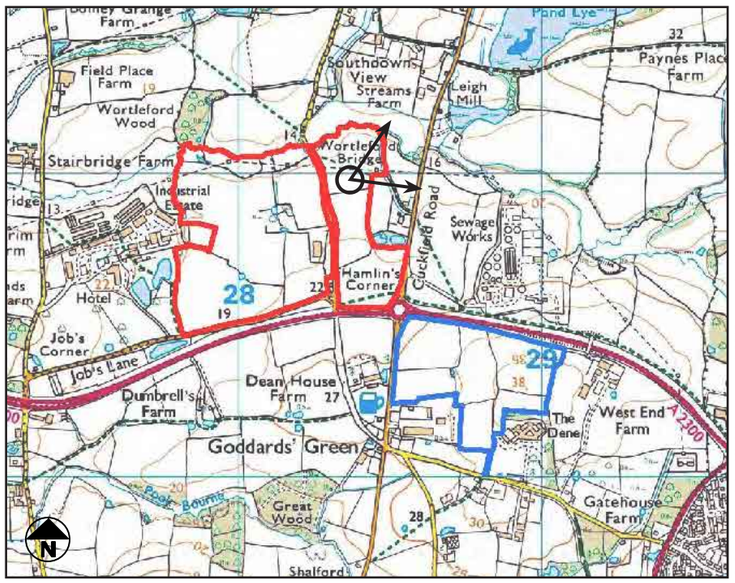
VIEWPOINT 7A

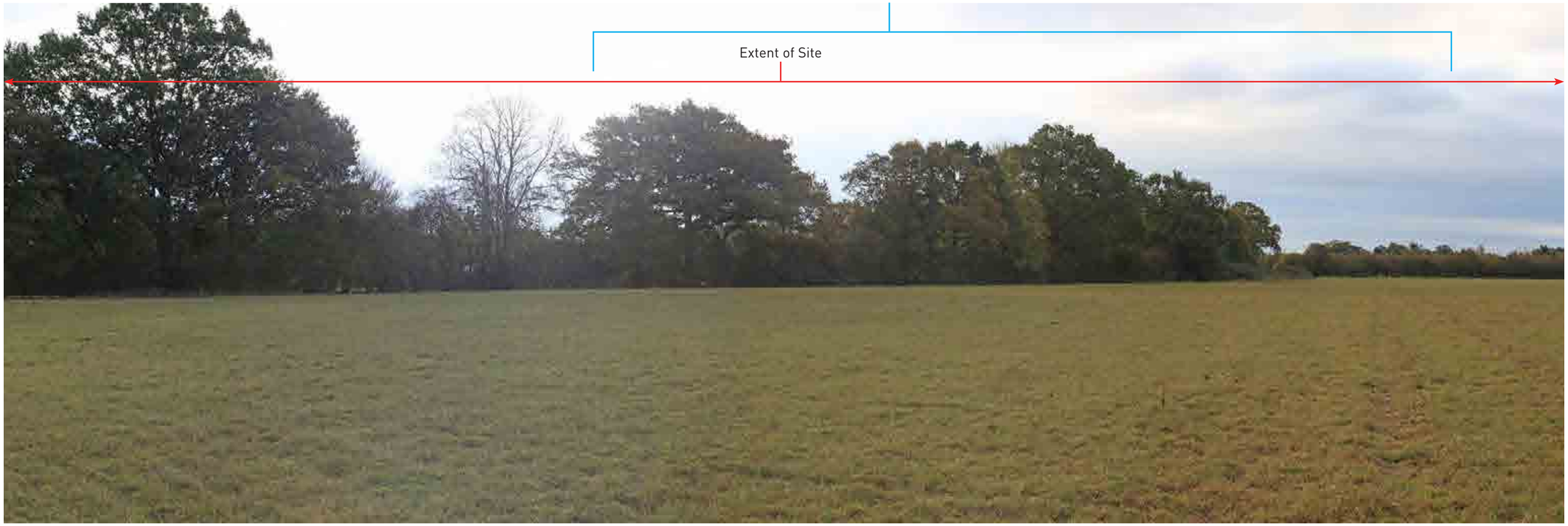
View from PRoW 14Hu within the site boundary



Camera make & model	- Canon EOS 5D	Viewpoint height (AOD)	- 19m
Date & time of photograph	- 26/10/2018 @ 09:27	Distance from site	- 0m
OS grid reference	- 528364, 120989		

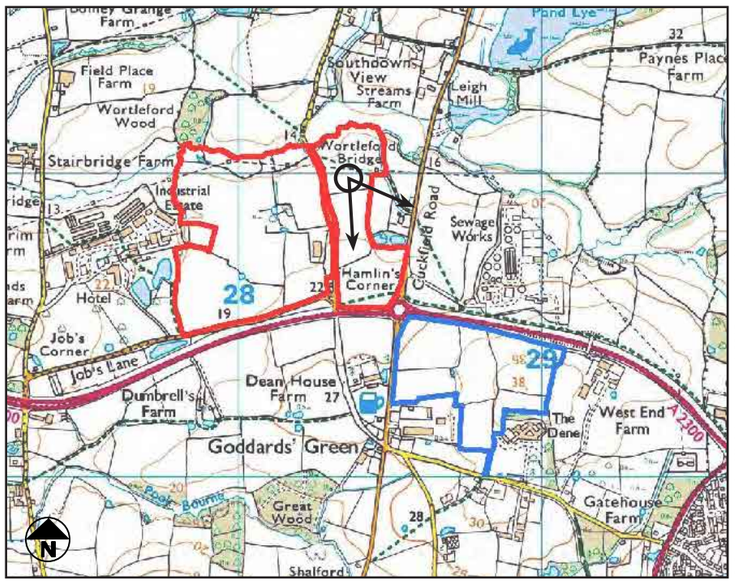
PLANNING | DESIGN | ENVIRONMENT | ECONOMICS

Pegasus Environment



VIEWPOINT 7B

View from PRoW 14Hu within the site boundary



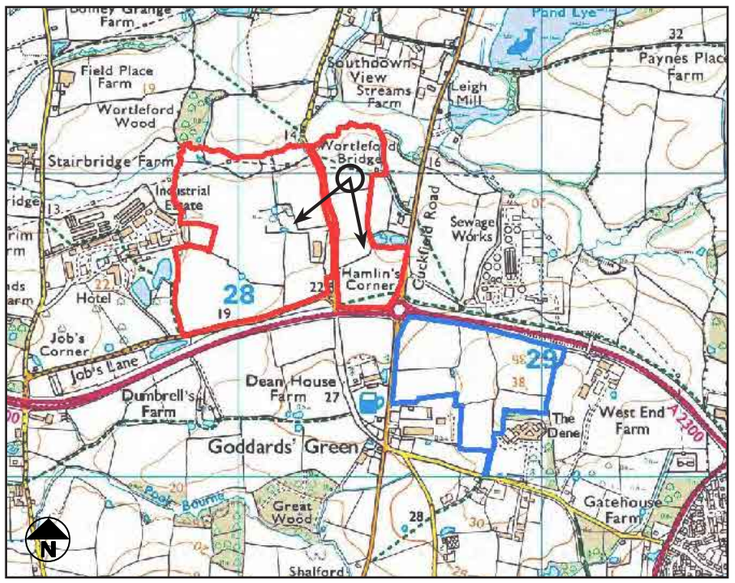
Camera make & model	- Canon EOS 5D	Viewpoint height (AOD)	- 19m
Date & time of photograph	- 26/10/2018 @ 09:27	Distance from site	- 0m
OS grid reference	- 528364, 120989		

PLANNING | DESIGN | ENVIRONMENT | ECONOMICS

Pegasus Environment

VIEWPOINT 7C

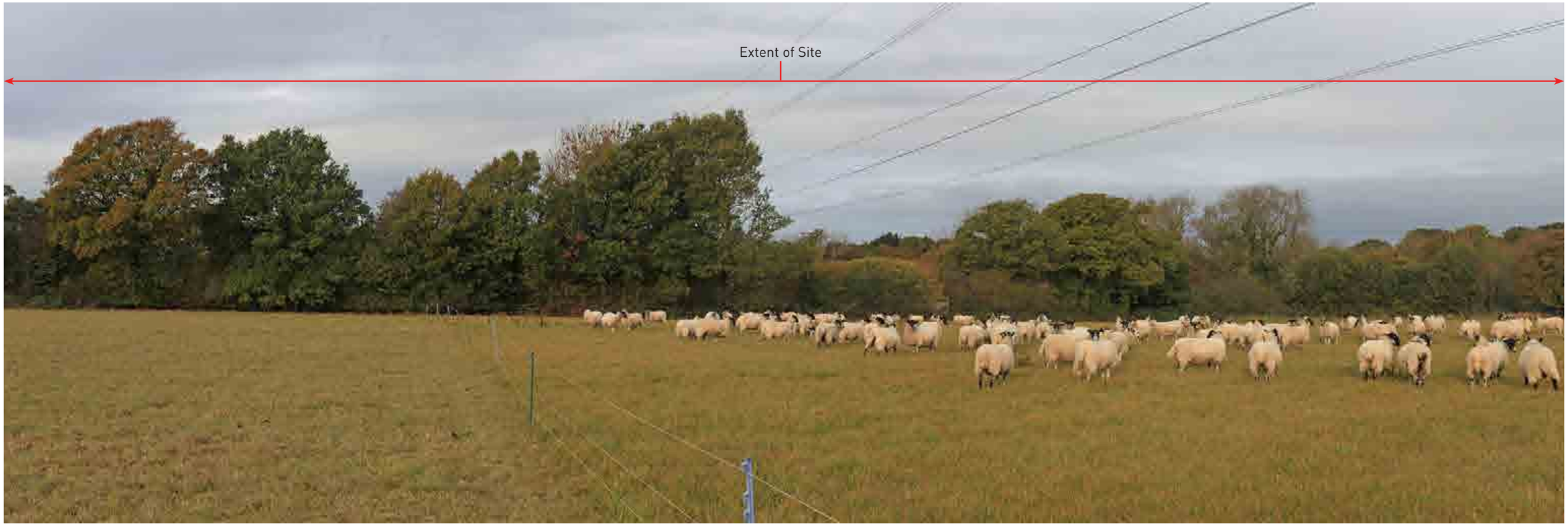
View from PRoW 14Hu within the site boundary



Camera make & model	- Canon EOS 5D	Viewpoint height (AOD)	- 19m
Date & time of photograph	- 26/10/2018 @ 09:27	Distance from site	- 0m
OS grid reference	- 528364, 120989		

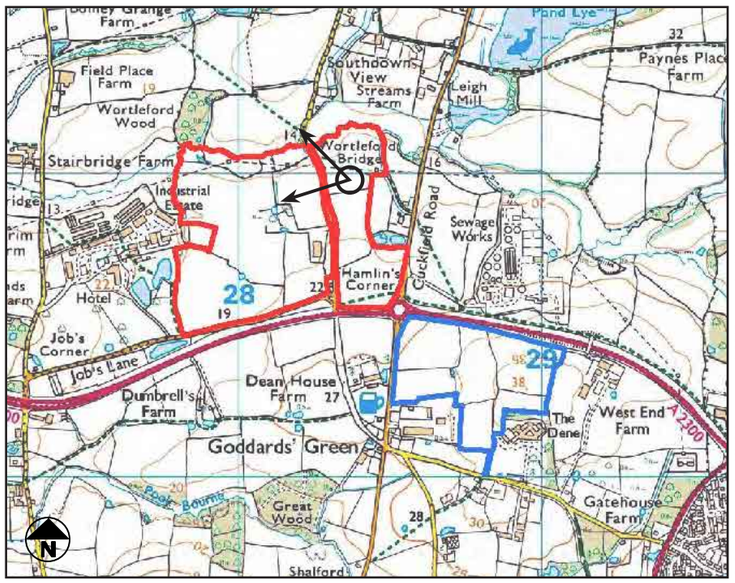
PLANNING | DESIGN | ENVIRONMENT | ECONOMICS

Pegasus Environment



VIEWPOINT 7D

View from PRoW 14Hu within the site boundary



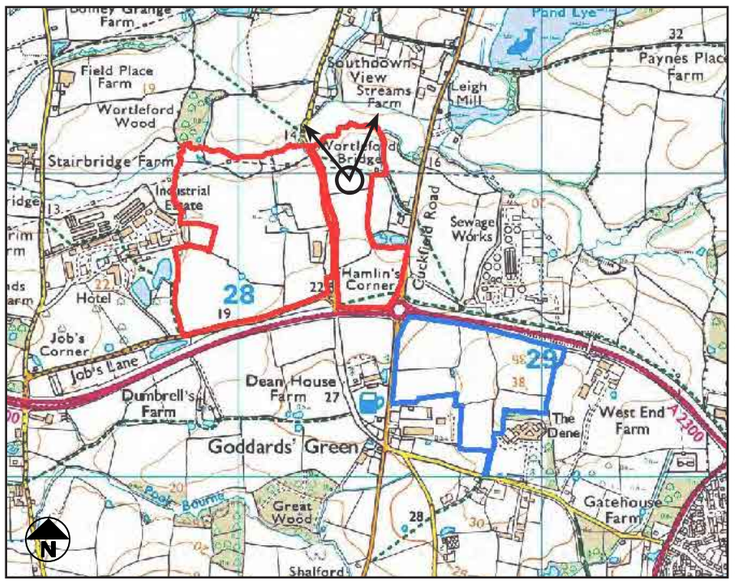
Camera make & model	- Canon EOS 5D	Viewpoint height (AOD)	- 19m
Date & time of photograph	- 26/10/2018 @ 09:27	Distance from site	- 0m
OS grid reference	- 528364, 120989		

PLANNING | DESIGN | ENVIRONMENT | ECONOMICS

Pegasus Environment

VIEWPOINT 7E

View from PRoW 14Hu within the site boundary



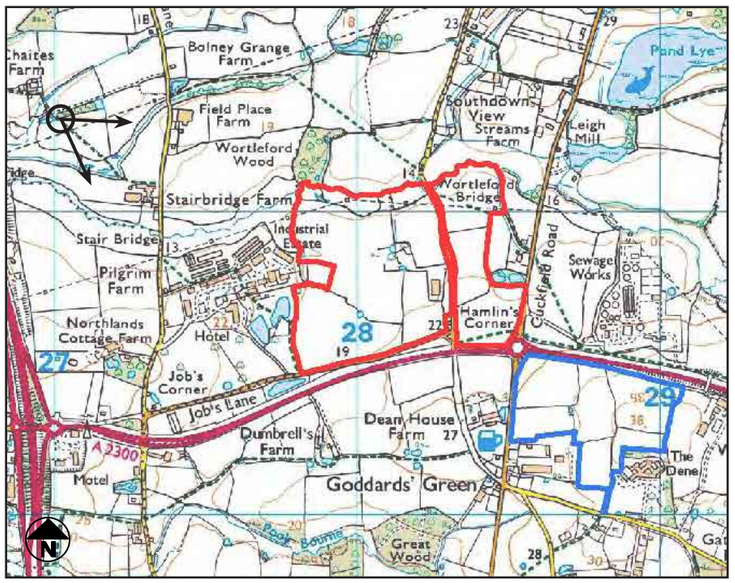
Camera make & model	- Canon EOS 5D	Viewpoint height (AOD)	- 19m
Date & time of photograph	- 26/10/2018 @ 09:27	Distance from site	- 0m
OS grid reference	- 528364, 120989		

PLANNING | DESIGN | ENVIRONMENT | ECONOMICS

Pegasus Environment

VIEWPOINT 8

View from PRoW 16Bo near Chaites Farm



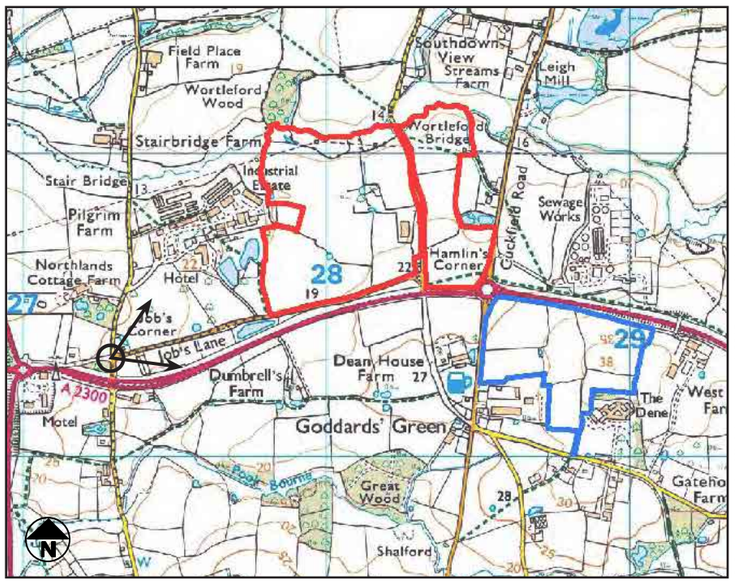
Camera make & model	- Canon EOS 5D	**Viewpoint height (AOD)**	- 15m
Date & time of photograph	- 26/10/2018 @ 09:52	**Distance from site**	- 821m
OS grid reference	- 527017, 121307		

PLANNING | DESIGN | ENVIRONMENT | ECONOMICS

Pegasus Environment

VIEWPOINT 9

View from Job's Lane looking north east



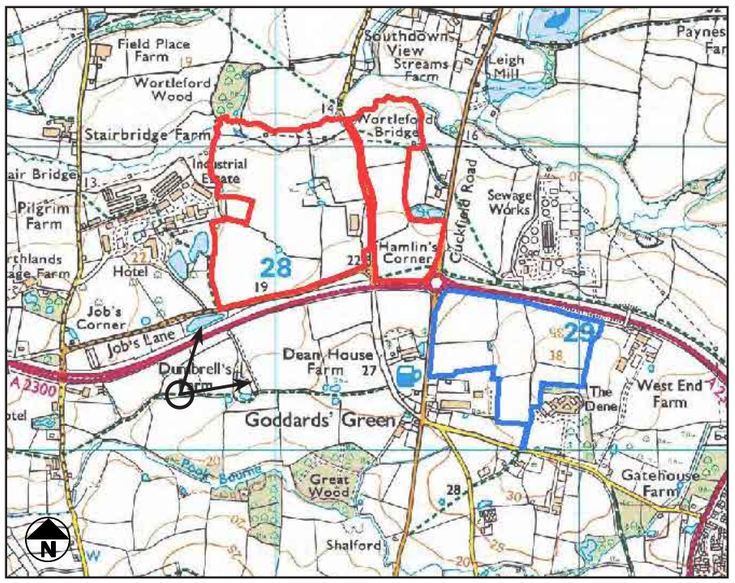
Camera make & model	- Canon EOS 5D	Viewpoint height (AOD)	- 24m
Date & time of photograph	- 26/10/2018 @ 10:11	Distance from site	- 547m
OS grid reference	- 527287, 120324		

PLANNING | DESIGN | ENVIRONMENT | ECONOMICS

Pegasus Environment

VIEWPOINT 10

View from PRoW 15Hu looking north east



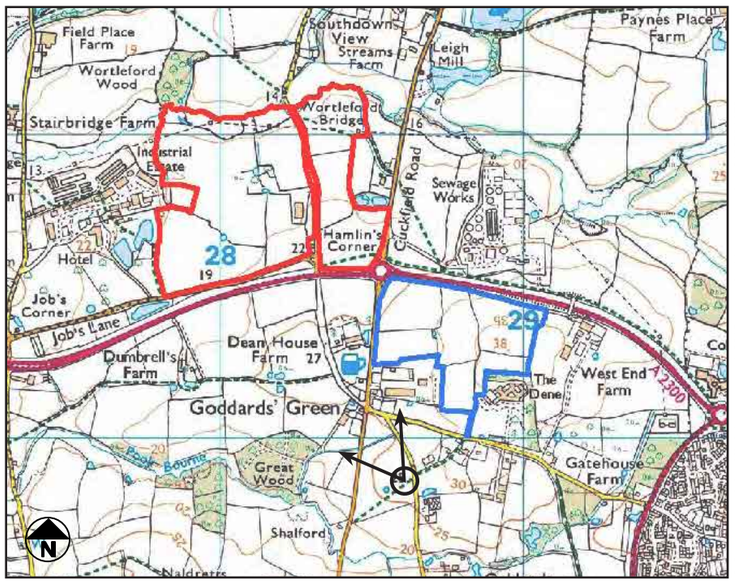
Camera make & model	- Canon EOS 5D	Viewpoint height (AOD)	- 18m
Date & time of photograph	- 26/10/2018 @ 12:15	Distance from site	- 317m
OS grid reference	- 527683, 120179		

PLANNING | DESIGN | ENVIRONMENT | ECONOMICS

Pegasus Environment

VIEWPOINT 11A

View from PRoW 18Hu looking north east



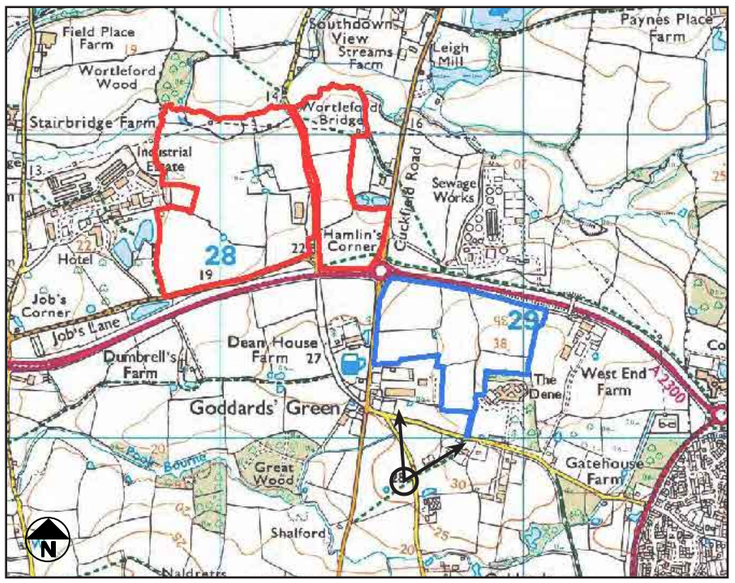
Camera make & model	- Canon EOS 5D	Viewpoint height (AOD)	- 26m
Date & time of photograph	- 26/10/2018 @ 10:39	Distance from site	- 706m
OS grid reference	- 528602, 119865		

PLANNING | DESIGN | ENVIRONMENT | ECONOMICS

Pegasus Environment

VIEWPOINT 11B

View from PRoW 18Hu looking north east



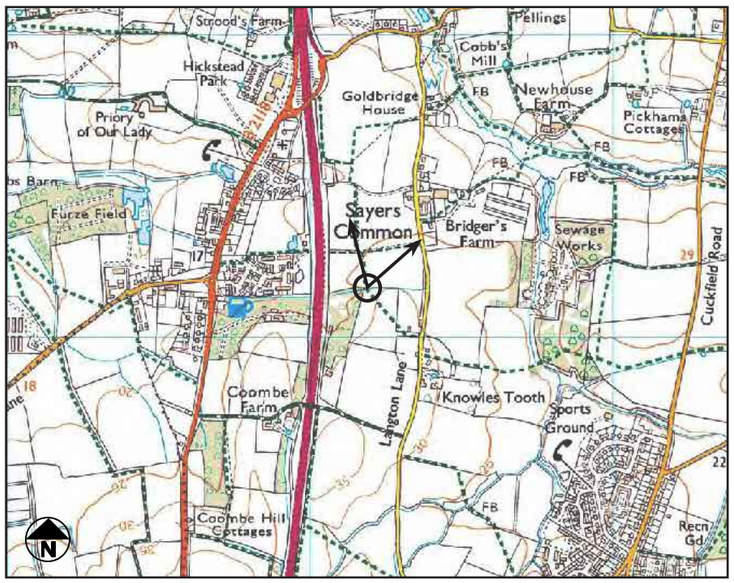
Camera make & model	- Canon EOS 5D	Viewpoint height (AOD)	- 26m
Date & time of photograph	- 26/10/2018 @ 10:39	Distance from site	- 706m
OS grid reference	- 528602, 119865		

PLANNING | DESIGN | ENVIRONMENT | ECONOMICS

Pegasus Environment

VIEWPOINT 12

View from PRoW 26Hu looking north east



Camera make & model	- Canon EOS 5D	**Viewpoint height (AOD)**	- 27m
Date & time of photograph	- 26/10/2018 @ 10:56	**Distance from site**	- 2385m
OS grid reference	- 527189, 118166		

PLANNING | DESIGN | ENVIRONMENT | ECONOMICS

Pegasus Environment

VIEWPOINT 13

View from PRoW 63Hu looking north

Camera make & model	- Canon EOS 5D	Viewpoint height (AOD)	- 43m
Date & time of photograph	- 26/10/2018 @ 11:18	Distance from site	- 3859m
OS grid reference	- 528564, 116682		

PLANNING | DESIGN | ENVIRONMENT | ECONOMICS

Pegasus Environment

VIEWPOINT 14A

View from PRoW 25CR looking south towards the site

Camera make & model	- Canon EOS 5D	Viewpoint height (AOD)	- 83m
Date & time of photograph	- 26/10/2018 @ 08:12	Distance from site	- 2769m
OS grid reference	- 528549, 123930		

PLANNING | DESIGN | ENVIRONMENT | ECONOMICS

Pegasus Environment

VIEWPOINT 14B

View from PRoW 25CR looking south towards the site

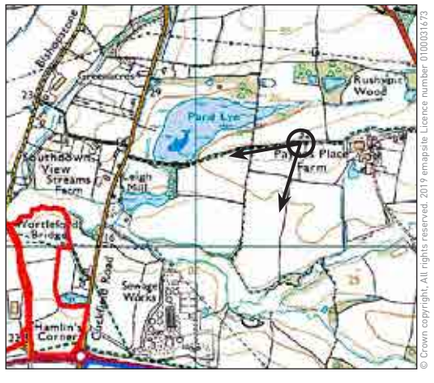
Camera make & model	- Canon EOS 5D	Viewpoint height (AOD)	- 83m
Date & time of photograph	- 26/10/2018 @ 08:12	Distance from site	- 2769m
OS grid reference	- 528549, 123930		

PLANNING | DESIGN | ENVIRONMENT | ECONOMICS

Pegasus Environment

APPENDIX 4

Photomontages 1 to 6



Camera make and model: Canon EOS 5D with a fixed 50mm lens.
Date & time of photography : 26.10.18 @ 08:48
OS reference : 529436, 121429
Viewpoint height : 32m
Recommended Viewing distance : 30cm
Angle of view : 75˚
Camera height set at 1.5m
Document dimensions (420mm x 297mm)

KEY:

Proposed Development Outline 5 storey option (Not Visible)

Goddards Green Development

VIEWPOINT 1

View from PRoW 102CR near Paynes Place Farm, looking south west

Science & Technology Park, Burgess Hill

Client: Dacorar Southern Ltd and Wortleford Trading Co Ltd

DRWG No: **P18-2325_07** Sheet No: **1 of 7**

Drawn by: CS Approved by: HD

Date: 22/02/2019 REV: B

Pegasus Environment

PLANNING | DESIGN | ENVIRONMENT | ECONOMICS

Camera make and model: Canon EOS 5D with a fixed 50mm lens.
Date & time of photography : 26.10.18 @ 09:04
OS reference : 528660, 121425
Viewpoint height : 25m
Recommended Viewing distance : 30cm
Angle of view : 75˚
Camera height set at 1.5m
Document dimensions (420mm x 297mm)

KEY:

- Proposed Development - 3 storeys (notional height 15m)
- Proposed Development - 4 storeys (notional height 19m)
- Proposed Development - 5 storeys (notional height 23m)

VIEWPOINT 2

View from PRoW 12Hu, looking south west

Science & Technology Park, Burgess Hill

Client: Dacorar Southern Ltd and Wortleford Trading Co Ltd

DRWG No: **P18-2325_07** Sheet No: **2 of 7**

Drawn by: CS Approved by: HD

Date: 22/02/2019 REV: B

Pegasus Environment

PLANNING | DESIGN | ENVIRONMENT | ECONOMICS

Camera make and model: Canon EOS 5D with a fixed 50mm lens.
Date & time of photography : 26.10.18 @ 09:18
OS reference : 528043, 121256
Viewpoint height : 21m
Recommended Viewing distance : 30cm
Angle of view : 75˚
Camera height set at 1.5m
Document dimensions (420mm x 297mm)

KEY:

- Proposed Development - 3 storeys (notional height 15m)
- Proposed Development - 4 storeys (notional height 19m)
- Proposed Development - 5 storeys (notional height 23m)

VIEWPOINT 3A

View from PRoW 29CR, looking south

Science & Technology Park, Burgess Hill

Client: Dacorar Southern Ltd and Wortleford Trading Co Ltd

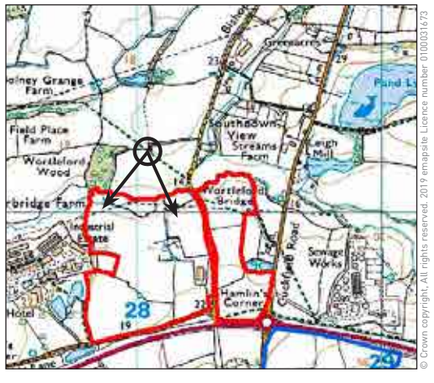
DRWG No: **P18-2325_07** Sheet No: **3 of 7**

Drawn by: CS Approved by: HD

Date: 22/02/2019 REV: B

Pegasus Environment

PLANNING | DESIGN | ENVIRONMENT | ECONOMICS



Camera make and model: Canon EOS 5D with a fixed 50mm lens.
Date & time of photography : 26.10.18 @ 09:18
OS reference : 528043, 121256
Viewpoint height : 21m
Recommended Viewing distance : 30cm
Angle of view : 75˚
Camera height set at 1.5m
Document dimensions (420mm x 297mm)

KEY:

- Proposed Development - 3 storeys (notional height 15m)
- Proposed Development - 4 storeys (notional height 19m)
- Proposed Development - 5 storeys (notional height 23m)

VIEWPOINT 3B

View from PRoW 29CR, looking south

Science & Technology Park, Burgess Hill

Client: Dacorar Southern Ltd and Wortleford Trading Co Ltd

DRWG No: **P18-2325_07** Sheet No: **4 of 7**
Drawn by: CS Approved by: HD
Date: 22/02/2019 REV: B

Pegasus Environment

Camera make and model: Canon EOS 5D with a fixed 50mm lens.
Date & time of photography : 26.10.18 @ 12:05
OS reference : 527285, 120224
Viewpoint height : 23m
Recommended Viewing distance : 30cm
Angle of view : 75˚
Camera height set at 1.5m
Document dimensions (420mm x 297mm)

KEY:

- Proposed Development - 3 storeys (notional height 15m)
- Proposed Development - 4 storeys (notional height 19m)
- Proposed Development - 5 storeys (notional height 23m)
- Goddards Green Development

VIEWPOINT 4

View from A2300, looking north east

Science & Technology Park, Burgess Hill

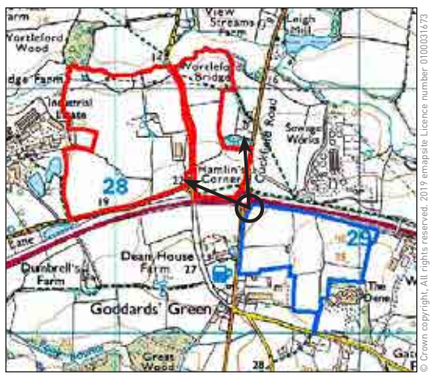
Client: Dacorar Southern Ltd and Wortleford Trading Co Ltd

DRWG No: **P18-2325_07** Sheet No: **5 of 7**

Drawn by: CS Approved by: HD

Date: 22/02/2019 REV: B

Pegasus Environment



Camera make and model: Canon EOS 5D with a fixed 50mm lens.
Date & time of photography : 26.10.18 @ 13:02
OS reference : 528543, 120518
Viewpoint height : 25m
Recommended Viewing distance : 30cm
Angle of view : 75˚
Camera height set at 1.5m
Document dimensions (420mm x 297mm)

KEY:

- Proposed Development - 3 storeys (notional height 15m)
- Proposed Development - 4 storeys (notional height 19m)
- Proposed Development - 5 storeys (notional height 23m)

VIEWPOINT 5

View from A2300, looking north west

Science & Technology Park, Burgess Hill

Client: Dacorar Southern Ltd and Wortleford Trading Co Ltd

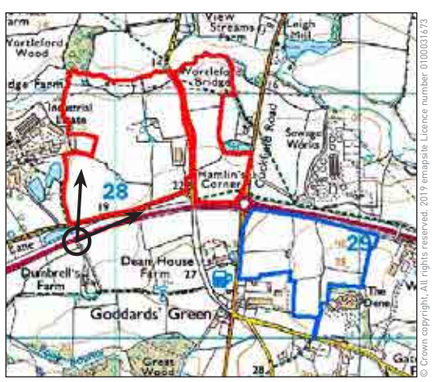
DRWG No: **P18-2325_07** Sheet No: **6 of 7**

Drawn by: CS Approved by: HD

Date: 22/02/2019 REV: B

Pegasus Environment

PLANNING | DESIGN | ENVIRONMENT | ECONOMICS



Camera make and model: Canon EOS 5D with a fixed 50mm lens.
Date & time of photography : 18.02.19 @ 12:08
OS reference : 527834, 120409
Viewpoint height : 19m
Recommended Viewing distance : 30cm
Angle of view : 75˚
Camera height set at 1.5m
Document dimensions (420mm x 297mm)

KEY:

- Proposed Development - 3 storeys (notional height 15m)
- Proposed Development - 4 storeys (notional height 19m)
- Proposed Development - 5 storeys (notional height 23m)

PLANNING | DESIGN | ENVIRONMENT | ECONOMICS

VIEWPOINT 6

View from Junction of A2300 and Entrance to Dumbrell's Farm, looking north east

Science & Technology Park, Burgess Hill

Client: Dacorar Southern Ltd and Wortleford Trading Co Ltd

DRWG No: **P18-2325_07** Sheet No: **7 of 7**

Drawn by: CS Approved by: HD

Date: 22/02/2019 REV: B

Pegasus Environment

APPENDIX V

CSA
CHARLES D. SMITH & ASSOCIATES LTD
CONSULTING ENGINEERS

SCIENCE AND TECHNOLOGY PARK (STP)

GODDARDS GREEN

PM1530/19

UTILITIES APPENDIX

Revision: D R A F T

Date: 29th April 2020

Project Name: **Science and Technology Park (STP)**

Project No: **PM1530/19**

Appendix

Utilities Investigation - Contacts Record with Utility Companies

1. Introduction

Charles D Smith and Associates Ltd (CSA) are appointed by Glenbeigh Developments Ltd to report on the ability of the utility companies to provide services to the proposed STP within the proposed construction programme period, and on constraints to the development presented by existing services crossing the site. CSA had existing good contacts with the utility companies in this region, having worked with them continuously since 2012 in diverting existing services and applying for new services for The Hub and for Fairbridge Way.

2. Southern Water Services – Foul Drainage

2.1 CSA made contact with Joff Edevane on 18th March 2020 with a high level network enquiry.

2.2. Enquiry passed to Charlotte Mayall at Southern Water Services (SWS), who requested an indicative daily flow rate (DWF).

2.3. CSA calculated the foul flow rate for each phase, converted that to DWF (using standard factors) and sent to Charlotte Mayall on 23rd March 2020.

2.4. Charlotte Mayall replied on 24th March 2020 confirming that Goddards Green WTW has capability to accept the predicted flows from Project Newton.

csa

From: [redacted]
Sent: 18 March 2020 11:00
To: [redacted]
Subject: RE: GODDARDS GREEN STW GROWTH

Joff,

Thanks for the swift reply. This project is some way off at the moment, so I was interested to know whether this site is already in SWS' plans (from high level liaison with MSDC), or whether there is presently no provision in the foul network? My client would like an indication on this matter, it is a little early for a pre dev app.

Kind regards,

Colin Smith

Charles D. Smith & Associates Ltd
333 High Street
Rochester
Kent
ME1 1DA

[redacted]

From: [redacted]
Sent: 18 March 2020 08:00
To: [redacted]
Subject: RE: GODDARDS GREEN STW GROWTH

Hi Colin

I am assuming this is project is a pre development query, as such then you can apply for a pre development enquiry to be requested via our portal:

https://developerservices.southernwater.co.uk/

regards
Joff

Joff Edevane
Growth Planning Lead

[redacted]
southernwater.co.uk

From: [redacted]
Sent: 17 March 2020 12:46
To: [redacted]
Subject: FW: GODDARDS GREEN STW GROWTH

Joff,

Our email below, that forwarded by George Csatlos is for a different site (albeit also in Goddard's Green).

Regards,

Colin Smith

Charles D. Smith & Associates Ltd
333 High Street
Rochester
Kent
ME1 1DA

[redacted]

From: [redacted]
Sent: 16 March 2020 16:07
To: [redacted]
Subject: GODDARDS GREEN STW GROWTH

Joff,
We made enquiries to Developer Services regarding capability at Goddard's Green to accept foul flows in addition to those for the Northern Arc. George Csatlos suggested that we contact your Growth Planning team.

We are considering a mixed development of 130,000m2, mainly B1 (office) and some B8 (distribution). We have worked on two recent developments (the Hub and Fairbridge Way) which were included in the flow rate for the expansion of Goddards Green STW.

Are you able to advise the flow rate that Goddards Green may be able to accept from this development?

Regards,

Colin Smith

Charles D. Smith & Associates Ltd
333 High Street

csa

From: [redacted]
Sent: 18 March 2020 11:00
To: [redacted]
Subject: RE: GODDARDS GREEN STW GROWTH

Joff,

Thanks for the swift reply. This project is some way off at the moment, so I was interested to know whether this site is already in SWS' plans (from high level liaison with MSDC), or whether there is presently no provision in the foul network? My client would like an indication on this matter, it is a little early for a pre dev app.

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Charles D. Smith & Associates Ltd
333 High Street
Rochester
Kent
ME1 1DA

[redacted]

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https://developerservices.southernwater.co.uk/

regards
Joff

Joff Edevane
Growth Planning Lead

[redacted]
southernwater.co.uk

From: [redacted]
Sent: 17 March 2020 12:46
To: [redacted]
Subject: FW: GODDARDS GREEN STW GROWTH

Joff,

Our email below, that forwarded by George Csatlos is for a different site (albeit also in Goddard's Green).

Regards,

Colin Smith

Charles D. Smith & Associates Ltd
333 High Street
Rochester
Kent
ME1 1DA

[redacted]

From: [redacted]
Sent: 16 March 2020 16:07
To: [redacted]
Subject: GODDARDS GREEN STW GROWTH

Joff,
We made enquiries to Developer Services regarding capability at Goddard's Green to accept foul flows in addition to those for the Northern Arc. George Csatlos suggested that we contact your Growth Planning team.

We are considering a mixed development of 130,000m2, mainly B1 (office) and some B8 (distribution). We have worked on two recent developments (the Hub and Fairbridge Way) which were included in the flow rate for the expansion of Goddards Green STW.

Are you able to advise the flow rate that Goddards Green may be able to accept from this development?

Regards,

Colin Smith

Charles D. Smith & Associates Ltd
333 High Street

csa

From: [redacted]
Sent: 23 March 2020 12:15
To: Mayall, Charlotte; Edevane, Joff; Janes, Tamzyn
Subject: RE: GODDARDS GREEN STW GROWTH

Charlotte,

I have used the following data:

Offices:	45 l/person day @10m2 / person
B1b:	45 l/person day @40m2 / person
B1c:	45 l/person day @47m2 / person
Creche:	50 l/person day @ 15m2 / person
Hotel:	135 l/day bedroom
Mixed Retail:	3.9 l/m2 day

Future Growth Factor	1.1
Infiltration Factor	1.1
DWF	6

The predicted consumption figures for each phase are:

Phase 1	88200 l/day;	7.41 l/s
Phase 2	39735 l/day	3.34 l/s
Phase 3	70785 l/day	5.95 l/s
Phase 4	34605 l/day	2.91 l/s
Phase 5	97965 l/day	8.23 l/s
Total 1-5	331290 l/day	27.84 l/s

You can change the factors to suit the characteristics of your network. Let me know if you require any further details.

Kind regards,

Colin Smith

Charles D. Smith & Associates Ltd
333 High Street
Rochester
Kent
ME1 1DA

[redacted]

csa

From: [redacted]
Sent: 24 March 2020 16:22
To: [redacted]
Subject: RE: GODDARDS GREEN STW GROWTH

Dear Colin,

Using your cumulative figure for all 5 phases of development of 331,290 l/d, this equates to 331.2 m3 daily flow which is well within current permit headroom at Goddards Green WTW. It should be noted however that WTW available headroom cannot be reserved, and Goddard's Green will probably need a new dry weather flow permit in AMP8 (2025-2030) to accommodate existing planned residential growth.

Kind regards,

Charlotte Mayall
Regional Planning Lead
Hampshire & West Sussex

T. 01273 663742
southernwater.co.uk

From: [redacted]
Sent: 23 March 2020 12:15
To: [redacted]
Subject: RE: GODDARDS GREEN STW GROWTH

Charlotte,

I have used the following data:

Offices:	45 l/person day @10m2 / person
B1b:	45 l/person day @40m2 / person
B1c:	45 l/person day @47m2 / person
Creche:	50 l/person day @ 15m2 / person
Hotel:	135 l/day bedroom
Mixed Retail:	3.9 l/m2 day

Future Growth Factor	1.1
Infiltration Factor	1.1
DWF	6

The predicted consumption figures for each phase are:

Phase 1	88200 l/day;	7.41 l/s
Phase 2	39735 l/day	3.34 l/s
Phase 3	70785 l/day	5.95 l/s
Phase 4	34605 l/day	2.91 l/s

3 Southern Gas Networks – Natural Gas

3.1. CSA made an application to Southern Gas Network (SGN) on 7th April, requesting a capacity check and confirmation of the point of connection to the network. The application included the estimate of natural gas flow rates for each phase, which total 2303 kW.

3.2. SGN replied on 14th April confirming that "it is likely that no reinforcement is required to support your load". The communication included a copy of their asset records showing a point of connection in Jane Murray Way. This point of connection has been extended for one of our projects, The Hub, by Fulcrum, which brings the likely point of connection closer to the site, in Gatehouse Lane.

3.3. CSA requested that SGN confirm that they have included the load for the Hub in their capacity check, on 21st April 2020. SGN provided this confirmation on 28th April.

csa

From: [redacted]
Sent: 07 April 2020 15:19
To: Southern Gas Networks (ndsouth@sgn.co.uk)
Subject: PM1530 CAPACITY CHECK APPLICATION
Attachments: SGN Site Plan.pdf; SGN Site location plan.pdf; SGN-Commercial-Multiple-Capacity-Increases-Form.pdf

Dear Sir,

Please find attached our request for a capacity check and point of connection.

Regards,

Colin Smith

Charles D. Smith & Associates Ltd
333 High Street
Rochester
Kent
ME1 1DA

[redacted]

csa

From: [redacted]

Sent: 14 April 2020 13:11
To: [redacted]
Subject: RE: PM1530 CAPACITY CHECK APPLICATION
Attachments: Site.pdf

Good morning,

Please find attached plan showing the nearby SGN gas infrastructure.

Your SGN reference is L20149985

It is likely that no reinforcement is required to support your load. This means that there is capacity within the network to supply your proposed load.

As per the NP14 table, 63mm Pipes and smaller should be able to support a load of up to 920kWh before possible reinforcement. 90mm Pipes and larger should be able to support a load of up to 1733kWh before possible reinforcement.

Land enquiries provide a understanding of local distribution networks <7bar, the effect of proposed loads on >7bar networks are not examined during this procedure.

A source pressure of 450mbar would be offered at the connection point of Medium Pressure parent main.

If you require more detailed information you will need to submit an application for a Quotation. My department does not provide quotations or Budget Estimates, for new lay or alterations to gas infrastructure, the use of any GIRS registered company currently operating within Southern Gas Networks foot print can be employed for these works. A list of such companies can be found on Lloyds register web site, http://www.lloydsregister.co.uk/schemes/girs/providers-list.aspx

If you choose to use a third party from the Lloyds register, I would recommend using one accredited for connections, Design and project management.

Many Thanks,
Matty Branagh
Third Party Connections
T: 01293 818 252 [redacted]
SGN, St Lawrence House, Station Approach, Horley, RH6 9HJ
sgn.co.uk
Find us on Facebook and follow us on Twitter: @SGNgas
Smell gas? Call 0800 111 999

PLEASE NOTE:- SGN have revised their Connections Service Charges with effect from the 18th June 2018. These new rates are available to view at the following location:

https://www.sgn.co.uk/Our-Services/SGN-Connections-Charges/

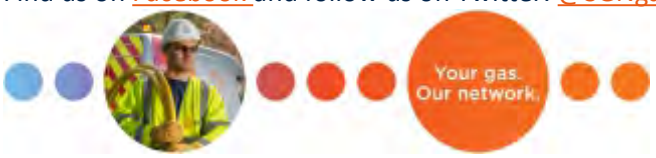
From: [redacted] **Behalf Of** Non Domestic Sales Enquiries-South
Sent: 08 April 2020 10:12
To: [redacted]
Subject: FW: PM1530 CAPACITY CHECK APPLICATION

Morning,

Please assist the customer with their request.

Kindest Regards,

Nick Jones,
Front Desk Process Assistant
[redacted]
SGN, St Lawrence House, Station Approach, Horley, Surrey RH6 9HJ
sgn.co.uk
Find us on Facebook and follow us on Twitter: @SGNgas



Smell gas? Call 0800 111 999
Find out how to protect your home from carbon monoxide

From: [redacted]
Sent: 07 April 2020 15:19
To: Non Domestic Sales Enquiries-South [redacted]
Subject: PM1530 CAPACITY CHECK APPLICATION

Dear Sir,

Please find attached our request for a capacity check and point of connection.

Regards,

Colin Smith

Charles D. Smith & Associates Ltd
333 High Street
Rochester
Kent
ME1 1DA

[redacted]

csa

From: [redacted]
Sent: 21 April 2020 11:50
To: [redacted] SGN
Subject: RE: PM1530 CAPACITY CHECK APPLICATION
Attachments: 5071906 - Draft Gas Design 24 04 2018.pdf

Matthew,

Thanks for the rapid response. The proposed POC at the junction of Jane Murray Way / Gatehouse Lane has already been extended down Gatehouse Lane by Fulcrum for another of our projects, the Hub, as attached.

Does your capacity investigation include the load for the Hub? The actual loads are less than those predicted in 2015, we are presently connected to DPD 250 kW and Roche 200 kW. When the site is fully developed the connected load is not expected to reach the 3642 kW noted on Fulcrum's design, on the two plots developed so far, we are 750 kW lower.

Regards,

Colin Smith

Charles D. Smith & Associates Ltd
333 High Street
Rochester
Kent
ME1 1DA

[redacted]

From: [redacted]
Sent: 14 April 2020 13:11
To: [redacted]
Subject: RE: PM1530 CAPACITY CHECK APPLICATION

Good morning,

Please find attached plan showing the nearby SGN gas infrastructure.

Your SGN reference is L20149985

It is likely that no reinforcement is required to support your load. This means that there is capacity within the network to supply your proposed load.

csa

From: [redacted]
Sent: 28 April 2020 15:47
To: [redacted]
Subject: RE: PM1530 CAPACITY CHECK APPLICATION

Matty,

Swift confirmation much appreciated.

Regards,

Colin Smith

Charles D. Smith & Associates Ltd
333 High Street
Rochester
Kent
ME1 1DA

[redacted]

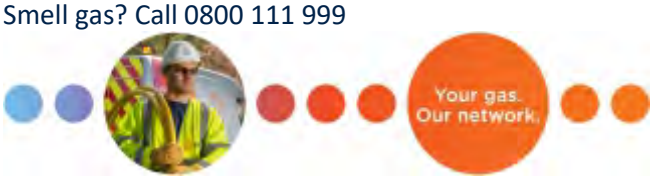
From: [redacted]
Sent: 28 April 2020 15:23
To: [redacted]
Subject: RE: PM1530 CAPACITY CHECK APPLICATION

Hello,

Yes I can confirm it was checked with the full load and can confirm that is no issue the full load can still be supported.

Thank you.

Matty Branagh
Third Party Connections
T: 01293 818 252 ([redacted]
[redacted]
SGN, St Lawrence House, Station Approach, Horley, RH6 9HJ
sgn.co.uk
Find us on Facebook and follow us on Twitter: @SGNgas
Smell gas? Call 0800 111 999



PLEASE NOTE:- SGN have revised their Connections Service Charges with effect from the 18th June 2018. These new rates are available to view at the following location:

https://www.sgn.co.uk/Our-Services/SGN-Connections-Charges/

Classified as Internal

From: [redacted]
Sent: 28 April 2020 11:13
To: [redacted]
Subject: RE: PM1530 CAPACITY CHECK APPLICATION

WARNING **This email is not from the SGN network. Do not open unexpected files or links.**

Matty,

Matty,

The load of 3645 kW, or at least the part of it that is already connected to your network, via the MP extension down Gatehouse Lane to the Hub, is existing, so I wanted to make sure that it had been included in your calculation, and that the point of connection would be in Gatehouse Lane, rather than where you show it.

I am in the office if you wish to discuss.

Regards,

Colin Smith

Charles D. Smith & Associates Ltd
333 High Street
Rochester
Kent
ME1 1DA

[redacted]

From: [redacted]
Sent: 28 April 2020 09:29
To: [redacted]
Subject: RE: PM1530 CAPACITY CHECK APPLICATION

Hello Colin,

I'm hoping you are well giving the current situation, this enquiry was analysed taking into account the proposed load of 2303Kwh not 3645 would you like me to take this into account and provide a updated check.

Thank you for the response.

4 South-East Water – Clean Water

4.1. CSA made a capacity enquiry to South-East Water on 27th March 2020. This included a Pre-Development Application form. The predicted daily flow rate is 331m³.

4.2. Ray Jordan from South-East Water replied on 22nd April 2020 confirming that their network can provide the predicted flow rate for the site.

4.3. Formal confirmation received from South-East Water in the form of a pre-development quotation on 28th April 2020.

csa

From: [redacted]
Sent: 27 March 2020 18:03
To: Developer Services
Subject: RE: GODDARDS GREEN STW GROWTH
Attachments: PM1530 SEW Pre Dev App.pdf; Site Location Plan.pdf

Amy,

Attached. Let me know if you require any further information.

Kind regards,

Colin Smith

Charles D.Smith & Associates Ltd
333 High Street
Rochester
Kent
ME1 1DA

[redacted]

From: Developer Services <Developer.Services@southeastwater.co.uk>
Sent: 27 March 2020 14:20
To: [redacted]
Subject: RE: GODDARDS GREEN STW GROWTH

Hi Colin,

We cannot advise to the below without an application form being submitted unfortunately as this would need to go through to various departments.

I have attached a budget pre development application form, please fill this is to proceed.

Kind regards,

Amy Martin
Developer Services Advisor
Service Management

[redacted] / www.southeastwater.co.uk

[redacted] [redacted]

South East Water, Rocfort Road, Snodland, Kent, ME6 5AH

From: [redacted]
Sent: 27 March 2020 10:45
To: Developer Services <Developer.Services@southeastwater.co.uk>
Subject: FW: GODDARDS GREEN STW GROWTH

We wish to understand the potential capability of your network to supply a large commercial development proposed at the junction of Cuckfield Rd and the A2300 in Goddards Green. The site location is included in the email chain below.

Our email to Southern Water below provides the estimated daily potable water consumption for each of the five phases of construction, and the total daily flow rate of 331m3. Our current project is connected to the 4"main in Cuckfield Rd which also serves the sewage treatment works (STW), but which we assume will require reinforcement for the proposed development. On the basis that you will have reinforced the network to accommodate the Northern Arc housing development to the east, we assume that there may be a suitable point of connection not far east of the STW.

We do not intend to make an application yet, but it would be appreciated if SEW would confirm whether the network already has the capability to serve this site.

Your 'phone lines are not available at present, but do give us a call if you require further details in order to reply.

Regards,

Colin Smith

Charles D. Smith & Associates Ltd
333 High Street
Rochester
Kent
ME1 1DA

[redacted]

From: [redacted]
Sent: 24 March 2020 16:22
To: [redacted]
Subject: RE: GODDARDS GREEN STW GROWTH

Dear Colin,

Using your cumulative figure for all 5 phases of development of 331,290 l/d, this equates to 331.2 m3 daily flow which is well within current permit headroom at Goddards Green WTW. It should be noted however that WTW

Our Ref: RB/JA/Dev Servs/NARS- 16271

Your Ref:

Direct Line: **03330 000 060**
Email: developermains@southeastwater.co.uk

22nd April 2020

Colin Smith
333 High Street
Rochester
Kent
ME1 1DA

Dear Colin,

Proposed Land at Junction of A2300 and Cuckfield Road, Goddards Green, West Sussex, BN6 9.

Thank you for your letter requesting provision of water mains at the above site. I enclose a plan showing details of the Company's mains.

No offsite reinforcement works are required in conjunction with this enquiry but any non-standard flow rate above 0.27 l/sec, is to be flow restricted to the designed flow rate. The flow management is required to provide the customer with their requested flow rate and protect the Company existing customer if in the event the site demand increases. For compliance, SEW are required to record any flow management installed in conjunction with domestic supplies on either GIS / Billing system or both , please ensure that this is adhered to.

Please be aware that under the new pricing structure, all reinforcement works will now be subsidised through infrastructure charges. Offsite reinforcement works are no longer site specific.

SEW does not guarantee pressure to the upper floors of properties & flats.

For budget purposes:

The on-site mains would be expected to cost:	£125.00 per metre
Standard connections are **£336.57** (A-type) each x 25:	£8,414.25
Infrastructure Charge is **£536.71** per connection x 25:	£13,417.75

The budget figures quoted above have been prepared on the assumptions that there are no Health & Safety hazards arising from either the present site conditions or any which may arise as a result of activities of the developer, his agents or contractors.

South East Water ("SEW") offers two options to developers for the installation of water mains. In brief, the options are as follows:

I. **The company offer** based on a discount being applied to the total cost of the scheme. This is derived by comparing the annual revenue from the new service connections and the annual repayment of a notional loan over a 12 year period to calculate the deficit. The corresponding lump sum then has the discount applied in accordance with the methodology issued by Ofwat under charging rules for new connection services (English Undertakers)

II. **The Self Lay Option** is divided into two sections: Non-Contestable is what you are required to pay SEW initially. This cost relates to non-contestable activities (i.e. those items of work that for reasons of safeguarding our water quality, only South East Water or their approved contractor may undertake). Details of Self Lay are available at: http://www.ofwat.gov.uk/consumerissues/selflay Income Offset - On satisfactory handover of the self-laid mains, an Asset Payment will be paid to you. If you choose to self-lay the mains, this will need to be in accordance with the SEW Self Lay Policy, using an accredited contractor, under South East Water supervision.

We would also be grateful to receive your detailed plans of the proposed development and the relevant reports and information required to enable us to prepare a firm quotation for the above option(s).

For the Company to provide firm figures at the earliest opportunity please supply the items listed in our "Developer Services – Information required for provision of Water Services".

The availability of a soils report to establish the presence or otherwise of contaminated land is most important. The report must be based on a site investigation carried out in accordance with British Standard Institution BS10175:2001 Investigation of Potentially Contaminated Sites - Code of Practice and in particular should include any potential risk of petroleum hydrocarbons.

In addition the specification proposed for the internal plumbing system could have relevance for the pipework design and your early confirmation of this information would be of great assistance.

If you have any questions or require clarification regarding this letter please feel free to call us.

Yours sincerely

Ray Jordan
Developer Services Coordinator
Developer Services Department

A firm site layout: scale 1: 500, which identifies:

i. the extent of the land in the developer's ownership
ii. the individual plot numbers + Bin Store / Landlord Supplies
iii. the service entry positions for each plot + Bin Store / Landlord Supplies
(Please note: Water for Domestic, Non Domestic (includes Bin Store / Landlord) and water for Fire fighting purposes will all be metered separately)

iv. the extent of the area proposed for adoption by the Highway Authority
v. any designated service strips

It is preferred that you supply an electronic version of your builder's plan, ideally in dwg format. This can be received via CD or by our email address on the top right hand corner of your letter.

The plan must include the proposed development footprint along with all details as previously stated, as well as a section of Ordnance Survey background for the area upon which it is located. The background must be substantial and varied enough, dependant upon its location being urban or rural, to include either surrounding field, fence and road lines, if possible buildings as well which then may be used as location reference points.

An Ordanence Survey grid reference for the site location would also be of help.

All plans that are submitted must be checked that an XREF documents are either imported into the DWG as independent layers or all XREF drawings or files are also included in the submission for mains to be designed and an estimation produced.

3. A Programme of Works and plan identifying any phasing with number of properties associated with any phase of the site and house build rate per year.

4. A Soil Investigation in accordance with British Standard Institution BS10175:2001 Investigation of Potentially Contaminated Sites - Code of Practice. **(In particular the soils investigation should include any potential risk of petroleum hydrocarbons)**

5. Details of any consultation with all known parties on archaeological and environmental issues

6. Type of Hot System installation, i.e. vented or unvented systems

7. Details of the Land owners, together with their Solicitors details, applicable for any Company asset to be installed in non-Highway Authority land.

8. Confirmation of the required flow rate in litres per second, plus completed fittings list, for any nonstandard connection with a flow rate of more than one cubic meter per hour.

9. Should there be any requirement to install sprinkler systems, hose reels or fire-fighting equipment within the new units, please confirm the required flow rate for the firefighting supply so as to enable the effects on design to be assessed and the relevant quotation to be provided. For your information, current Company policy does not permit the cross connection of water for domestic and fire-fighting /non-domestic use therefore should the properties require a supply for firefighting purposes it will be necessary to gain independent metered connections to our main to individually supply the separate elements.

5 UK Power Networks – Power

5.1. CSA calculated the estimated demand of the development to be 15MVA.

5.2. CSA contacted UK Power Networks (UKPN) on 20th December 2019 regarding the provision of the power from the high voltage network.

5.3. A meeting was held with UKPN on 26th February 2020 to discuss the strategy for power provision. The agenda for the meeting included other proposed projects with large electricity demands in the vicinity, the Northern Arc (25 MVA) and The Hub Phase 2 (10 – 12 MVA).

5.4. Following further discussions with UKPN by email on 15th April 2020, an application for a "Budget Estimate" i.e. outline proposal was made on 16th April 2020.

5.5. Email received from UKPN on 29th April 2020 confirming capacity to serve the STP from the Goodards Green grid site.

6. Communications

6.1. Virgin Media

6.1.1. Contact was made with Virgin Media on 15th April 2020 regarding the presence of existing network infrastructure in the locality that could be extended to serve the site.

6.1.2. Virgin Media advised in their email dated 16th April 2020 that their infrastructure runs past the site along the A2300 and can be extended to serve the development. The email also states that Virgin Media has the intention to expand its existing services to serve future developments in the area.

csa

From: [redacted]
Sent: 16 April 2020 15:48
To: [redacted]
Subject: RE: Re Science & Technology Park Goddards Green Sussex
Attachments: Web Form.xlsx; Science & Technology Park Goddards Green Sussex VM Landscape.pdf

Good afternoon Mike,
Many thanks for your time today.

Our Commercial New Build process facilitates the build of infrastructure only that has the capability of serving broadband, ethernet or high capacity services directly from Virgin Media or approved 3rd parties. Exact requirements will be defined with the client during the New Build process.

The attached shows that Virgin Media have our own infrastructure in the immediate vicinity of the STP proposed site but works would be required to bringing our services on net for future tenants. These works would be defined and completed through the Commercial New Build process.

As the UK's second largest ISP we are in a position to offer this site secure true diversity should it be required, acting as a standalone provider or as part of a resilient requirement.

Attached is a high level overview to Virgin Media, our parent organisation, Liberty Global and the purpose and process to commercial new build, with some additional bullet point information below – more than happy to provide further information to any of the attached or below as required.

Burgess Hill is an area currently served by Virgin Media for residential and commercial premises and it will be our intention to support future residential and commercial build in the surrounding area.

Unfortunately our web portal for registration of new sites is currently undergoing essential maintenance, but site registration can be achieved by completing the attached Web Form.

I look forward to any further questions you and the client may have and registration of the site.

Best wishes,
Roddy

How we achieve Commercial New Build

- Collaboration is key to everything we do: simple processes, easy delivery
- Dedicated portal: New Build Admin, New Build Officer, Planner, New Build Liaison Officer
- Early knowledge & registration
- Free initial analysis through First Pass & Feasibility with New Build Liaison Officers streamlining operations on the ground. Virgin Media issue materials, site surveys, commercials are kept to cost only
- Future proofing sites, network installed although not live, made live early which promotes our products
- Demand for our services on new build sites is extremely high
- Close collaboration with other VM teams

How can our team help you

- Speed and choice
- Encouraging tenants from a strategic level given a choice of providers, reduced future disruptions
- Government Broadband agenda and digital strategy objectives
- Significant investments within the areas
- Developers also meet their requirements

- UK Government full fibre broadband 2025 statement

From: [redacted]
Sent: 15 April 2020 16:46
To: Oflaherty, Roddy
Subject: Re Science & Technology Park Goddards Green Sussex

Dear Roddy

We are services consulting engineers and are appointed by our client Glenbeigh Developments Ltd to advise on Utilities matters for the development of a proposed Science and Technology Park (STP) in the Burgess Hill Area.

The preferred site as selected in Mid Sussex District Councils' Site Allocation Development Plan document is located to the North of the A2300, between the junctions with the A23 and Cuckfield Road. Refer to attached plan indicating the location and site plan for this. The postcode for the site area is RH17 5PB.

The outline proposal for the STP is for up to 130,000 square metres of offices, research facilities and high tech light industry and manufacturing.
The inventory is projected to contain

Innovation Centre 2800 m^2 - flexible units 20 m^2 – 200 m^2

B1a – Offices HQ building 9,000 m^2 plus 10 No suites 6,000m^2 – 2,750m^2

B1b – High tech laboratories – 3 No units 9,000m^2 – 2,700m^2

B1c – Light industry R&D, high quality factories – HQ Building 12,000m^2 plus 7 No units 10,000m^2 – 2,250m^2

Ancillary development on the site would include a 150 bed hotel, a shopping pavilion and a Creche.
The projected employment on the site is up to 5,000 people

Clearly given the nature and size of the businesses that would occupy this facility it is highly likely that all would require high capacity high quality connectivity.

Based on our team's market experience in the region, it is anticipated that the development would be completed in five phases. Release of land is anticipated within 0-5 years for phase 1, with 2-3 years roll out for each phase aligning with market conditions. The Positioning Document for the STP is due for issue in spring 2020, firm allocation of the site would be towards the end of 2020, and Outline Planning submission would be in mid 2021

We are in the process of preparing a servicing strategy for this site for inclusion in the Positioning Report to be submitted to the local authority. From discussions with you and colleagues in 2019 on the nearby development called The Hub, we believe you would be well placed to build a fibre network to serve the Science and Technology Park from your existing network.

Would you please confirm that you do have network connectivity in this locality and advise how this might be extended/upgraded to serve such a development. At this stage we would ask for a short statement of the strategy for bringing the network onto site and how this would then be distributed around the site to allow connections to be made to individual units. Clearly it will be important to many of the customers to have secure connections, so we do need to show that diversity of routes etc would be provided in the solution.

Please can you confirm that you are interested in this project, and can provide the information requested above.

Kind regards
Mike Gibbins
Charles D.Smith & Associates Ltd.
333 High Street
Rochester
Kent
ME1 1DA

[redacted]

6.2 Openreach – Communications

6.2.1. Investigations for an adjacent site previously carried out indicate that there is Openreach infrastructure adjacent to the site, along Cuckfield Road across the A2300 roundabout.

6.2.2. The Openreach fibre network currently serves the adjacent development site on the other side of the roundabout. It is therefore well placed to serve the new development.

6.2.3. An online Newsite registration was lodged on 22nd April 2020.

6.3 Zayo Group UK – Communications

6.3.1. Investigations for an adjacent site indicate that the Zayo network infrastructure exits locally, routed along the A2300 on the south side of the carriageway.

6.3.2. The network is therefore well situated for extension into the new development site.

6.3.3. An enquiry was made on 22nd April 2020.

6.3.4. Response received from Zayo Group UK on 23rd April 2020 by email as attached, indicating that local infrastructure could be extended to serve the development.

csa

From: [redacted]
Sent: 23 April 2020 13:43
To: [redacted]
Subject: RE: Science & Technology Park Goddards Green Sussex

Thanks Mike, our fibre and duct network does indeed go through this area and could be extended to provide a full suite of services to the new Science Park. Zayo would be happy to extend our existing network with the right commercial model to this area. The duct and high fibre count cable passing site at present would allow those businesses in the new Science Park to benefit from Zayo's national and international network. This would meet the industry demands should this be constructed and as a neutral host this would also allow others to use our duct and fibre network to provide choice and availability to new business taking advantage of using the new Science Park. Let me know If you need any further details?

Many thanks,

Jonathan Bremner
Sales Director, Public Sector, Zayo Group UK Limited
Zayo | Our Fiber Fuels Global Innovation
International House | 1 St Katharine's Way | London | E1W 1UN Direct:+44 (0) 20 3356 8586 | [redacted]
[redacted]
https://www.zayo.com/solutions/industries/public-sector/
Mission | **Network Map** | **LinkedIn** | **Twitter** | **Technical Support** | **Global Reach**

From: [redacted]
Sent: 23 April 2020 12:52
To: [redacted]
Subject: RE: Science & Technology Park Goddards Green Sussex

Jonathan

Thanks for your call, glad to talk next week. However our first task is to identify, for the purposes of our site allocation submission to the local authority, is for Zayo to provide a statement that you have fibre infrastructure in the locality – which seems clear from the attached which we obtained in 2017 for another local site - that can be extended/enhanced to provide high quality communications for the kind of businesses who would occupy the Science Park. This would go into an appendix of utility contacts that have been made in support of our application. It would also be helpful if this could mention the ability to provide resilience in the services. We would be looking for this stamen, which can be on an e-mail, by mid next week.

It is only after the site allocation has been confirmed that we can move onto issues of exactly how the site would be provisioned, but this is further down the line.

Kind regards
Mike Gibbins
Charles D.Smith & Associates Ltd.
333 High Street

Rochester
Kent
ME1 1DA

[redacted]

From: [redacted]
Sent: 23 April 2020 12:30
To: [redacted]
Cc: Andrew Tipping <andrew.tipping@zayo.com>; Paul Brooker <Paul.Brooker@zayo.com>
Subject: RE: Science & Technology Park Goddards Green Sussex

Mike,

Thanks for the enquiry and we would be very interested to see where Zayo could help with this Science and Technology Park. Do you have any availability early next week for a call to discuss where you see where Zayo can help?

Best regards,

Jonathan Bremner
Sales Director, Public Sector, Zayo Group UK Limited
Zayo | Our Fiber Fuels Global Innovation
International House | 1 St Katharine's Way | London | E1W 1UN Direct:+44 (0) 20 3356 8586 | [redacted]
https://www.zayo.com/solutions/industries/public-sector/
Mission | **Network Map** | **LinkedIn** | **Twitter** | **Technical Support** | **Global Reach**

From: [redacted]
Sent: 23 April 2020 11:26
To: [redacted]
Cc: [redacted]
Subject: FW: Science & Technology Park Goddards Green Sussex

Jonathan

As you are looking at Sussex can you have a look at this please.

Paul

From: ukenquiries@zayo.com <ukenquiries@zayo.com> **On Behalf Of** csa
Sent: 23 April 2020 11:02

To: ukenquiries@zayo.com
Subject: FW: Science & Technology Park Goddards Green Sussex

Please see email below re new project in Sussex. Unsure if you would deal with this or JSM Group

Kind regards
Mike Gibbins
Charles D.Smith & Associates Ltd.
333 High Street
Rochester
Kent
ME1 1DA

[redacted]

From: [redacted]
Sent: 22 April 2020 09:35
To: enquires@jsmgroup.com
Subject: Science & Technology Park Goddards Green Sussex

Dear Sirs

We are services consulting engineers and are appointed by our client Glenbeigh Developments Ltd to advise on Utilities matters for the development of a proposed Science and Technology Park (STP) in the Burgess Hill Area.

The preferred site as selected in Mid Sussex District Councils' Site Allocation Development Plan document is located to the North of the A2300, between the junctions with the A23 and Cuckfield Road. Refer to attached plan indicating the location and site plan for this. The postcode for the site area is RH17 5PB.

The outline proposal for the STP is for up to 130,000 square metres of offices, research facilities and high tech light industry and manufacturing.
The inventory is projected to contain

Innovation Centre 2800 m^2 - flexible units 20 m^2 – 200 m^2

B1a – Offices HQ building 9,000 m^2 plus 10 No suites 6,000m^2 – 2,750m^2

B1b – High tech laboratories – 3 No units 9,000m^2 – 2,700m^2

B1c – Light industry R&D, high quality factories – HQ Building 12,000m^2 plus 7 No units 10,000m^2 – 2,250m^2

Ancillary development on the site would include a 150 bed hotel, a shopping pavilion and a Creche.
The projected employment on the site is up to 5,000 people

Clearly given the nature and size of the businesses that would occupy this facility it is highly likely that all would require high capacity high quality connectivity.

Based on our team's market experience in the region, it is anticipated that the development would be completed in five phases. Release of land is anticipated within 0-5 years for phase 1, with 2-3 years roll out for each phase aligning with market conditions. The Positioning Document for the STP is due for issue in spring 2020, firm allocation of the site would be towards the end of 2020, and Outline Planning submission would be in mid 2021

We are in the process of preparing a servicing strategy for this site for inclusion in the Positioning Report to be submitted to the local authority. From investigations for an adjacent site in 2017, we believe Zayo would be well placed to build a fibre network to serve the Science and Technology Park from your existing network.

Would you please confirm that Zayo do have network connectivity in this locality and advise how this might be extended/upgraded to serve such a development. At this stage we would ask for a short statement of the strategy for bringing the network onto site and how this would then be distributed around the site to allow connections to be made to individual units. Clearly it will be important to many of the customers to have secure connections, so we do need to show that diversity of routes etc would be provided in the solution.

Please can you confirm that Zayo is interested in this project, and can provide the information requested above and what the timescale would be

Kind regards
Mike Gibbins
Charles D.Smith & Associates Ltd.
333 High Street
Rochester
Kent
ME1 1DA

7. Diversions and Constraints

The extent of diversions and constraints is presented pictorially on Drawing No. CSA PM1520/20/02.

7.1. 33kV overhead lines on pylons cross the site near the north boundary. The pylon towers are protected by an exclusion zone, typically of 12.5m x 12.5m. Construction of buildings is not permitted within the swing zone of the overhead lines. It is not proposed to divert this asset, but to locate the buildings to accommodate these constraints.

7.2. 11kV electricity lines on poles cross the site from near Cuckfield Road to a sub-station west of the site at Bolney Grange. These will be diverted in an underground route around the perimeter of the site.

The 11kV electricity lines on poles that follow Bishopstone Road will be routed below the regraded and new route of Bishopstone Road.

7.3. If UKPN wish to serve the development at 33kV a new primary sub-station will be required. A footprint of 20m x 10m will be required, and the site will require a lease agreement.

7.4. A 4" water main enters the site at the junction of Bishopstone Road with the A2300. It is likely that the main will be abandoned from the point of connection at the Job's Lane junction.

7.5. Southern Water Services have a rising foul main which crosses the site close to the north and east boundaries. This main is protected by an easement 7.5m wide. It is not proposed to divert this asset, but to locate the buildings to accommodate its constraints. The main will cross the new roundabout proposed for the site entrance from Cuckfield Road. A minimum depth of 1200mm from the road surface to the crown of the pipe must be maintained.

7.6. It is concluded that the relative levels of the ground floors of the proposed buildings and of the inlet to the sewage treatment works mean that a foul pumping station will be required for the STP. It is the intention that this would be adopted by Southern Water Services, and would comply with the technical details for a Type 3 pumping station, as defined in Sewers for Adoption. The resulting constraints include 10m clearance from habitable buildings, a location above the level of a 1 in 30 year return period flood, a site compound of dimensions 12m x 8m, and access from the road for a tanker.

7.7. The changes to the Cuckfield Road / A2300 roundabout associated with turning the highway into a dual carriageway will result in the diversion of existing utility services. Project Newton should try to use the road closures to cross the A2300 with new natural gas and telecoms ducts for the development.

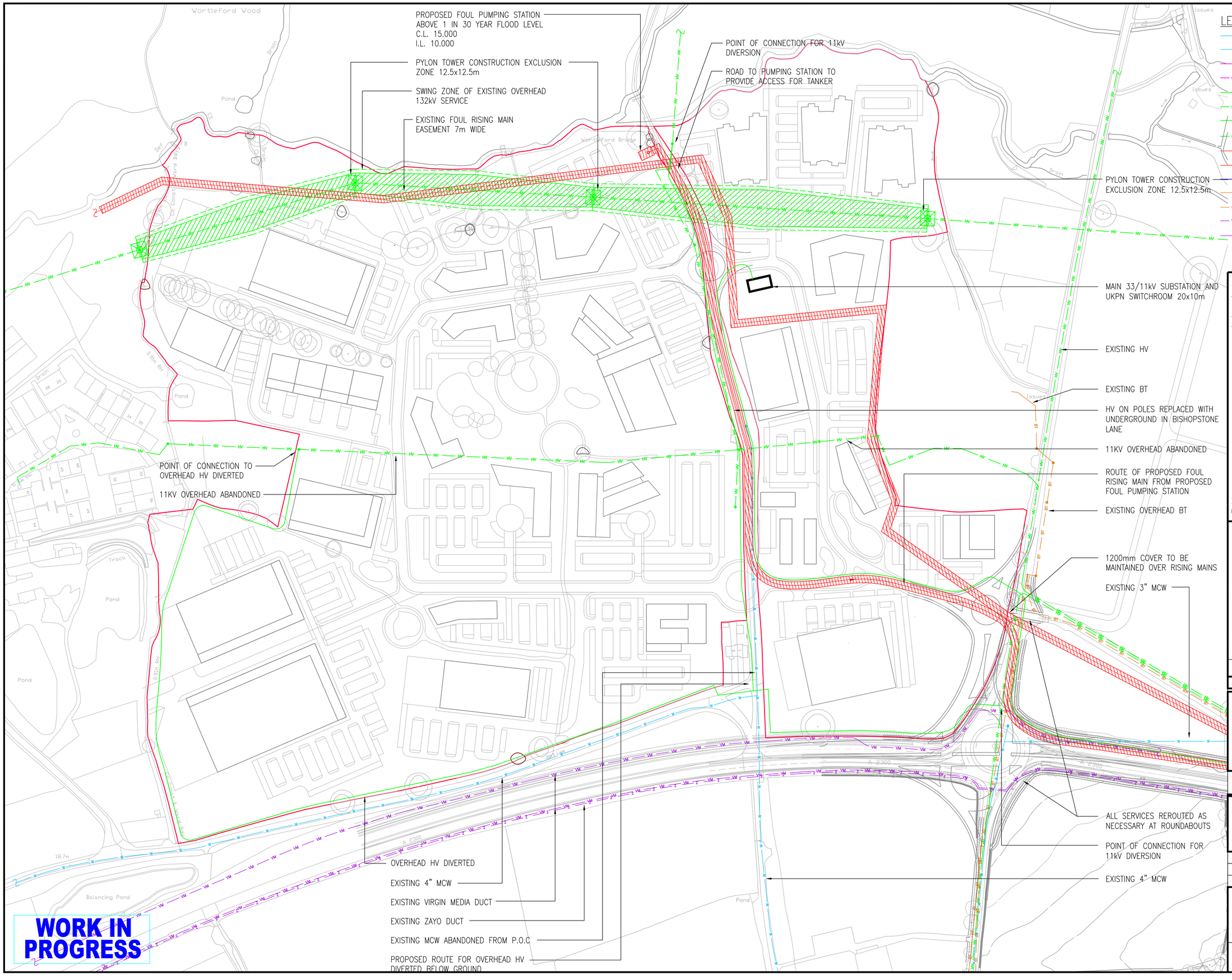
8. Conclusion

8.1. All of the utility companies except UKPN have confirmed that, at the present time, their networks can provide the calculated loads for the STP without reinforcement.

8.2. UKPN have advised that they would be able to provide the estimated load after an upgrade to their primary sub-station at Goddards Green, which will be required to serve the Burgess Hill Northern Arc development, meaning that the reinforcement would be completed before electricity was required for Phase 1 of the STP.

8.3. Diversions of services are not demanding from a technical, programme or cost perspective.

8.4. The Services Constraints Plan demonstrates that the existing major utilities crossing the site have been accommodated in the development proposal.



LEGEND

- PROPOSED MCW SERVICE
- EXISTING MCW SERVICE
- PROPOSED GAS SERVICE
- EXISTING GAS SERVICE
- PROPOSED LV SERVICE
- EXISTING LV SERVICE
- PROPOSED HV SERVICE
- EXISTING HV SERVICE
- EXISTING FOUL DRAINAGE
- PROPOSED FOUL DRAINAGE
- EXISTING COMBINED RISING MAIN
- PROPOSED BT SERVICE
- EXISTING BT SERVICE
- EXISTING VIRGIN MEDIA
- EXISTING ZAYO

CONSTRUCTION (DESIGN AND MANAGEMENT) REGULATIONS 2015

DESIGNERS HAZARD INFORMATION FOR CONSTRUCTION

1. EXPLOSION/ELECTRIC SHOCK – HAND DIG IN VICINITY OF UNDERGROUND SERVICES – ERECT BARRIERS TO PREVENT CONTACT WITH OVERHEAD CABLES.

THE ABOVE NOTES REFER SPECIFICALLY TO THE INFORMATION SHOWN ON THIS DRAWING.
REFER TO THE HEALTH AND SAFETY PLAN FOR FURTHER INFORMATION.

REV	REVISIONS	DATE	CHK BY	BY
P2	SWING ZONE ADDED.	MAY 20		M.W.

CSA
CHARLES SMITH & ASSOCIATES LTD.
CONSULTING ENGINEERS
333 High Street Rochester Kent ME1 1DA
Tel 01634 880544 Fax 01634 880599
Email csa@csachatham.co.uk

PROJECT TITLE

PROJECT NEWTON

DRAWN M.W.	CHECKED
CAD FILE PM15302002	APPROVED
SCALE –	DATE APRIL 2020

DRAWING TITLE

SITE PLAN
SERVICES CONSTRAINTS

DRG No PM1530/20/02 P2

PROPOSED FOUL PUMPING STATION
ABOVE 1 IN 30 YEAR FLOOD LEVEL
C.L. 15.000
I.L. 10.000

PYLON TOWER CONSTRUCTION EXCLUSION ZONE 12.5x12.5m

SWING ZONE OF EXISTING OVERHEAD 132kV SERVICE

EXISTING FOUL RISING MAIN EASEMENT 7m WIDE

POINT OF CONNECTION FOR 11kV DIVERSION

ROAD TO PUMPING STATION TO PROVIDE ACCESS FOR TANKER

PYLON TOWER CONSTRUCTION EXCLUSION ZONE 12.5x12.5m

MAIN 33/11kV SUBSTATION AND UKPN SWITCHROOM 20x10m

EXISTING HV

EXISTING BT

HV ON POLES REPLACED WITH UNDERGROUND IN BISHOPSTONE LANE

11KV OVERHEAD ABANDONED

ROUTE OF PROPOSED FOUL RISING MAIN FROM PROPOSED FOUL PUMPING STATION

EXISTING OVERHEAD BT

1200mm COVER TO BE MAINTAINED OVER RISING MAINS

EXISTING 3" MCW

ALL SERVICES REROUTED AS NECESSARY AT ROUNDABOUTS

POINT OF CONNECTION FOR 11kV DIVERSION

EXISTING 4" MCW

POINT OF CONNECTION TO OVERHEAD HV DIVERTED

11KV OVERHEAD ABANDONED

OVERHEAD HV DIVERTED

EXISTING 4" MCW

EXISTING VIRGIN MEDIA DUCT

EXISTING ZAYO DUCT

EXISTING MCW ABANDONED FROM P.O.C

PROPOSED ROUTE FOR OVERHEAD HV DIVERTED BELOW GROUND

Wortleford Wood
Wortleford Bridge
Pond
Drain
Track
Balancing Pond
A 2300

LEGEND

- PROPOSED MCW SERVICE
- EXISTING MCW SERVICE
- PROPOSED GAS SERVICE
- EXISTING GAS SERVICE
- PROPOSED LV SERVICE
- EXISTING LV SERVICE
- PROPOSED HV SERVICE
- EXISTING HV SERVICE
- EXISTING FOUL DRAINAGE
- PROPOSED FOUL DRAINAGE
- EXISTING COMBINED RISING MAIN
- PROPOSED BT SERVICE
- EXISTING BT SERVICE
- EXISTING VIRGIN MEDIA
- EXISTING ZAYO

CONSTRUCTION (DESIGN AND MANAGEMENT) REGULATIONS 2015

DESIGNERS HAZARD INFORMATION FOR CONSTRUCTION

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REV	REVISIONS	DATE	CHK BY	BY
P2	SWING ZONE ADDED.	MAY 20		M.W.

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DRAWING TITLE
SITE PLAN
SERVICES CONSTRAINTS

DRG No PM1530/20/02 P2

WORK IN PROGRESS

APPENDIX VI

Dacorar Southern Ltd &
Wortleford Trading Company Ltd

ECOLOGYSOLUTIONS

Part of the ES Group

PROJECT NEWTON, BURGESS HILL, WEST SUSSEX

Ecological Report

July 2020
8856.EcoAss.vf1

ecology solutions for planners and developers

PROTECTED SPECIES

This report contains sensitive information
relating to protected species.
The information contained herein
should not be disseminated without the
prior consent of Ecology Solutions.

CONTENTS

PLANS

APPENDICES

1. INTRODUCTION

1.1. Background & Proposals

1.1.1. Ecology Solutions was commissioned in April 2020 on behalf of Dacorar Southern Limited and Wortleford Trading Company Limited to undertake a Phase 1 habitat survey of land to the north of A2300 Burgess Hill (see Plan ECO1); hereafter referred to as the Site.

1.1.2. The emerging proposals for the Site are for mixed use development including a science and technology park and the provision of strategic green infrastructure.

1.2. Site Characteristics

1.2.1. The Site is located to the north west of Burgess Hill and comprises several separate land parcels which cumulatively measure approximately 49ha in size. The vast majority of the Site is located to the north of the A2300, with a small area of land located to the south of this road. The land parcels to the north are further dissected by Bishopstone Lane and Cuckfield Road, both of which run north south.

1.2.2. The River Adur forms the northern boundary of the Site. To its east the Site is bordered by Goddards Green Wastewater Treatment Works, with an industrial estate and hotel forming the majority of the western boundary. The remainder of the Site is bordered by agricultural land, with this also being the predominant land use in the wider area.

1.2.3. The Site itself comprises two main land parcels of predominantly agricultural land, with arable fields and species-poor pasture present. The agricultural fields are bordered by hedgerows and tree belts, with small woodland pockets and occasional ponds also present. An area of existing commercial development (Westbourne Motors), comprising a modern building and a hardstanding carpark is also present.

1.3. Ecological Assessment

1.3.1. This document assesses the ecological interest of the 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)[1].

1.3.2. The report also sets out the existing baseline conditions for the Site, setting these in the correct planning policy and legal framework and assessing the need for any further survey work. It also highlights any potential impacts from development at the Site. Appropriate mitigation, where necessary, is identified such that it will offset any negative impacts and where possible provide for an ecological enhancement of the Site, in accordance with planning policy.

[1] Chartered Institute of Ecology and Environmental Management (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal (Third Edition).

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 Site and its immediate surroundings Ecology Solutions contacted Sussex Biodiversity Records Centre (SBRC).

2.2.2. Information has been provided by SBRC and is referenced where necessary within this report. This information is also illustrated 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)[2] database. This information is reproduced at Appendix 1 and where appropriate on Plan ECO1.

2.3. Habitat Survey Methodology

2.3.1. Ecology Solutions undertook a Phase 1 habitat survey in late April 2020 to ascertain the general ecological value of the land contained within the boundaries of the Site as well as immediately adjacent where appropriate and to identify the main habitats and associated plant species, with notes on fauna utilising the Site.

2.3.2. On each occasion, the Site was surveyed based around extended Phase 1 survey methodology[3], as recommended by Natural England (NE), 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 Site was classified into areas of similar botanical community types, with a representative species list compiled for each habitat identified.

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, the survey work was completed during the optimal period for Phase 1 surveys. As such, and noting the predominantly agricultural nature of the Site, it is considered that an accurate and robust assessment has been made.

---

[2] http://www.magic.gov.uk/

[3] 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.

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 Biodiversity Action Plan (BAP) species. In addition, specific surveys were undertaken in 2019 for Badgers *Meles meles* and bats (initial roost assessment), including within small portions of immediately adjacent land within the east and southern most proportions of the site.

2.4.2. **Badgers.** Surveys were undertaken to search for evidence of Badgers in April 2020. The surveys comprised two main elements. The first of these was a thorough search for evidence of Badger setts. 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.

2.4.3. Secondly, 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 Site by Badgers.

2.4.4. **Bats**. Specific bat surveys were undertaken in April 2020 to assess the potential for roosting bats within the building and trees on Site. The work was undertaken by an experienced bat worker and aimed to establish the likelihood of presence/absence of bats.

2.4.5. Field surveys were undertaken with regard to best practice guidelines issued by NE (2004[4]), the Joint Nature Conservation Committee (JNCC) (2004[5]) and the Bat Conservation Trust (2016[6]).

[4] Mitchell-Jones, A. J. (2004). *Bat Mitigation Guidelines*. English Nature, Peterborough.
[5] Mitchell-Jones, A.J. & McLeish, A.P. (Eds.) (2004). *Bat Workers' Manual*. 3rd edition. Joint Nature Conservation Committee, Peterborough.
[6] Bat Conservation Trust (2007). *Bat Surveys – Good Practice Guidelines*. Bat Conservation Trust, London.

2.4.6. All trees at the 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.

3. ECOLOGICAL FEATURES

3.1. The Site was subject to an updated ecological survey in late April 2020. 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:

- Arable fields
- Species-poor semi-improved grassland;
- Hedgerows and tree lines;
- Woodland;
- Scrub;
- Ponds;
- Ditches;
- Road verge;
- River bank; and
- Building and hardstanding.

3.3. The location of these habitats is shown on Plan ECO2.

3.4. Each habitat present is described below with an account of their representative plant species.

3.5. Arable Fields

3.5.1. Three fields (**F3, F5** and **F7**) within the Site were under active cultivation at the time of survey and supported either bare ground or a planted crop monoculture (including Broad Bean *Vicia faba* and Potato *Solanum tuberosum*).

3.5.2. Whilst the margins of these fields supported a limited range of grasses and herbs, the fields themselves were generally absent of any non-crop vegetation. These habitats are therefore not deemed to be of any significant ecological interest.

3.5.3. The species composition of the field margins were noted as comparable to that recorded within the grassland fields on Site (see species-poor grassland below).

3.6. Semi-improved Grassland

3.6.1. The majority of the Site comprises a series of large fields which appear to be utilised as pasture. Sheep grazing was noted in field **F2** at the time of survey.

3.6.2. Whilst botanical composition varied between fields, the grassland on Site overall was identified to be relatively species-poor, being dominated by a modest range of common grasses and herbs typical of more enriched soil conditions. None of the grassland fields were deemed to be of any heightened ecological interest in the context of the surrounding area. A summary of the fields is provided below.

3.6.3. Fields **F1** and **F2** were recorded to support a very limited range of species. Both fields were dominated by Perennial Rye-grass *Lolium perenne*, Yorkshire Fog *Holcus lanatus* and Meadow Foxtail *Alopecurus pratensis*, with a very limited herb component, including White Clover *Trifolium repens*, Creeping Buttercup *Ranunculus repens*, Common Sorrel *Rumex acetosa*, Common Mouse-ear *Cerastium fontanum* and Creeping Thistle *Cirsium arvense*.

3.6.4. Field **F4,** whilst still considered species-poor, was recorded to support a relatively more diverse range of species including Yorkshire Fog, Tall Fescue *Festuca arundinacea*, Red Fescue *Festuca rubra*, Sweet Vernal Grass *Anthoxanthum odoratum*, Groundsel, Ragwort *Senecio jacobaeae*, Soft rush, Meadow Vetchling *Lathyrus pratensis*, Common Fleabane *Pulicaria dysenterica*,, Curled Dock *Rumex crispus* and Broad-leaved Dock *Rumex obustifolius.*

3.6.5. Field **F6** is an area of rougher semi-improved grassland in the south western corner of the Site which supports a similar species composition to Field F4. However, it was noted that a large part of the grassland had been chemically sprayed at the time of survey, with most vegetation dead or dying off. A wet depression is also present and heavily inundated with Soft Rush *Juncus effusus*.

3.6.6. Fields **F8** to **F11** are notably more improved in nature, supporting a dominant sward of Perennial Rye-grass *Lolium perenne*, with regular Broad-leaved Dock *Rumex obtusifolius* and Curled Dock *Rumex crispus* throughout. Other species recorded include Red Clover *Trifolium pratense*, Meadow Foxtail, Yorkshire Fog, Sweet Vernal Grass *Anthoxanthum odoratum*, Common Mouse-ear, Creeping Buttercup, Bulbous Buttercup *Ranunculus bulbosus*, Cuckoo Flower *Cardamine pratensis* (in areas of impeded drainage), and Lesser Stitchwort *Stellaria graminea*.

3.6.7. The field margins across the Site also supported a modest range of species, comprising those listed above in addition to Rough Meadow-grass *Poa trivialis*, Annual Meadow-grass *Poa annua*, Cock's-foot *Dactylus glomerate,* Red Fescue, Meadow-sweet, Greater Stitchwort *Stellaria holostea*, Germander Speedwell *Veronica chamaedrys*, Spear Thistle *Cirsium vulgare*, Bugle *Ajuga reptans*, Common Nettle *Urtica dioica*., Common Sowthistle *Sonchus oleraceus*, Hogweed *Hercleum*, and Cow Parsley *Anthriscus sylvestris*.

3.7. Hedgerows and Tree Lines

3.7.1. The fields within the Site are invariably bordered by hedgerows and tree belts. Collectively, this network of wooded features supports a good range of tree and shrub species, with some individual features (**H1, H6, H8, H11 to H15, H18, H20, H23** and **H24**) likely to qualify as 'important' under the Hedgerow Regulations 1997. An individual description of each feature is provided below.

3.7.2. Hedge **H1** and comprises an unmanaged line of shrubs along part of its extent, however adopts a more conventional hedge structure

further south and is box cut to a height of approximately 1.2m. Occasional semi-mature trees are present and a seasonal ditch (dry at the time of survey) runs along the eastern side of the ditch (along Bishopstone Lane). Ash *Fraxinus*, Oak *Quercus* (including standard trees), Blackthorn *Prunus spinosa*, Hawthorn *Crataegus*, Field Maple *Acer campestre*, Hazel *Corylus* and Bramble *Rubus* were frequently recorded within the hedge, with Dogwood *Cornus* also present. Elder *Sambucus* and Holly *Ilex* were rarely recorded, as was Honeysuckle *Lonicera*. The ground flora included for Native Bluebell *Hyacinthoides non-scripta*, Hybrid Bluebell sp. *H. hispanica*, Common Nettle, Cleavers *Galium aparine*, Dog's Mercury *Mercurialis perennis*, Red Campion *Silene dioica* and Primrose *Primula vulgaris*. This hedge is likely to qualify as 'important' under the Hedgerow Regulations 1997.

3.7.3. **H1A** is continuous with **H1** and comprises a short stretch of hedge which is box cut to approximately 1.2m in height. This short stretch of hedge is notably less species diverse.

3.7.4. **TB1** comprises a belt of mature trees in which Pedunculate Oak *Quercus robur* is dominant. The mature trees form two rows, with a shallow dry ditch inbetween which is likely to be wet on occasion. A shrub layer (managed as a hedge) is associated with this belt and includes for Blackthorn (abundant) and Hawthorn (frequent), alongside Elder, Hazel, Field Maple and Dog-rose. Bramble and Elm *Ulmus sp*., were rarely recorded. The ground flora includes for Native Bluebell, Greater Stitchwort, Hops *Humulus lupulus*, Cleavers, Garlic Mustard *Alliaria petiolata*, Dog's Mercury, Common Nettle and Cow Parsley.

3.7.5. **H2** is structurally poor and part defunct. It comprises a gappy shrub belt at its eastern end, with the western edge flail managed. Along the most part, it comprises a series of old Hazel coppice stools, with scattered Hawthorn, Field Maple (including standards), Blackthorn and Elder also present. Ivy and Common Nettle are present in the ground flora.

3.7.6. **H3** comprises a short remnant hedgerow which now comprises 7 shrubs, all showing grazing damage. Field Maple, Hazel and Grey Willow *Salix cinereal* are present.

3.7.7. **H4** runs adjacent to the River Adur. It is dominated by Blackthorn which, in some sections, is unmanaged and in others is box cut to a height of approximately 1.2m.

3.7.8. **H5** is a short stretch of hedge which comprises a double line of Blackthorn with a seasonal ditch (continuous with that associated with H2) inbetween. It is in poor condition, being box cut to approximately 1m.

3.7.9. **H6** is a well established and unmanaged hedgerow which supports frequent mature standard trees. The hedge is associated with a tall bank/slope and there is a significant change in gradient between fields F2 and F3. Blackthorn dominates along much of its length, with Elder, Hazel (including coppice stools), Hawthorn, Rose *Rosa* sp.

and Dogwood also present. Holly and Spindle *Euonymus* were rare. Ivy was recorded, whilst Native Bluebell was locally dominant and Common Nettle also present. This hedge is likely to qualify as 'important' under the Hedgerow Regulations 1997.

3.7.10. **H7** comprises a gappy belt of mature shrubs including Hawthorn, Ash, Grey Willow, Blackthorn and Field Maple. A collapsed and dead Oak tree was also present.

3.7.11. **H8** forms part of the Site's western edge and merges into an area of wet woodland at its southern extent. The hedge is unmanaged and is more akin to a line of mature shrubs and trees. A central, dry ditch runs through the 'hedge', delineating two lines of trees/shrubs. The hedge supports Field Maple (including old coppice stools), Hazel, Hawthorn, Blackthorn, Rose *Rosa* sp., Elder and Spindle as well as mature standards of Oak, Ash and Field Maple. The ground flora includes for Ramsons *Allium ursinum*, Common Nettle, Garlic Mustard, Cleavers, Hybrid and Native Bluebell, Greater Stitchwort and Bugle. This hedge is likely to qualify as 'important' under the Hedgerow Regulations 1997.

3.7.12. **TB2** comprises a line of mature Oak trees with occasional Elder below and Native Bluebell in the ground flora.

3.7.13. **H9** comprises an unmanaged and gappy line of Blackthorn, Bramble, Ash and Elder.

3.7.14. **H10** is an unmanaged hedge on the far (off Site) side of a seasonally wet ditch. The hedge supports Ash (including standards), Elder, Elm, Hawthorn, Blackthorn and Grey Willow. Pendulous Sedge *Carex pendula* was recorded in the ground layer.

3.7.15. **H11** is off Site and forms the Sites south western boundary, it is unmanaged and shows signs of disturbance (debris/litter/invasive species) associated with the adjacent industrial uses of the Site. A ditch is present on the eastern aspect of the hedge and held a shallow depth of water at the time of survey. Only occasional scattered Blackthorn and Bramble scrub within the Site. The hedge supports Blackthorn, Bramble, Guelder Rose *Viburnum opulus*, Hawthorn, Elder, Field Maple, Crack Willow *Salix fragilis* and Crab Apple *Malus*. Pendulous Sedge, Foxglove and Common Water Dropwort *Oenanthe* were associated with the hedge/ditch. This hedge is likely to qualify as 'important' under the Hedgerow Regulations 1997.

3.7.16. A single stand of Japanese Knotweed *Reynoutria japonica* was also recorded in this hedge, with the location marked on Plan ECO2.

3.7.17. **H12** comprises box-cut hedge which forms part of Site's southern boundary. It has a good structure and a height of 2m along most of its length, albeit some sections have a reduced height and were of a poorer structure. The hedge supports occasional standard trees and has a shallow, dry ditch on its southern aspect. Hawthorn dominates, with Blackthorn abundant and Oak (including 3 standard trees) and Field Maple frequent. Also recorded was Hazel, Spindle,

Bramble and Holly. Honeysuckle was present trailing through. The ground flora included for Hogweed , Horsetail, Red Campion, Lesser Celandine *Ficaria verna*, Hybrid Bluebell, Greater Stitchwort, Bracken, Dog's Mercury, Cow Parsley, Cleavers and Common Nettle. This hedge is likely to qualify as 'important' under the Hedgerow Regulations 1997.

3.7.18. **H13** comprises a short section of hedge on a shallow bank. It is dominated by Hawthorn and Blackthorn. Occasional Spindle and Dogwood were recorded, with Oak and Rose *Rosa* sp., rare. The ground flora included for greater Stitchwort, Dog's Mercury, Lords and Ladies *Arum maculatum*, Hybrid Bluebell, Cleavers, Garlic Mustard and Honeysuckle. This hedge is likely to qualify as 'important' under the Hedgerow Regulations 1997.

3.7.19. **H14a** is dominated by Hawthorn and Blackthorn and with a dry ditch to its southern aspect. It appears to have been historically subject to a hedge lay. Field Maple, Oak and Rose *Rosa* sp. were also recorded. **H14b** is similar to H14a in size and structure, although suffers from notable gaps and supports a mature Oak tree. This hedge is also largely comprised of Hawthorn, with other species including Dogwood, Blackthorn, Hazel, Holly, Field Maple, Elder, Grey Willow, and Crab Apple. The ground flora included for Greater Stitchwort, Common Nettle, Hard Rush, Teasel *Dipsacus*, Cuckoo Flower, Hybrid Bluebell and Sun Spurge *Euphorbia helioscopia*. Both H14a and H14b are likely to qualify as 'important' under the Hedgerow Regulations 1997.

3.7.20. **H15** is broadly identical to H14, albeit with the addition of occasional Spindle, Dogwood, Grey Willow and *Prunus* sp. A ditch is present on the western aspect, whilst Bugle and Primrose were also recorded in the field layer. H15 is likely to qualify as 'important' under the Hedgerow Regulations 1997

3.7.21. **H16** is a line of scrub and semi-mature trees which lines the building compound on the north eastern boundary F8 and is associated with a shallow wet ditch. Species recorded include Ash, Hawthorn, Blackthorn, Bramble, Field Maple, Silver Birch *Betula pendula* and Grey Willow. Very limited ground flora was apparent at the time of survey

3.7.22. **H17** is a regularly managed amenity Hornbeam *Carpinus* hedgerow which lines the boundary of an off Site/adjacent residential property.

3.7.23. **H18** forms the southern boundary of F8 and is of similar structure/species composition to H13. The hedge is primarily formed of Hawthorn, Blackthorn, Field Maple, Dog-rose, Dogwood, with a small number of mature Oaks and Hybrid Black Poplar *Populus canadensis*. The ground flora included for Hogweed, Hybrid Bluebell, Greater Stitchwort, Bracken, Cow Parsley, Cleavers and Common Nettle. This hedge is may qualify as 'important' under the Hedgerow Regulations 1997.

3.7.24. **TB3** comprises a narrow band of woodland on the eastern boundary of F8. This woodland comprises two lines of mature Oak between

which lies a developing shrub/scrub layer, suggesting historical clearance. The shrub layer is comprised of Wych Elm *Ulmus glabra*, Hawthorn, Field Maple, Dogwood and Grey Willow. The ground layer supports a limited range species, included Hybrid Bluebell, Bluebell, Garlic Mustard, Ivy, Cow Parsley and Dogs Mercury.

3.7.25. **TB3** comprises a band of mature trees and shrubs which run adjacent to Bishopstone Lane. This band of vegetation varies in width across its length and is approximately 12m wide at its maximum. TB4 is dominated by Mature Oaks, with Ash and Field Maple standards also present. The shrub layer included for Oak, Field Maple, Privet *Ligustrum*, Hawthorn, Blackthorn, Dog Rose, Elder, Elm (diseased), Hazel, Grey Willow, Horse Chestnut *Aesculus hippocastanum* and Dogwood. The field layer includes for White Dead-nettle *Lamium album*, Garlic Mustard, Common Nettle, Lords and Ladies, Common Forget-me-not *Myosotis*, Dog's Mercury, Wood Avens *Geum urbanum*, Cleavers, Hybrid and Native Bluebell, Wood False Brome *Brachypodium sylvaticum*, Green Alkanet *Pentaglottis sempervirens*, Ground Elder, Primrose, Greater Stitchwort, Ramsons and, rarely, Yellow Archangel *Lamium galeobdolon*.

3.7.26. The northern aspect of **H19** (**H19a**) comprises a short stretch of unmanaged shrub associated with a shallow dry ditch. It includes for Oak and Hazel coppice, Privet, Rose *Rosa* sp., Blackthorn and Field Maple. The central section of the hedge (**H19b**) runs north south along the western boundary of the central land parcel and is continuous with **H19a**. It comprises a line of mature Oak trees with occasional Ash. It supports a shrub understory dominated by Blackthorn and with occasional Field Maple, Bramble, Hawthorn and Elder. At its southern end (**H19c**) comprises a short stretch of planted, immature Hawthorn with Blackthorn and Grey Willow. Local examples of Dog's Mercury and Native Bluebell were recorded in the ground flora.

3.7.27. **H20** is a 'detached' hedgerow (owing to access tracks at either end of the feature) which transects the southern part of F9. The hedgerow is associated with a shallow dry ditch and is approximately 9m in height on average. This feature supports Blackthorn, Hawthorn, Dog-rose, Field Maple, semi-mature Oak trees, Hazel and Crab Apple, with Lords-and-Ladies and Dogs Mercury frequent in the ground layer. This hedge is may qualify as 'important' under the Hedgerow Regulations 1997.

3.7.28. **H21** comprises a young hedge of suckering Blackthorn that has regenerated following clearance for adjacent road works.

3.7.29. **H22** comprises an unmanaged shrub belt forming the south western edge of the central land parcel. It appears to have been planted, potentially as part of adjacent road works. Species present include Grey Willow, Blackthorn, Oak (including 1 x standard), Ash, Hawthorn, Dogwood and Bramble. It does not support any significant ground flora.

3.7.30. **H23** is an unmanaged hedge which runs adjacent to Cuckfield Road and has a seasonal dry ditch along its western edge. The hedge is dominated by Hawthorn, with Blackthorn abundant and Field Maple frequent. Other woody species recorded included Oak, Dog-rose, Grey Willow and Hazel. Spindle and Cherry *Prunus avium* were rarely recorded, with Dogwood, Ash (including diseased Ash and 1 x standard) present at the northern end of the hedge. Lord and Ladies, Greater Stitchwort, Honeysuckle, Cuckoo Flower, Native Bluebell and Wood False Brome were present in the ground layer. This hedge is likely to qualify as 'important' under the Hedgerow Regulations 1997.

3.7.31. **H24** is a tall, unmanaged hedgerow situated immediately north of H23 and fairly sparse in nature, comprising Cherry, Field Maple, Hawthorn, Dogwood, Hazel, Oak, Ash, Elm, Elder and Wych Elm. It is likely this hedge may also qualify as 'important' under the Hedgerow Regulations 1997

3.7.32. **H25** comprises a line of Hazel coppice stools on a high bank. Occasional Blackthorn and Hawthorn were also recorded, whilst Beech *Fagus* was rare. Native Bluebell, Wood Anemone *Anemone nemorosa*, Common Nettle and Ground Ivy were recorded in the field layer.

3.7.33. **H26** is a short length of hedge of Hawthorn and two standard Oak trees adjacent to W4.

3.7.34. **TB4** comprises a bank of mature trees which abuts W4. Mature Oak dominate, with occasional standard Ash. The shrub layer included for Hawthorn, Blackthorn, Spindle and Field Maple. Native and Hybrid Bluebell are present in the ground layer, as is occasional greater Stitchwort and Bracken.

3.7.35. **H27** is a box cut hedge with a height of 2.5m and an associated, shallow dry ditch. Whilst off-site, it forms the southern boundary to the eastern-most land parcel that forms part of the Site. Hawthorn, Field Maple, Blackthorn, Dogwood, Bramble and semi-mature Oak standards are present. Honeysuckle trailed through the hedge in some locations. The field layer included for Dog's Mercury, Greater Stitchwort, Ground Ivy, Hybrid and Native Bluebell, Lesser Celandine, Common Nettle and Cuckoo Flower.

3.7.36. **H28** comprises a relatively mature, planted hedge running adjacent to the A2300. At its western end the hedge tends towards a line of mature shrubs reaching approximately 7m in height. Along the remainder of its length, the hedge is box cut to approximately 2.5m with an adjacent ditch between the road and hedge. Field Maple, Dogwood, Hawthorn, Hornbeam, Grey Willow, Blackthorn and Ash were recorded. Bugle, Lords and Ladies and Hogweed are present in the field layer.

3.7.37. **H29** is continuous with H28 and with a comparable structural and botanical composition. In addition to those species recorded for H28, Rose *Rosa* sp. was recorded, with Garlic Mustard and Dog's Mercury in the field layer.

3.8. **Woodland**

3.8.1. Several woodland blocks are present within the Site. Most of these represent small copses supporting a modest range of tree species, albeit some larger wooded areas are present. These wooded habitats are described individually below and detailed on Plan ECO2.

3.8.2. **W1** is located within the westernmost land parcel and measures approximately 1.2ha. It comprises a scrubby, wet woodland, albeit with several mature trees, most notably towards the perimeters. The canopy layer, where present, includes for Oak, Ash and some taller specimens of Field Maple. The shrub layer includes for Blackthorn, Hawthorn, Bramble, Goat Willow, Grey Willow, Elder, diseased Elm, Dog Rose, and Hazel. These shrubby species dominated the central areas of the W1, with Willows abundant adjacent to the wetter areas (including P1 and P6). The field layer was varied and typically of a more ruderal nature with Common Nettle, Teasel and Cleavers frequent. Hybrid Bluebell, Lords and Ladies, Ground Ivy and Dog's Mercury were also recorded and were better represented to the north of W1.

3.8.3. **W2** is continuous with H8 and supports a similar range of species, towards its northern edge. The central part of W2 is dominated by Willow scrub with Hawthorn also frequent and Common Nettle dominating the field layer. Blackthorn and Hawthorn scrub are present at the margins of the woodland.

3.8.4. **W3** is small and dense area of mature and semi-mature trees associated with P4 (see below). Species include Grey Willow, Oak Hawthorn, Blackthorn, Dogwood, and Dog-rose. The ground layer dominated by Hybrid Bluebell, Dogs Mercury, Cleavers, with occasional Black Bryony *Dioscorea communis* and scattered Bramble.

3.8.5. **W4** comprises a relatively large band of young plantation woodland which forms the eastern boundary of the Site. It is fringed on its side by a belt of mature trees (H28 and H29). The woodland appears to have been subject to localised management, with some sections having been evidently thinned and supporting plantation dominated by semi-mature Ash, with occasional Willows, Hazel, Lime *Citrus* × *aurantiifolia*, Blackthorn and Hawthorn. Elsewhere the woodland appears to have forgone any thinning and comprises very dense, scrubby woodland which is virtually inaccessible. These areas supported a similar range of woody species.

3.8.6. The ground flora is unevenly distributed (noting the varied management) and includes for Hybrid and Native Bluebell, Primrose, Ground Ivy, Bugle, Common Dog-violet, Wood Avens, Lesser Celandine, Dog's Mercury and, rarely to the north, Common Spotted Orchid *Dactylorhiza fuchsii*.

3.9. **Scrub**

3.9.1. Several small pockets of scrub are present within the Site. These areas are invariably self-seeded and support limited botanical diversity, being typically dominated by one or two species, typically Bramble, Hawthorn, Blackthorn or Willows.

3.9.2. Other species recorded in areas of scrub included for Sycamore *Acer pseudoplatanus*, Spindle, Elm *Ulmus* sp., Rose *Rosa* sp. and Alder.

3.10. **Ponds**

3.10.1. A total of seven ponds were recorded within or adjacent to the Site. The majority of these comprised heavily over shaded and seasonal waterbodies, with some already dry (or near dry) at the time of survey in late April 2020. Others are deemed likely to hold water on a permanent basis. Some of the ponds are connected to the network of field ditches and/or the River Ardur and likely play a role in land drainage.

3.10.2. An individual description of each pond is provided below.

3.10.3. **P1** is a seasonally wet feature that was virtually dry at the time of survey in April 2020. It is heavily over-shaded (located within W1) and lacks any aquatic vegetation. It is considered likely to remain dry for the majority of each year.

3.10.4. **P2** is a linear feature that effectively comprises a slightly widened, flooded ditch. It measures approximately 1.5m by 10m in surface area, with a depth of approximately 20 to 30cm. It is likely to dry in the late Spring/early Summer months. The pond is almost entirely over-shaded and supports little in the way of aquatic flora.

3.10.5. **P3** again comprises a woodland pond which is largely over-shaded. At the time of survey in April 2020, the water level had evidently reduced significantly, albeit a large area of standing water remained. The pond had high turbidity, was considered to remain relatively shallow (<1m max depth) and is likely to dry annually. A small range of marginal species were recorded including Bulrush *Typha latifolia*, Water Plantain *Alisma*, Water Dropwort *Oenanthe* sp., and Brooklime *Veronica beccabunga*.

3.10.6. **P4** is a small, largely isolated waterbody situated between F5 and F7. The pond is overshadowed by shrubby sallow growth amongst other woody vegetation, and as such is the subject to heavy leaf litter. At the time of survey the pond supported shallow water, with no marginal or aquatic plants recorded.

3.10.7. **P5** comprises a large (approximately 40m by 20m), tree fringed permanent waterbody with a shaded perimeter. The water was turbid, with no aquatic vegetation recorded.

3.10.8. **P6** comprises a small (approximately 12m radius) and over-shaded woodland pond. It is likely to remain wet for much, if not all, of the year. No aquatic vegetation was recorded within this waterbody.

3.11. Ditches

3.11.1. Boundary ditches are present across much of the Site and are associated with the hedge network. These ditches are typically deemed to retain water following periods of rain, albeit some small stretches are likely to hold water for extended durations in the wetter months.

3.11.2. The ditches on Site typically lacked a distinct floral assemblage, with the species present generally those recorded to be associated within the adjacent hedge network, albeit including for some species tolerant of wetter conditions such as Pendulous Sedge and Cuckoo Flower.

3.12. Road Verge

3.12.1. Managed road verges along the eastern and southern boundaries of the Site included a modest range of herbs, including some suited to damp conditions. Species recorded include Curled Dock, Yorkshire Fog, Cut-leaved Crane's-bill *Geranium dissectum*, Creeping Cinquefoil *Potentilla reptans*, Common Field Forget-me-not, Ground Ivy, Cleavers, Ribwort Plantain *Plantago lanceolata*, Comfrey *Symphytum*, Dove's-foot Crane's-bill, White Clover, Thale Cress *Arabidopsis thaliana*, Pendulous Sedge, Red Campion, Perforate St John's-wort *Hypericum perforatum*, Creeping Bent *Agrostis stolonifera*, Bristly Oxtongue *Helminthotheca echioides*, Greater Plantain and Garlic Mustard. Scattered Blackthorn and Bramble scrub was also recorded.

3.12.2. A small area of predominantly ruderal vegetation is present to the east of H1, abutting Bishopstone Lane.

3.13. River Bank

3.13.1. The River Adur runs along the northern boundary of the Site. The river has a moderate flow and is approximately 6m wide. The southern bank abuts the Site and has an average height of approximately 3m. The bank is relatively steep and near vertical along much of its length within the Site and was primarily bare. Much of the southern bank supports bands of scrub, including frequent Blackthorn, Grey Willow and Bramble. Less frequently recorded were Alder, Rose *Rosa* sp. and diseased Ash.

3.13.2. Marginal vegetation was recorded to include Hemlock Water Dropwort *Oenanthe crocata*, Reed Mace *Typha*, Himalayan Balsam *Impatiens glandulifera* and Cuckoo Flower.

3.13.3. No significant aquatic flora was recorded.

3.14. **Buildings and Hardstanding**

3.14.1. A single building, **B1**, is present within the Site and comprises a two storey, flat roofed office building in active use as an office. The main building (**B1a**) is of modern design, with brick and metal walls and a metal panel roof with a very shallow pitch. A two storey brick extension (**B1b**) extends to the south and has a slightly lower height relative to the main compartment. It again supports a flat roof, albeit this having a shed felt lining. A large number of windows are present at all aspects of both **B1a** and **B1b**. A further extension is present beyond B1b, this comprising a single storey metal sheet structure with a shallow pitched roof and skylights.

3.14.2. The building is in good condition and, with the exception of some very minor gaps in the shed felt roof of **B1b**, offers no potential ingresses or opportunities for faunal species.

3.14.3. **B1** is surrounded by an area of tarmac which is in good condition and is used as an area of carparking and operational space.

3.14.4. **Background information.** The data search undertaken with the SxBRC returned one record of Devil's-bit Scabious *Succisa pratensis*, recorded during 2010 from a 100m grid reference which includes field **F5**.

3.14.5. No other records of protected or notable plant species were returned from within the site, as part of the data search undertaken.

4. WILDLIFE USE OF THE SITE

4.1. During the survey general observations were made of any faunal use of the Site with specific attention paid to the potential presence of protected or notable species. Specific surveys were also undertaken with regard to Badgers and bats (initial tree roost assessments).

4.2. Consideration has also been given to survey work undertaken in support of development proposals in the wider area including that for the proposed 'Northern Arc Allocation' to the east of the Site.

4.3. Badgers

4.3.1. The habitats on Site provide suitable foraging and sett building habitat for Badgers, albeit it is noted that such opportunities are widespread in the local area.

4.3.2. The survey in April 2020 found very limited evidence of potential Badger presence within the Site. Two locations (**S1** and **S2**) within the Site supported mammal burrows which appeared superficially suitable to support Badger, albeit no evidence of Badger use was recorded for each feature.

4.3.3. **S1** is located in the north of the Site, to the west of H6. It comprises two abandoned burrows that likely represent an abandoned sett.

4.3.4. **S2** comprises an actively used rabbit *Oryctolagus cuniculus* warren, extending along much of H5. A single entrance within this warren was deemed sufficiently large to be utilised by Badger. Nonetheless, no evidence of Badger use was noted, and it is deemed to be used solely by rabbits.

4.3.5. No other evidence of Badger presence, such as latrines, snuffle holes or tracks were recorded within or adjacent to the Site. As such there is nothing to indicate the Site would be of any particular importance to Badger populations in the local area.

4.3.6. **Background information**. No badger records were returned as part of the data search undertaken with the SxBRC. Notwithstanding this, due consideration will be afforded to any records held by local Badger groups upon the submission of any forthcoming applications.

4.4. Bats

4.4.1. The single building within the Site is of modern design and appears to lack internal voids. Moreover, with the exception of some very localised crevices where the flat roof of **B1b** adjoins the brick wall, no features of potential roosting value were noted. This building is therefore deemed of low to negligible bat roosting potential.

4.4.2. Several of the mature trees within the Site support features of potential value to roosting bats such as woodpecker *Picidae* holes, rot holes or dead/damaged wood in the canopy. The approximate

locations of those trees noted to have potential to support roosting bats are shown on Plan ECO3. A ground based inspection of these features found no evidence to indicate use by bats.

4.4.3. In terms of potential foraging and navigational features for bats within the Site, these are considered to be limited to the river corridor, tree lines, hedgerows, woodland pockets and ponds within the Site. The grazed species poor pasture and arable fields are unlikely to be of any significant importance for bats. Moreover, it is noted that similar and improved opportunities for bats are present in the local area, not least the presence of large areas of woodland (including ancient woodland).

4.4.4. At this stage it is envisaged the vast majority of higher value bat habitats will be retained as part of an appropriately designed landscape strategy, to include for the retention and bolstering of the vast majority of the hedgerow and tree belt, areas of woodland, ponds and the river corridor.

4.4.5. In due course the completion of a suite of bat activity surveys would be sufficient to reaffirm the value of the Site, as well as inform mitigation and enhancement opportunities for the Site. In the event that any trees with bat potential were to be adversely impacted, further survey effort in the form of tree climbing surveys or emergence/re-entry work would be sufficient to robustly assess the current use of these features for roosting bats. Likewise, a single precautionary emergence survey of B1 would likely be sufficient to reaffirm the absence of roosts within this structure.

4.4.6. **Background information**. The desk study undertaken with the SxBRC returned one record of bats from within (or suspected immediately adjacent to) the site; consisting of an unconfirmed Myotis *Myotis sp*. species, recorded as grounded within a grid reference located adjacent to the Cuckfield Road during 2011.

4.4.7. The closest returned roosting record was for a number of unidentified bat species within the Little Lower Ease estate, located approximately 0.15km to the north of the site, recorded during 1998.

4.4.8. Other bat species recorded within the wider area include: Serotine *Eptesicus bechsteinii*, Bechstein't Bat *Myotis bechseinii*, Daubenton's Bat *Myotis daubentonii*, Whiskered Bat *Myotis mystacinus*, Natterer's Bat *Myotis nattereri*, Common Pipistrelle *Pipistrellus pipistrellus*, Soprano Pipistrelle *Pipistrellus pygmaeus* and Brown Long-eared Bat *Plecotus auritus*.

4.5. Birds

4.5.1. The mature treelines, hedgerows and woodland provides suitable opportunities for a range of bird species albeit such opportunities are again widespread in the locality, and there is nothing to indicate the Site would be of any significance for local bird populations.

4.5.2. The species poor grassland and arable habitat is not considered to provide any significant nesting opportunities, albeit may provide

some limited opportunities for ground nesting birds such as Skylark *Alauda arvensis*.

4.5.3. The river corridor provides suitable opportunities for riparian birds, with the banks being considered potentially suitable for Kingfisher *Alcedo atthis*, albeit no evidence of burrows was noted within/adjacent to the Site.

4.5.4. Bird species recorded in the Site during the suite of habitat surveys undertaken included for Nuthatch *Sitta*, Great Tit *Parus major*, Blackbird *Turdus Merdula*, Song Thrush *Turdus Philomelus*, Robin *Erithacus rubecula*, Wood Pigeon *Columba palumbus*, Carrion Crow *Corvus corone*, Chiffchaff *Phylloscopus collybita*, Wren *Troglodytidae*, Blue Tit *Cyanistes caeruleus*, Buzzard *Buteo buteo*, Dunnock *Prunella modularis*, Rook *Corvus frugilegus*, Jackdaw *Corvus monedula*, Long-tailed Tit *Aegithalos caudatus*, Yellowhammer *Aegithalos caudatus*, Chaffinch *Fringilla coelebs*, Greenfinch *Chloris chloris*, Blackcap *Sylvia atricapilla*, Jay *Garrulus glandarius*, Goldfinch *Carduelis carduelis,* Skylark *Alauda arvensis* and Treecreeper *Certhiidae*.

4.5.5. **Background information**. The data search undertaken with the SxBRC returned records of both Barn Owl *Tyto alba*, recorded during 2007, and Red Kite *Milvus milvus*, recorded during 2016, from within the site.

4.5.6. Other notable species recorded either within the local area, or from within a 2km grid reference which includes the site, include: Bittern *Botaurus stellaris*, Kestrel *Falco tinnunculus*, Hobby *Falco subbuteo*, Stock Dove *Columba oenas*, Cuckoo *Cuculus canorus*, Kingfisher *Alcedo atthis*, Swift *Apus apus*, Willow Warbler *Phylloscopus trochilus,* Skylark *Alauda arvensis*, Dunnock *Prunella modularis*, Nightingale *Luscinia megarhynchos*, Song Thrush *Turdus philomelos*, Mistle Thrush *Turdus viscivorus*, Whitethroat *Sylvia communis,* Bullfinch Pyrrhula pyrrhula, Yellowhammer *Emberiza citrinella* and Reed Bunting *Emberiza schoeniclus*.

4.6. **Reptiles**

4.6.1. The grassland fields within the Site offer suitable opportunities for common reptiles, albeit the management regime (sheep grazing) has prevented the establishment of any significant rougher elements or tussocks. Some of the margins associated with the arable fields also offer a degree of suitable habitat, however they are generally limited in extent.

4.6.2. Noting the lack of any significant areas of unmanaged grassland, the Site is considered, at best, to be of modest potential value for reptiles. The riparian corridor supports the habitats of greatest value within the Site.

4.6.3. No evidence of reptiles was recorded during opportunistic checks of natural refugia or debris during the course of the Phase 1 walkover survey (undertaken during conditions suitable for reptiles to be active).

4.6.4. In due course, the completion of a suite of presence/absence surveys for reptiles would be sufficient to confirm the presence or absence of common reptiles within the Site and to inform any mitigation and enhancement measures which would be appropriate.

4.6.5. **Background information.** The data search undertaken with the SxBRC returned no records of any reptiles from within the site.

4.6.6. The closest returned record was of Grass Snake *Natrix helvetica*, recorded approximately 0.2km to the north-east of the site during 2008. Other species recorded within the wider area include; Slow-worm *Anguis fragilis*, Common Lizard *Zootoca vivipara* and small numbers of Adder *Vipera berus*.

4.7. Invertebrates

4.7.1. The habitats at the Site are likely to support a range of common invertebrate species, but there is no reason to suggest that any protected or notable species may be present.

4.7.2. **Background information.** The data search undertaken with the SxBRC returned one record of Sallow *Cirrhia icteritia* from the eastern most field of the site during 2007.

4.7.3. Other invertebrate species recorded within a 1km grid reference which includes a small portion of the northern boundary of the site, include Variable Coenagrion *Coenagrion pulchellum*, Downy Emerald *Cordulia aenea* and Scarce Libellula *Libellula fulva*.

4.8. Amphibians (Great Crested Newts)

4.8.1. Great Crested Newts *Triturus cristatus* (GCN) are known to travel up to 500 metres – without barriers that inhibit dispersal – to a breeding pond. However, it is widely accepted that they most commonly utilise suitable terrestrial habitat within a much closer distance, and activity is usually concentrated within 100 metres of breeding ponds, with key habitat being located within 50 metres. Indeed, Research Report 576 produced by English Nature (now Natural England) concludes that “Captures on fences (and by other methods) at distances between 100m and 200 to 250m from breeding ponds tended to be so low as to raise serious doubts about the efficacy of this as an approach”.

4.8.2. There are seven ponds present within the Site or adjacent to the Site, four of which (P4, P5, P6 and P7) are likely to remain wet for the majority of the GCN breeding season and therefore are of potential value to breeding amphibians. It is noted that the suitability of these ponds is frequently tempered by significant over-shading and an absence of significant aquatic growth.

4.8.3. The remaining features, including the network of ditches, are unlikely to offer viable breeding opportunities on account of their more ephemeral nature.

4.8.4. In terms of terrestrial habitats, the woodland and boundary features (tree lines, ditches and hedgerows) offer suitable foraging and refuge opportunities. Areas of grassland (including arable field margins) are typically of reduced suitability for amphibians, albeit they will offer a degree of sub-optimal habitat. Arable habitats are of negligible value to amphibians and indeed are likely to inhibit dispersal within and across the Site.

4.8.5. No amphibians were recorded during opportunistic checks of natural refugia during the Phase 1 Walkover survey.

4.8.6. In due course, the completion of a suite of presence/absence surveys for GCN would be sufficient to confirm the presence or absence of this species within the Site and to inform any mitigation and enhancement measures which would be appropriate. It is noted that those habitats likely to be of heightened interest to GCN are sought to be retained in the emerging masterplan proposals.

4.8.7. **Background information.** The data search undertaken with the SxBRC returned no records of any GCN from within the site itself, however several records were returned from the immediate surrounding area; the closest of which being recorded between the eastern most portion and middle of the site (to the west of the Cuckfield Road), during 2007 in addition to another record immediately to the south-west of the site during 2011.

4.8.8. It is further noted that GCN have been recorded in the wider area, including an area land known as 'The Hub' which is currently under development and for which Ecology Solutions have provided ecological advice.

4.9. Dormouse

4.9.1. The hedgerows and treelines with the Site provide suitable opportunities for Dormice *Gliridae*, should they be present in the local area.

4.9.2. At this stage it is considered that the vast majority of suitable Dormice habitat would be retained and indeed enhanced as part of the proposals, ensuring continued and improved opportunities to a range of small mammal species, not least Dormice (should they be present).

4.9.3. In the event that small areas of boundary vegetation are to be lost, the completion of a suite of Dormouse surveys would be sufficient to inform the scheme and identify an appropriate package of measures to retain and enhance opportunities for Dormice in the Site and local area.

4.9.4. **Background information.** The data search undertaken with the SxBRC returned one record of Dormouse from a 100m grid reference which includes a very small portion of the southern boundary of the site. Recorded during 2005, the record was of a single adult male, recorded within a Dormouse box.

4.9.5. Two other records of Dormouse were recorded within the wider area, each over 0.8km to the east of the site during 2001 and 2012 respectively.

4.10. Otter & Water Vole

4.10.1. The river corridor (River Adur) and the immediately adjacent riparian habitats provide suitable opportunities to support both Otter *Lutrinae* and Water Vole *Arvicola amphibius*, offering opportunities for holts/burrows, as well as foraging opportunities. The River Adur also offers relatively optimal dispersal opportunities for both species.

4.10.2. An initial inspection of the watercourse, where this lies adjacent to the Site, found no clear evidence of either species. Whilst a single burrow was noted, this was attributed to rats.

4.10.3. The River Adur and its associated riparian habitats are envisaged to be fully retained as part of the emerging masterplan proposals.

4.10.4. **Background information.** The data search undertaken with the SxBRC returned no records of any Water Vole from within the site. The closest suspected record of Water Vole was recorded approximately 0.5km to the north-east of the site, during 2005.

4.10.5. No records of Otter were returned from either within the site, or wider area.

4.11. Other Species

4.11.1. The woodland and hedgerow habitats on Site are likely to provide opportunities for a range of small mammal species present in the local area. The extensive areas of agricultural land are not considered likely to provide any significant species for any protected or notable species.

4.11.2. **Background information.** The data search undertaken with the SxBRC returned no records of any other protected or notable species from within the site.

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[7]. 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. The Sussex Biodiversity Partnership have prepared the Sussex Biodiversity Action Plan. This identifies a number of habitat and species specific action plans. Furthermore, a series of 'Biodiversity Opportunity Areas' (BOA) have also been identified within Sussex. These BOA are identified on the basis that they offer the best opportunities for enhancing biodiversity at a strategic scale. The Site lies outside of any BOA, albeit is located near to the Burgess Hill Green Crescent (BOA).

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.

[7] 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 within or immediately adjacent to the Site. The nearest statutory designated site is Bedelands Farm Local Nature Reserve (LNR) which is located approximately 2.7km to the east of the Site and which is separated from the Site by extensive open countryside, agricultural land and roads. This LNR is designated on account of its meadow grassland, hedgerow, woodland and wetland habitats and is owned and managed by Mid-Sussex District Council.

5.2.2. The closest SSSI, Ditchling Common SSSI, is located approximately 4.6km to the south east of the Site at its closest point. Ditchling Common SSSI is designated on account of its varied grassland habitats, including areas of wet and acid grassland, as well as scrub, woodland and stream habitats. A rich Lepidoptera assemblage is also present, with the Site of local value to a range of breeding birds.

5.2.3. Given the significant separation of the Site from these (and indeed any other designated site) it is considered there would be no potential for significant effects (direct or in-direct) to arise during either the construction or operational phases of the emerging proposals.

5.2.4. Notwithstanding the above, any emerging proposals would come forward alongside the adoption of best practice construction and engineering practices which comply with adopted legislation and guidance. These measures would ensure potential impacts on off Site habitats are avoided.

5.2.5. In considering designated Sites, due regard has been given to NE's SSSI Impact Risk Zones (IRZ). The IRZ tool is used to identify those types of development upon which NE should be consulted as part of the planning process, based on their proximity to a SSSI (a proxy for assessing the likelihood for potential adverse impacts to arise). The Site is located outside of any IRZ for which the type of development proposed is considered to have 'likely' impacts on statutory sites.

5.2.6. There are no European Designated Sites located within a 15km radius of the Site. Given the significant separation of any European Sites, there are no identified pathways through which potential significant effects could arise as part of the emerging masterplan proposals (either when considered alone or in combination with other plans or projects).

5.2.7. It is noted that NE were content that potential impacts on European Designated Sites could be safely scoped out for the nearby 'Northern Arc Allocation', a substantially larger development proposal which is moreover located in closer proximity to European Sites (albeit still well distanced).

5.2.8. **Non-statutory Sites.** There are no non-statutory designated sites present within the Site, with the closest site being Pond Lye Local

Wildlife Site (LWS) which is located approximately 130m to the north of the Site at its closest point, and on the far side of the River Adur. Pond Lye LWS supports a pond with adjacent shrub habitat and neutral grasslands. It is identified to be of heightened importance to breeding birds.

5.2.9. The next closest LWS, Great Wood & Copyhold Hanger LWS, is located approximately 1.7km to the east of the Site at its closest point. This LWS is designated on account of its ancient gill woodland habitats, and abandoned 'water meadows', alongside a network of streams.

5.2.10. Given the separation of both these LWS, as well as all other LWS in the local area, there is no potential for adverse impacts to arise during the construction phase. Nonetheless, emerging proposals would come forward in line with all relevant best practice construction measures, such as is in relation to dust, noise, air, light and hydrological pollution. These measures, which would be secured by way of a Construction Environmental Management Plan (CEMP), or similar, would be sufficient to ensure adverse impacts are avoided.

5.2.11. Given the separation of non-statutory sites from the Site, it is again not considered that any significant impacts would have the potential to arise during the operational phase, not least given that the proposals are employment based (and therefore would not give rise to additional recreational pressure).

5.2.12. In any event, the retention and enhancement of existing on site green infrastructure, including the River Adur and associated riparian habitats, will deliver a multi-functional asset within the Site, providing diverse and species rich habitats within the Site, as well as new recreational opportunities and alternative, sustainable modes of transport. These measures will complement local ecological objectives and ensure the retention of complementary habitats which support the floral and faunal communities recorded in these LWS.

5.2.13. As such, and in summary, it is considered that through the adoption of an appropriately designed development scheme and the implementation of best practice during the construction phase, which accords with the measures set out above in respect of statutory designated sites, any potential direct or indirect adverse effects on these non-statutory sites may be fully mitigated or avoided.

5.2.14. **Biodiversity Opportunity Areas**. The Site is located outside of any BOAs, with the closest BOA being Burgess Hill Green Crescent BOA.

5.2.15. The emerging proposals seek to retain those habitats of greatest biodiversity value within the Site, including the network of woodland, tree-belts, hedgerows and the River Adur. The opportunities to deliver enhancement to these habitats, incorporating them within a wider green infrastructure network, will contribute to the aims and

objectives of this BOA. Such opportunities include the establishment of appropriate hedge and woodland management, as well as the creation of species rich meadow grassland within the Site.

5.2.16. **Ancient Woodland**. There are no areas of ancient woodland within the Site. A single ancient woodland, Wortleford Wood, is located adjacent to the north west boundary of the Site, on the far side of the River Ardur. No development is proposed within 15m of this off Site ancient woodland. In any event, given the separation of Wortleford Wood from the Site by the River Ardur, there is no potential for direct adverse impacts to arise.

5.2.17. As for higher value on Site habitats, careful consideration will be given to ensure adverse lighting impacts are avoided on this off Site woodland.

Habitats Within the Site

5.2.18. Much of the Site comprises intensively managed arable land and is resultantly considered to be of negligible ecological interest. Given the negligible value of these habitats, no specific ecological mitigation would be required for any losses.

5.2.19. Moreover, the grassland habitats on Site are also of reduced ecological interest, being subject to regular agricultural management and typically supporting a sward indicative of more agriculturally improved conditions. Resultantly, these more species poor habitats are also considered to be of limited ecological interest within the context of the Site.

5.2.20. It is considered that losses to areas of grassland could be sufficiently mitigated through the creation of new, species rich meadow as part of the green infrastructure network within the Site. In particular, opportunities exist to establish diverse wet meadow habitats to the north of the Site, allowing the establishment of a high quality riparian corridor extending east west across the Site. Wet meadow habitats are particularly scarce in Sussex and the creation and safeguarding of such habitats would be a significant benefit.

5.2.21. The composition of new areas of meadow grassland will be targeted to complement local biodiversity targets, for example delivering new areas of lowland meadow, a UK BAP habitat present in Sussex.

5.2.22. The implementation of a sensitive, biodiversity led management regime for new and retained grassland habitats would provide opportunities to realise significant qualitative enhancements post development. This management would provide a mechanism to restore grassland habitats which have been historically suppressed and damaged by intensive grazing and which have limited potential for recovery under current management.

5.2.23. The habitats of greater interest within the Site include the woodland pockets, tree belts, hedgerows and river corridor, as well as, to a

lesser extent, the ponds present within the Site (largely on account of the potential opportunities they provide to faunal species).

5.2.24. As stated above, the habitats of relatively higher interest are to be largely retained, protected and enhanced as part of the emerging proposals. Further consideration is given to these habitats below. As noted previously, the emerging masterplan has been carefully informed by the existing biodiversity assets of greatest interest within the Site, allowing for the retention and enhancement of the vast majority of these features as part of an extensive green infrastructure network.

Woodland, Mature Tree Belts and Hedgerow

5.2.25. The woodland, tree belt and hedgerows are considered to be of high ecological value within the context of the Site, albeit this habitat is well represented locally.

5.2.26. As stated above, the presence of mature woodland, mature tree lines and hedgerows within the Site have informed the emerging development proposals for the Site, with the vast majority of these habitats to be retained and enhanced as part of the emerging proposals. Indeed, these existing habitats are envisaged to be the 'arteries' for the proposed green infrastructure network, dictating the location and extent of the Site wide open space post development.

5.2.27. Whilst losses to small areas of mature boundary habitat may be required to facilitate elements of the proposals (such as access roads), such impacts would be more than mitigated for through the retention and enhancement of the vast majority of existing wooded habitats, as well as the creation of significant new areas of woodland, hedge and tree planting.

5.2.28. Habitat creation would include for new native woodland and shrub planting adjacent to existing areas of woodland, buffering these existing habitats and providing valuable new edge habitat. Likewise, new planting will strengthen the existing boundary features, offering opportunities to restore defunct hedgerows or otherwise establish more robust features with improved structural diversity.

5.2.29. The creation of new edge habitat, which would be bought under a suitable management regime in the long term, would provide a significant enhancement over the existing situation where mature trees and woodland cease abruptly where they abut managed agricultural land.

5.2.30. The retention of the vast majority of woody habitat, as well as new planting to deliver both quantitative and qualitative gains in woodland relative to the existing situation, would ensure significant enhancements for the Site and moreover improve habitat connectivity across the Site and local area.

5.2.31. The protection and enhancement of mature trees and woodland will moreover contribute towards the safeguarding of BAP habitats such

as *Lowland Mixed Deciduous Woodland, Wet Woodland* and *Hedgerows.*

Ponds and Ditches

5.2.32. The ditches within the Site were recorded to be largely dry at the time of survey, with the ground flora typically dominated by species of a ruderal nature. Notwithstanding the majority of these features are of low intrinsic value, the majority are associated with hedgerows and/or tree lines and thus will be retained as part of the emerging proposals.

5.2.33. Despite many comprising shallow, ephemeral or over-shaded features with limited aquatic flora, the network ponds within the Site are nonetheless considered to be of ecological value in the context of the Site, albeit primarily on account of the potential opportunities they afford faunal species.

5.2.34. At this stage it is envisaged that the existing ponds within the Site will be retained as part of the proposals and incorporated into the extensive green infrastructure network.

5.2.35. Opportunities exist as part of the emerging development proposals to enhance the value of existing ponds through the sensitive clearance/pruning of over-shading vegetation as well as the dredging of these features to increase depth and remove leaf litter.

5.2.36. Such measures would allow for growth of aquatic flora within the features and, as a result, ensure biodiversity gains over the existing situation.

5.2.37. Some of the ponds appear to likely to receive run-off from arable fields and these would benefit from a cessation in chemical application within adjacent habitats, allowing the water quality of the waterbodies to improve in the longer term.

5.2.38. Moreover, the emerging proposals have ample scope to deliver extensive new wetland habitats, both as part of SUDS networks, as well as through the creation of dedicated biodiversity ponds at intervals within the green infrastructure network.

5.2.39. The creation and enhancement of new wetland habitats within areas of proposed open space would contribute towards the protection of ‘blue infrastructure’ within the Site, providing valuable stepping stone habitats for floral and faunal species of local importance

River Adur

5.2.40. The River Adur forms the Site’s northern boundary and is considered to be of high ecological value in the context of the Site, not least on account of the potential opportunities this watercourse affords faunal species.

5.2.41. The emerging masterplan proposals seek to retain this watercourse in its entirety, incorporating it into the emerging green infrastructure

network which will buffer the watercourse along the entirety of its extent within Site. A buffer zone of at least 8m will be secured along the full length of the river, within which habitat creation and management will promote the establishment of diverse riparian habitats. The creation of areas of wet meadow (as detailed above) will also be sought.

5.2.42. In due course, opportunities exist to deliver simple yet significant enhancements to this watercourse, for example through undertaking sensitive, localised scrub clearance along some stretches of the river such that light can penetrate and aquatic flora may establish. The implementation of a management regime to eradicate the invasive Himalayan Balsam (see below) would be a further enhancement.

Invasive Species

5.2.43. As noted in Section 4, a single stand of the invasive Japanese Knotweed was recorded adjacent to the Site at its western boundary. It is recommended this stand be monitored as part of the emerging proposals. Any plants located within the Site should be the subject to the implementation of an eradication programme.

5.2.44. Himalayan Balsam was also recorded intermittently along the River Adur. It is envisaged that long term management of the Site would include for the removal of this species when recorded.

Summary

5.2.45. It is considered that the adoption of a suitable landscaping scheme for the Site, in line with the recommendations set out above, will ensure the biodiversity value of the habitats present within the Site are retained and indeed enhanced as part of any development.

5.2.46. In functional terms, the protection, restoration and/or enhancement of valuable biodiversity assets (such as the ancient woodland and mature tree lines) will enhance the value of the Site both in intrinsic terms and as an important functional resource for faunal groups (see below), creating a high quality resource linking habitats within the wider landscape.

5.2.47. The biodiversity value of these habitats would be further enhanced through the establishment of an appropriate management regime, as would form an integral component of the emerging development proposals for the Site.

5.2.48. In summary, it is considered that the proposals would be sufficient to achieve a significant biodiversity net gain within the Site post development, as is sought by existing and emerging policy and legislation. This net gain could be further demonstrated through the completion of an appropriate biodiversity metric tool (such as the Defra Metric 2.0) at a more detailed stage of planning.

5.3. Faunal Evaluation

Badgers

5.3.1. **Legislation.** 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 south.

5.3.2. 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 NE as any use within the preceding 12 months.

5.3.3. 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.

5.3.4. Previous guidelines were issued by NE on the types of activity it considers should be licensed within certain distances of sett entrances. They stated that works which may require a licence include using heavy machinery within 30m of any entrance to an active sett, using lighter machinery within 20m, and light work such as hand digging within 10m. However, interim guidance issued by NE in September 2007 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."*

5.3.5. More recent guidance produced by NE in 2009 states that Badgers are relatively tolerant of moderate levels of disturbance and that low levels of disturbance at or near to Badger setts do not necessarily disturb the Badgers occupying those setts[8]. However, NE's guidance continues by stating that any activity that will, or is likely to cause one of the interferences defined in Section 3 (such as damaging a sett tunnel or chamber or obstructing access to a sett entrance) will continue to be licensed.

5.3.6. In addition, this latest 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.

[8] Natural England. 2009. Protection of Badgers Act 1992 (as amended). Interpretation of Disturbance n relation to badgers occupying a sett.

5.3.7. This interim 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.

5.3.8. **Site Evaluation.** No evidence of confirmed Badger use was recorded on Site and as such there is nothing to indicate the Site is of any significant value to Badger populations present in the local area.

5.3.9. **Mitigation/Enhancement Opportunities.** In line with best practice, and noting that Badgers are a mobile species which can rapidly excavate new setts, an updated survey would be required at a more detailed stage of planning.

5.3.10. Notwithstanding the need for further survey work in due course, no specific mitigation is envisaged to be required at this stage. The proposals would offer opportunities to enhance the Site for Badgers post development, not least through new native shrub planting and the establishment of sensitive habitat management. It is considered there would be ample scope to provide any specific mitigation in the unlikely event that it is required.

<u>Bats</u>

5.3.11. **Legislation.** All bats are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as Amended) and are included on Schedule 2 of the Conservation of Habitats and Species Regulations 2010 ("the Habitats Regulations"). These include provisions making it an offence to:

- Deliberately kill, injure or take (capture) bats;
- Deliberately 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;
- 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.

5.3.12. While the legislation is deemed to apply even when bats are not in residence, NE guidance suggests 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.

5.3.13. The words 'deliberately' and 'intentionally' include actions where a court can infer the defendant knew the action taken would almost inevitably result in an offence, even if that was not the primary purpose of the act.

5.3.14. 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.

5.3.15. European Protected Species (EPS) licences are available from NE in certain circumstances, and permit activities that would otherwise be considered an offence.

5.3.16. Licences can usually only be granted if the development is in receipt of full planning permission and it is considered that:

(i) There is no satisfactory alternative; or
(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.

5.3.17. **Site Evaluation.** There are a number of trees present within the Site which have features of potential value for roosting bats. The vast majority of the trees are restricted to Site boundaries.

5.3.18. Moreover, the treelines and hedgerows provide suitable foraging and navigational resources for this group.

5.3.19. **Mitigation/Enhancement Opportunities.** At this stage it is envisaged the vast majority of those landscape features deemed to be of heightened potential interest to bats (trees belts/hedge) will be retained and enhanced as part of the emerging proposals, ensuring a contiguous wooded network across the Site which will provide continued commuting and foraging opportunities. Indeed, a key guiding principle of the masterplan proposals is to establish high quality green infrastructure corridors (identified as ‘green arteries’) throughout the Site, ensuring Site wide connectivity is retained and enhanced for the benefit of a range of species, not just bats.

5.3.20. The adoption of an appropriate lighting strategy alongside the proposed enhancements of these habitats, and the provision of a range of new high quality habitats as part of the emerging development proposals, would ensure opportunities for bats are retained and enhanced in the long term.

5.3.21. In the event that any trees identified to have potential for roosting bats are to be adversely affected by a proposed scheme, further survey work such as a tree climbing survey or emergence survey would need to be undertaken in order to ascertain whether they support a bat roost. Should any bat roosts be found during further survey work a NE EPS Licence would be required for works likely to disturb bats and their roosting sites, and would include details of any mitigation measures required.

5.3.22. Given the nature of any potential roosts (i.e. crevices and holes in trees); it is considered that any required mitigation measures could easily be accommodated within the emerging scheme. Indeed, the emerging development proposals would include for the provision of a suite of bat roosting features to be associated with retained trees,

allowing for a significant net gain in roosting opportunities as part of the proposals and more than mitigating for any minor potential losses.

5.3.23. In order to inform a future planning application and to reaffirm and 'fine tune' appropriate mitigation and enhancement measures for this faunal group, it is recommended that a suite of bat activity surveys are undertaken at the Site during appropriate times of year. The findings of the surveys would be sufficient to further inform the design of the proposed development and identify any specific measures which may be necessary to mitigate impacts on foraging and commuting opportunities for bats.

5.3.24. There is nothing to indicate that bats would be an overriding constraint to the delivery of an appropriately designed scheme.

Birds

5.3.25. **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.

5.3.26. **Site Evaluation.** There are some opportunities for nesting birds in the treelines and hedgerows within the Site. The agricultural nature of the land, being either short grazed grassland or intensively managed arable land, does not provide suitable nesting opportunities for birds.

5.3.27. It is noted that comparable and improved opportunities are present in the wider area.

5.3.28. **Recommendations.** As all species of birds receive general protection whilst nesting, to avoid a possible offence it is recommended that any clearance of suitable nesting vegetation (including any tree felling) should be undertaken outside of the main breeding season (March to August inclusive,) or that checks be made for nesting birds by an ecologist immediately prior to removal.

5.3.29. The vast majority of suitable nesting habitat is to be retained and enhanced as part of the emerging masterplan proposals. Where losses to features of potential value to breeding birds are required as part of any forthcoming planning application, it is considered that these could be more than compensated for through the proposed new planting as part of the scheme.

5.3.30. Given the nature of the existing Site and emerging proposals, it is considered that a suite of breeding bird surveys would not be required to inform any forthcoming applications. However, if the local planning authority are inclined to take a different stance, it is considered a single breeding bird survey, undertaken during an optimal time of year, would be more than sufficient to robustly inform a planning application.

5.3.31. In due course simple enhancements for this group of species could be provided by the provision of suitable bird boxes on retained trees or new buildings within the Site.

Reptiles

5.3.32. **Legislation.** All six British reptile species receive a degree of legislative protection that varies depending on their conservation importance.

5.3.33. Rare, endangered or declining species receive 'full protection' under the Wildlife and Countryside Act 1981 (as Amended) as well as protection under the Conservation of Habitats and Species Regulations 2010 (as Amended). Species that are fully protected include Smooth Snake *Coronella austriaca* and Sand Lizard *Lacerta agilis*. These receive 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;
- selling, offering for sale, possession or transport for purposes of sale (live or dead animal, part or derivative).

5.3.34. By contrast, due to their abundance and more cosmopolitan habitat requirements in Britain, Common Lizard *Zootoca vivipara*, Slow Worm *Anguis fragilis*, 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.

5.3.35. **Site Evaluation.** The habitats present on Site are typically highly sub-optimal to support reptiles, comprising grazed grassland and intensively managed arable land. Nonetheless, some areas of potentially suitable reptile habitat are present, namely at field margins.

5.3.36. **Recommendations.** Given the existing agricultural nature, the Site and the absence of habitats likely to be of heightened value to common reptiles, there is nothing to indicate the Site is of particular value to reptiles. Nonetheless, in due course, the completion of a suite of presence/absence surveys for reptiles would be sufficient to confirm the presence or absence of common reptiles within the Site and to inform any mitigation and enhancement measures which would be appropriate.

5.3.37. In the event that reptiles are recorded, and given that the majority of the Site does not provide suitable opportunities for reptiles, there would be ample opportunities, as part of any emerging scheme, to retain and enhance opportunities for reptiles within the Site in the long term. Indeed, the emerging proposals seek to fully retain the hedgerows and tree belts, and with them the associated grassy margins.

Invertebrates

5.3.38. **Site Evaluation.** Cultivated arable land is deemed to be of negligible interest to invertebrates and indeed there is a growing evidence base which links the use of agricultural chemicals with a collapse in invertebrate communities.

5.3.39. The wooded habitats within the Site are likely to support a range of invertebrate species, but there is nothing to indicate these elements are of any heightened importance in the local area (where such habitats are widespread) nor that these habitats would be of any significant value to protected, rare or notable species.

5.3.40. **Recommendations/Mitigation/Enhancements**. The creation of an extensive and diverse network of green infrastructure, which will retain the existing habitats of heightened value to invertebrates (such as mature woodland) would ensure continued opportunities for existing assemblages, whilst the creation of extensive new areas of meadow grassland would be of benefit to a range of nectar feeding/pollinating species.

5.3.41. Further enhancements may be delivered through the incorporation of invertebrate friendly features elsewhere on Site. For example, through the provision of bee nesting bricks within new buildings, or the creation of 'invertebrate hotels'

Amphibians (Great Crested Newts)

5.3.42. **Legislation.** All British amphibian species receive a degree of protection under the 1981 Wildlife and Countryside Act (as amended). The level of protection varies from protection from sale or trade only, as is the case with species such as Smooth Newt *Triturus vulgaris* and Common Toad *Bufo bufo,* to the more rigorous protection afforded to species such as the Great Crested Newt.

5.3.43. Although Great Crested Newts are regularly encountered locally and throughout much of England, the UK holds a large percentage of the world population of the species. As such the UK has an international obligation to conserve the species and they receive full protection under domestic and European legislation.

5.3.44. More specifically, Great Crested Newts are also listed in Annex IV(a) of the European Community Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora, more commonly known as the Habitats Directive. The Habitats Directive is transposed into UK law by the Conservation of Habitats and Species

Regulations 2017 ("the Habitats Regulations"; as amended), which lists Great Crested Newts under Schedule 2.

5.3.45. Great Crested Newts are thus protected from deliberate killing, injury or capture with their habitat, including a breeding site, resting place or any structure or place used for 'shelter or protection' also protected against deliberate or reckless damage or destruction. It is also illegal to deliberately or recklessly disturb Great Crested Newts and their eggs are protected from taking or destroying.

5.3.46. **Site Evaluation.** Notwithstanding that a number of the individual features are likely to dry on a regular basis, the pond network on site offers potential breeding opportunities for a range of amphibians.

5.3.47. Moreover, the boundary features, ditches and to some extent the field margins and areas of less managed grassland provide suitable opportunities for amphibians in their terrestrial phase.

5.3.48. **Recommendations / Mitigation / Enhancement Opportunities.** The completion of a suite of Great Crested Newt survey work will be sufficient to ascertain the presence or absence of this species within the site boundary.

5.3.49. In any event, it should be noted that the majority of waterbodies within the site are to be retained as part of the emerging masterplan. Moreover, there scope within the proposals to create high quality breeding and terrestrial opportunities for a full range of amphibian species (not least GCN).

5.3.50. This can be easily achieved through the provision of permanently wet waterbodies and rough grassland habitats with the proposed Green Infrastructure. The creation of new biodiversity ponds, which would be designed such that their value for breeding amphibians is maximised would provide a significant enhancement relative to many of the existing features. The strategic locating of new ponds would further maximise opportunities for amphibians to disperse across the landscape, potentially improving dispersal in areas that have been historically fragmented by large scale conversion to an agricultural setting.

<u>Dormouse</u>

5.3.51. **Site Evaluation.** The tree lines and hedgerows within the Site would provide potential opportunities for Dormice, should they be present in the local area.

5.3.52. **Recommendations.** It is envisaged the vast majority of suitable Dormouse habitat will be retained and enhanced as part of a network of green infrastructure as part of the emerging proposals. As such, it is considered that the scheme would retain opportunities for Dormouse, should they be present. Indeed, emerging proposals offer significant opportunities for enhancements to linear features through new planting and the establishment of appropriate habitat management – enhancing the connectivity and structure of the wooded network within the Site.

5.3.53. Notwithstanding the above, and should habitat losses be required as part of the emerging proposals, the completion of a suite of Dormouse surveys will be required. These surveys will be sufficient to assess the presence (or not) of Dormouse on Site and identify any specific mitigation and enhancement opportunities which may be required.

5.3.54. Given the emerging proposals seek to retain the network of suitable Dormouse habitat on Site and offer significant opportunities for betterment post development, it is not considered that Dormouse would have the potential to be an overriding constraint to an appropriately designed scheme.

Otters and Water Voles

5.3.55. **Legislation.** Otters benefit from a level of legislative protection equivalent to bats. The species is listed under Section 41 of the NERC Act as being of principal importance for the conservation of biodiversity in England.

5.3.56. Water Voles received limited legal protection in April 1998 through inclusion in Schedule 5 of the Wildlife & Countryside Act 1981 (as Amended) for some offences. This protection was extended in April 2008 so the Water Vole is fully protected under Section 9.

5.3.57. Legal protection makes it an offence to:

- Intentionally kill, injure or take (capture) a Water Vole;
- Possess or control a live or dead Water Vole, or any part of a Water Vole;
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place which Water Voles use for shelter or protection or disturb Water Voles while they are using such a place; and
- Sell, offer for sale or advertise for live or dead Water Voles.

5.3.58. The law only applies to wild animals, so the possession of captive bred Water Voles is not an offence.

5.3.59. **Site Evaluation.** The initial habitat appraisal survey in April 2020 identified the River Adur offers suitable opportunities for both Otter and Water Vole, albeit no evidence of either species was recorded during the course of this work. The other habitats within the Site are not considered to provide potential opportunities for either species.

5.3.60. In any event, the watercourse within the Site will be fully retained and buffered as part of the emerging masterplan proposals.

5.3.61. **Recommendations/Enhancement Opportunities.** The emerging proposals seek to retain the River Adur and its adjacent riparian habitats in full, ensuring a significant landscaped buffer is retained between the watercourse and built form. The retention and enhancement of this corridor will ensure continued opportunities for

Water Vole and Otter, should either group be present in the local area or colonise the Site in future years.

5.3.62. Sensitive landscaping along the watercourse, perhaps to include localised vegetation clearance and the planting of species which offer a food resource or otherwise provide important bank cover, would provide suitable enhancements in this regard. Appropriate examples of aquatic/marginal planting are provided at Appendix 2.

European Hedgehog

5.3.63. **Legislation:** Section 6 of the Wildlife & Countryside Act 1981 (as Amended) makes it an offence to capture or kill Hedgehogs through certain means. Hedgehogs are also identified as a species of Principle Importance in England through the Natural England and Rural Communities (NERC) Act 2006.

5.3.64. **Site usage.** No evidence of Hedgehog was recorded during the surveys undertaken in 2020. Suitable habitat is nonetheless present, and Hedgehog are known to be present in the local area.

5.3.65. **Mitigation and Enhancements**. Post development, Hedgehogs, a UK BAP Priority Species, will benefit from the retention, restoration and enhancement of the existing green infrastructure within the Site. Appropriate management of these habitats in the long term will ensure continued opportunities for Hedgehog post development.

5.3.66. Given the nature of the emerging proposals, it is considered the development would not have the potential to restrict dispersing Hedgehog. In the event that any boundary fencing is required, opportunities for small mammal passage will be provided in the form of regular 13cm by 13cm gaps at the base of these boundary features.

6. PLANNING POLICY CONTEXT

6.1.1. The planning policy framework that relates to nature conservation in Mid Sussex District, West Sussex, is issued at two main administrative levels: nationally through the National Planning Policy Framework (NPPF); and locally through the Mid Sussex District Plan.

6.1.2. The proposed development will be judged in relation to the policies contained within these documents.

6.2. National Policy

National Planning Policy Framework

6.2.1. Guidance on national policy for biodiversity and geological conservation is provided by the NPPF, published in March 2012, revised on 24 July 2018 and updated on 19 February 2019. It is noted that the NPPF continues to refer to further guidance in respect of statutory obligations for biodiversity and geological conservation and their impact within the planning system provided by Circular 06/05 (DEFRA ODPM, 2005) accompanying the now defunct Planning Policy Statement 9 (PPS9).

6.2.2. The key element of the NPPF is that there should be "*a presumption in favour of sustainable development*" (paragraphs 10 to 11). It is important to note this presumption "*does not apply where the plan or project is likely to have a significant effect on a habitats sites (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site*" (paragraph 177). 'Habitats Site' has the same meaning as the term 'European Site' as used in the Habitats Regulations 2017.

6.2.3. Hence, the direction of Government policy is clear; that is, the presumption in favour of sustainable development is to apply in circumstances where there is potential for an effect on a European Site, if it has been shown there will be no adverse effect on that designated site as a result of the development in prospect.

6.2.4. A number of policies in the NPPF are comparable to those in PPS9, including reference to minimisation of impacts to biodiversity and provision of net gains to biodiversity where possible (paragraph 170).

6.2.5. The NPPF also considers the strategic approach that Local Authorities should adopt with regard to the protection, maintenance and enhancement of green infrastructure, priority habitats and ecological networks, and the recovery of priority species.

6.2.6. Paragraphs 174 to 176 of the NPPF comprise a number of principles that Local Authorities should apply, including encouraging opportunities to incorporate biodiversity in and around 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 there are 'wholly exceptional reasons' (for instance, infrastructure projects where the public benefit would clearly outweigh the loss or deterioration of habitat) and a suitable compensation strategy exists.

6.2.7. 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.

6.3. **Local Policy**

Mid Sussex District Plan (2018)

6.3.1. The Mid Sussex District Plan was adopted in March 2018. This document sets out the key policies which will guide development in the plan period (2014 to 2031). It includes two policies of relevance to biodiversity and nature conservation, each of which are set out below.

6.3.2. Policy DP16**:** 'Ashdown Forest Special Protection Area (SPA) and Special Area of Conservation (SAC)' seeks to prevent adverse effects on the above European statutory designated sites through development. Any development which is likely to have a significant effect on these sites will be required to demonstrate that adequate measures are put in place to avoid or mitigate and potential adverse effects. The policy also outlines the avoidance and mitigation measures that all development must have regard to, including provision of Suitable Alternative Natural Greenspace (SANG) and financial contribution to the Ashdown Forest Strategic Access Management and Monitoring (SAMM) Strategy (where applicable).

6.3.3. Policy DP37: 'Trees, Woodland and Hedgerows' puts emphasis on the protection and enhancement of such features and maintenance of green infrastructure, stating that new development should conserve the network, avoid fragmentation and, if necessary, ensure any impacts are appropriately mitigated.

6.3.4. Policy DP38: 'Biodiversity' identifies that development will need to conserve and, where possible, restore and enhance biodiversity assets. Specific consideration is given to the protection of designated sites, habitats, and species.

6.4. **Discussion**

6.4.1. It is considered that, following the recommendations in this report, any forthcoming development proposals would fully accord with

national and local policy and avoid any significant impacts on any designated sites for nature conservation.

6.4.2. The presence or potential presence of protected species is acknowledged with further survey effort recommended, where relevant, to ensure the presence/absence of these species can be robustly assessed and mitigated for. Those habitats of ecological importance have been identified and measures recommended to ensure their protection. As such there are no ecological reasons why this Site should not come forward for development.

7. SUMMARY AND CONCLUSIONS

7.1. Ecology Solutions was commissioned in April 2020 to undertake an updated Phase 1 habitat survey of land to the north of A2300, Burgess Hill.

7.2. The emerging proposals for the Site are for mixed use development including a science and technology park and the provision of strategic green infrastructure.

7.3. There are no statutory or non-statutory designated sites (designated for reasons of nature conservation) located within the Site. The nearest statutory designated site is Bedelands Farm Local Nature Reserve (LNR) which is located approximately 2.7km to the east of the Site and which is separated from the Site by extensive open countryside, agricultural land and roads. The closest non-statutory aite is the Pond Lye Local Wildlife Site (LWS) which is located approxiately 130m to the north of the Site at its closest point, and on the far side of the River Adur.

7.4. Subject to the adoption of the measures set out in this report, it is considered potential adverse impacts on these sites will be fully avoided, either when considered alone or in combination with other plans or projects.

7.5. Habitats of relatively improved ecological value within the Site include the boundary tree belts and hedgerows. The presence of these habitats has been given careful consideration as part of this assessment and appropriate measures are set out to guide emerging development proposals and ensure the biodiversity value of these habitats can be retained and enhanced as part of the emerging proposals.

7.6. In terms of protected species, further survey effort in due course has been recommended where required, and appropriate mitigation has been suggested, where relevant.

7.7. No fresh evidence of use of the Site by Badgers was recorded. No bat roosts were recorded during specific searches of the Site as a whole. However, the presence of trees containing features with potential to support roosting bats was recorded, but these do not preclude development coming forward.

7.8. In regards other protected or notable species, there is potential for bats to use these features for foraging and navigating purposes and for birds to utilise hedgerows and trees within the Site for nesting. The hedgerows would also offer suitable opportunities for Dormice, should they be present in the local area. Moreover, grassland habitats within the Site provide a limited degree of sub-optimal habitat for common reptiles. The potential for these species to be present is duly noted, and the emerging proposals would ensure such opportunities are retained and enhanced.

7.9. It is considered there is significant opportunity for new habitat creation and ecological enhancement of the Site through suitable landscape schemes which would more than mitigate for any loss of existing habitat on Site.

7.10. From Ecology Solutions' Site survey and the background information obtained, there is no evidence to suggest there are any overriding ecological constraints which would prevent an appropriate planning application coming forward for the Site. With the implementation of the recommendations in this report, it is considered that any forthcoming proposals may conform to relevant national and local policy with respect to nature conservation and biodiversity and further realise an enhancement over the current situation.

Conclusions

7.11. In conclusion, it is considered there is no evidence to suggest there would be any overriding ecological constraints which would prevent the delivery of an appropriately designed development at the Site.

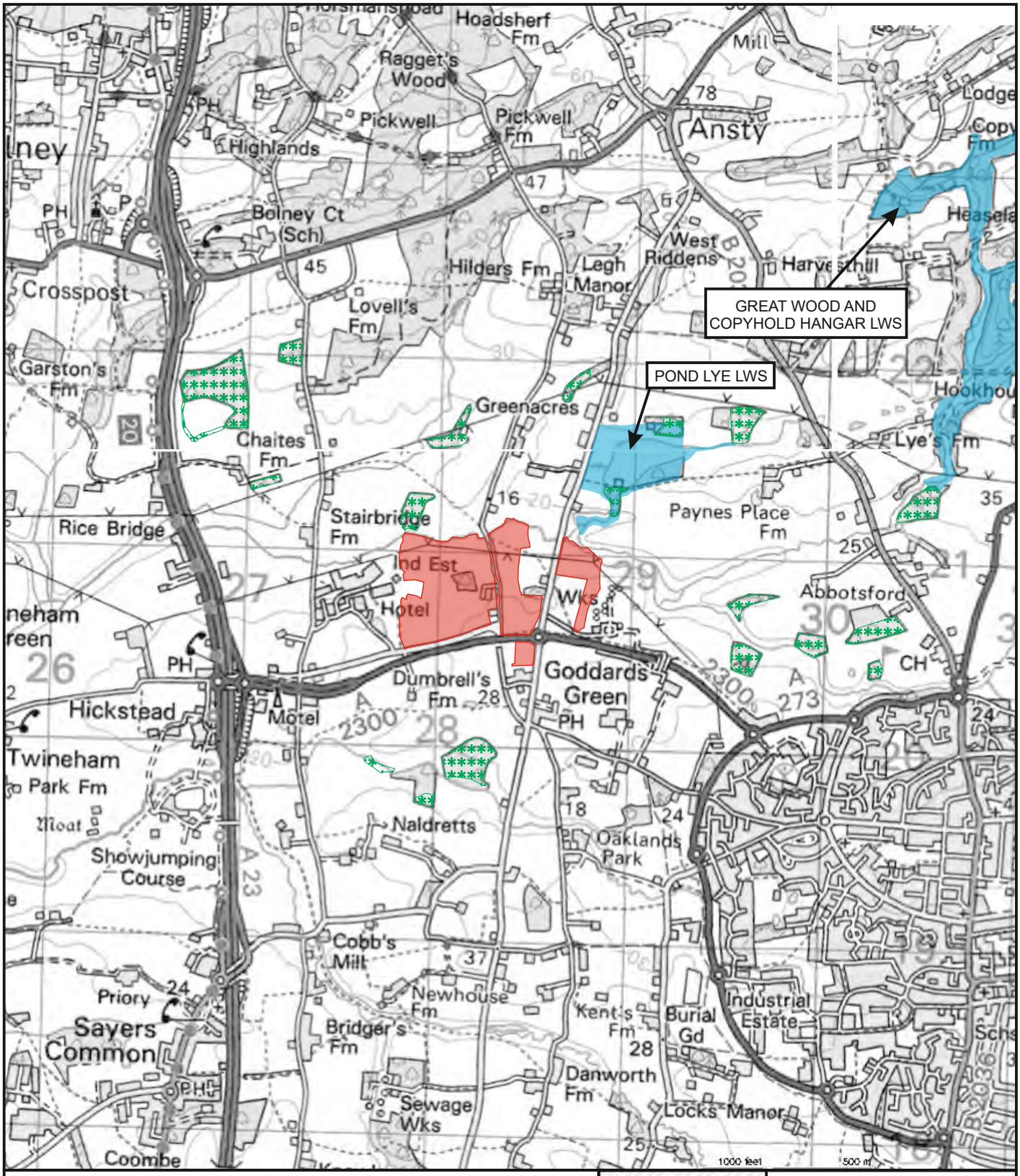
7.12. With the implementation of the recommendations in this report, it is considered that any forthcoming proposals may conform to relevant national and local policy with respect to nature conservation and biodiversity and further realise an enhancement over the current situation, contributing to local biodiversity targets for the area.

PLANS & APPENDICES

PLANS

PLAN ECO1

Site Location and Ecological Designations



KEY:

- SITE LOCATION
- LOCAL WILDLIFE SITE (LWS)
- ANCIENT WOODLAND

N

ECOLOGY SOLUTIONS
Part of the ES Group

Farncombe House
Farncombe Estate | Broadway
Worcestershire | WR12 7LJ

+44(0)1451 870767
info@ecologysolutions.co.uk
ecologysolutions.co.uk

8856: PROJECT NEWTON

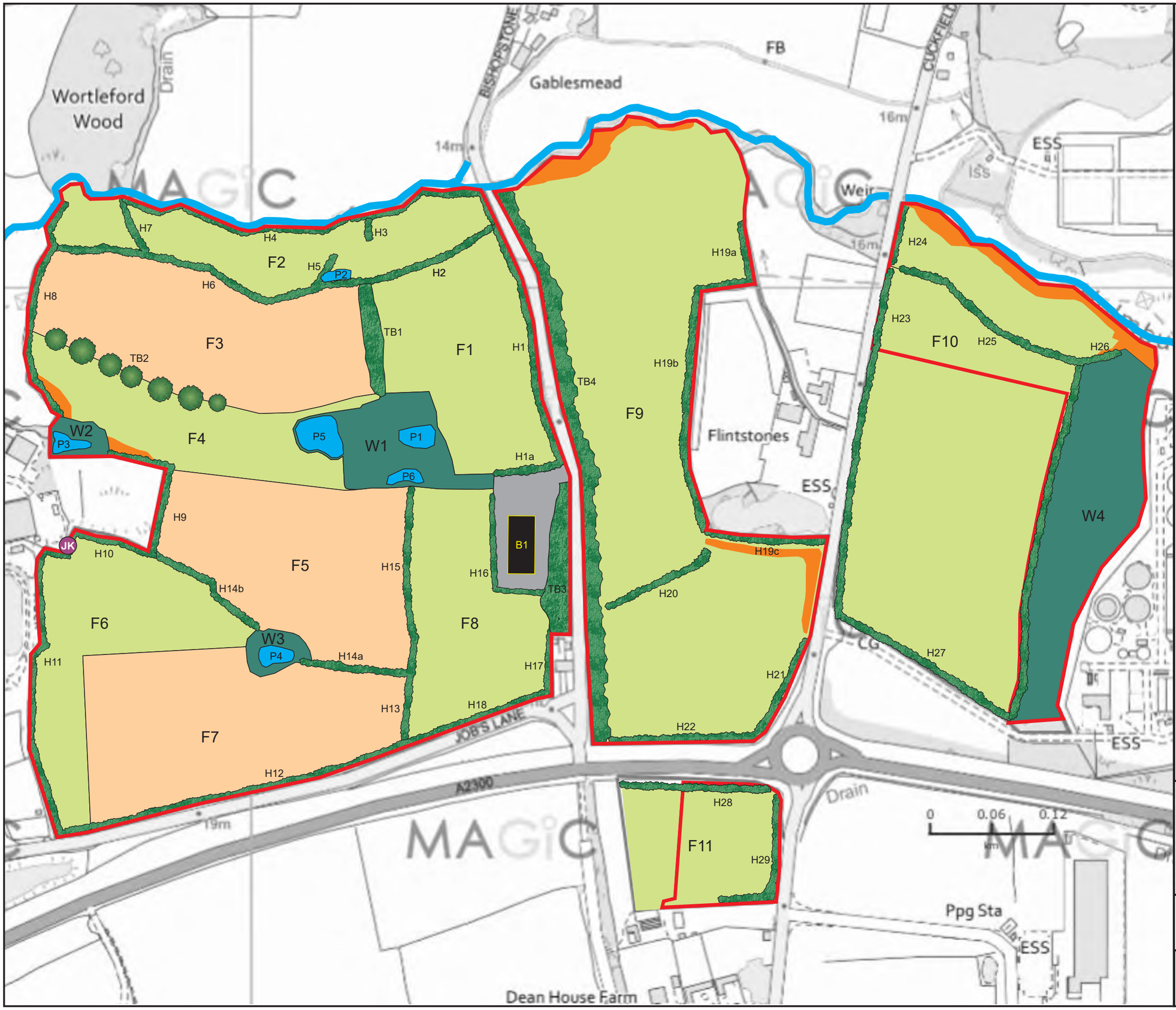
PLAN ECO1: SITE LOCATION AND ECOLOGICAL DESIGNATIONS

Rev: A

Jul 2020

PLAN ECO2

Ecological Features



KEY:

- SITE BOUNDARY
- SEMI-IMPROVED GRASSLAND
- ARABLE LAND
- WOODLAND
- HEDGEROWS / TREELINES
- TREE
- POND
- RIVER ADUR
- SCRUB
- HARDSTANDING
- BUILDING
- JAPANESE KNOTWEED

N

Graphic amended from Multi-Agency Geographic Information for the Countryside (MAGIC) database.

ECOLOGYSOLUTIONS
Part of the ES Group

Farncombe House
Farncombe Estate | Broadway
Worcestershire | WR12 7LJ

+44(0)1451 870767
info@ecologysolutions.co.uk
ecologysolutions.co.uk

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ECO2: HABITAT FEATURES

July 2020

PLAN ECO3

Protected Species

KEY:

- SITE BOUNDARY
- TREE WITH BAT POTENTIAL
- BADGER SETT

N

Graphic amended from Multi-Agency Geographic Information for the Countryside (MAGIC) database.

ECOLOGYSOLUTIONS
Part of the ES Group

Farncombe House
Farncombe Estate | Broadway
Worcestershire | WR12 7LJ

+44(0)1451 870767
info@ecologysolutions.co.uk
ecologysolutions.co.uk

8856: PROJECT NEWTON

ECO3: PROTECTED SPECIES

July 2020

APPENDICES

APPENDIX 1

Information Obtained From

Multi-Agency Geographic Information for the Countryside

(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)

Projection = OSGB36
xmin = 518600
ymin = 118000
xmax = 538900
ymax = 126400

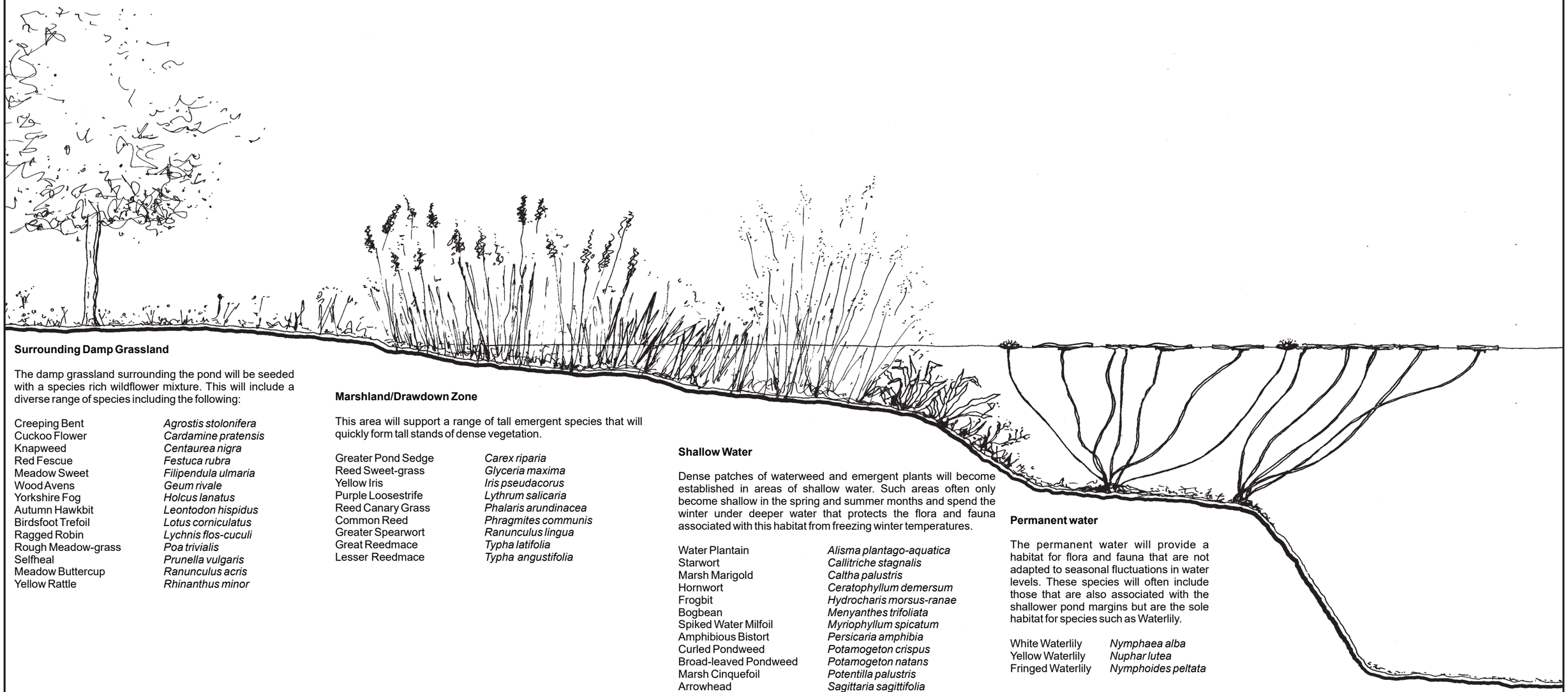
0 0.75 1.5
km

Map produced by MAGIC on 22 July, 2020.

APPENDIX 2

Example of Suitable

Marginal and Aquatic Planting



Surrounding Damp Grassland

The damp grassland surrounding the pond will be seeded with a species rich wildflower mixture. This will include a diverse range of species including the following:

Creeping Bent	*Agrostis stolonifera*
Cuckoo Flower	*Cardamine pratensis*
Knapweed	*Centaurea nigra*
Red Fescue	*Festuca rubra*
Meadow Sweet	*Filipendula ulmaria*
Wood Avens	*Geum rivale*
Yorkshire Fog	*Holcus lanatus*
Autumn Hawkbit	*Leontodon hispidus*
Birdsfoot Trefoil	*Lotus corniculatus*
Ragged Robin	*Lychnis flos-cuculi*
Rough Meadow-grass	*Poa trivialis*
Selfheal	*Prunella vulgaris*
Meadow Buttercup	*Ranunculus acris*
Yellow Rattle	*Rhinanthus minor*

Marshland/Drawdown Zone

This area will support a range of tall emergent species that will quickly form tall stands of dense vegetation.

Greater Pond Sedge	*Carex riparia*
Reed Sweet-grass	*Glyceria maxima*
Yellow Iris	*Iris pseudacorus*
Purple Loosestrife	*Lythrum salicaria*
Reed Canary Grass	*Phalaris arundinacea*
Common Reed	*Phragmites communis*
Greater Spearwort	*Ranunculus lingua*
Great Reedmace	*Typha latifolia*
Lesser Reedmace	*Typha angustifolia*

Shallow Water

Dense patches of waterweed and emergent plants will become established in areas of shallow water. Such areas often only become shallow in the spring and summer months and spend the winter under deeper water that protects the flora and fauna associated with this habitat from freezing winter temperatures.

Water Plantain	*Alisma plantago-aquatica*
Starwort	*Callitriche stagnalis*
Marsh Marigold	*Caltha palustris*
Hornwort	*Ceratophyllum demersum*
Frogbit	*Hydrocharis morsus-ranae*
Bogbean	*Menyanthes trifoliata*
Spiked Water Milfoil	*Myriophyllum spicatum*
Amphibious Bistort	*Persicaria amphibia*
Curled Pondweed	*Potamogeton crispus*
Broad-leaved Pondweed	*Potamogeton natans*
Marsh Cinquefoil	*Potentilla palustris*
Arrowhead	*Sagittaria sagittifolia*

Permanent water

The permanent water will provide a habitat for flora and fauna that are not adapted to seasonal fluctuations in water levels. These species will often include those that are also associated with the shallower pond margins but are the sole habitat for species such as Waterlily.

White Waterlily	*Nymphaea alba*
Yellow Waterliily	*Nuphar lutea*
Fringed Waterlily	*Nymphoides peltata*

ECOLOGYSOLUTIONS
Part of the ES Group

Farncombe House
Farncombe Estate | Broadway
Worcestershire | WR12 7LJ

+44(0)1451 870767
info@ecologysolutions.co.uk
ecologysolutions.co.uk

EXAMPLES OF SUITABLE MARGINAL AND AQUATIC PLANTING

ECOLOGYSOLUTIONS

Part of the ES Group

Ecology Solutions Limited | Farncombe House | Farncombe Estate | Broadway | Worcestershire | WR12 7LJ

01451 870767 | info@ecologysolutions.co.uk | www.ecologysolutions.co.uk

APPENDIX VII

PROJECT NEWTON

land North of A2300, Burgess Hill, West Sussex

Science and Technology Park Sustainability Statement

Regulation 19 - September 2020

SECTION:

Introduction

This document has been prepared to support the allocation proposals for a new Science & Technology Park in Burgess Hill and should be read alongside the 'September 2020 Positioning Statement'. Sustainable development is defined as "***development that meets the needs of the present without compromising the ability of future generations to meet their own needs"*** *(The Report of the Brundtland Commission, 1987)* . It is about ensuring a better quality of life for everyone, now and for generations to come.

As further defined in the National Planning Policy Framework (NPPF) (as amended 2019)"*achieving sustainable development means that the planning system has three overarching objectives, which are interdependent and need to be pursed in mutually supportive ways"* so that opportunities are taken to secure net gains across the three objectives. These three key strands of sustainable development are:

- **Social**
- **Environmental**
- **Economic**

The NPPF (2019) considers that the purpose of the planning system is to contribute to achieving sustainable development in a positive way. Accordingly, there is a presumption in favour of sustainable development at the heart of the Framework.

Aligning with National Planning Policy, this aspirational Sustainability Strategy explains how the development of a new Science & Technology Park (Science & Technology Park) in Burgess Hill could both explore and address the **Environmental** issues which form one aspect of sustainable development; and how in doing so this may have a positive impact upon the remaining **Social** and **Economic** strands in return. Whilst these proposals for a Science & Technology Park in this location are at a very early stages, the principles of sustainability underlie the key aspects of the concept masterplan and approach presented to Mid Sussex District Council (MSDC) to-date.

As outlined in the supporting 'Project Newton Positioning Statement – September 2020' the proposals for a new Science & Technology Park in Burgess Hill to the site North of the A2300, look to create a sustainable and appropriate balance addressing both the local and wider context. In doing so, the proposals seek to create a new landscape-led employment site to address future work needs, trends and evolution. The Science & Technology Park doesn't look to replicate what has been built elsewhere but instead proposes to be the next generation of a Science & Technology Park and this is demonstrated throughout the Positioning Statement which references ambitions to enable evolution in ideas, technology, connectivity, travel, materials and energy. The project team and developers will seek to ensure that the proposals contribute to achieving sustainable development. It is the purpose of this document to explore how the new Science & Technology Park may address principles of sustainability in the future design, construction and operation of a new Science & Technology Park on this site to the North of the A2300, Burgess Hill.

The Challenge we face

Climate change is recognised by international consensus to be mainly due to greenhouse gas emissions resulting from combustion of fossil fuels for energy use. Energy from fossil fuels consumed in the construction and operation of buildings accounts for approximately half of the UK's emissions of carbon dioxide. Therefore, reducing carbon, waste and other impacts from the Built Environment is an important strand in tackling climate change and environmental degradation.

This proposal aspires to become a model of how to balance the needs of ever evolving carbon-based energy reductions against commercial pressures and continually changing technologies and science, in a way which is both commercial and economically viable.

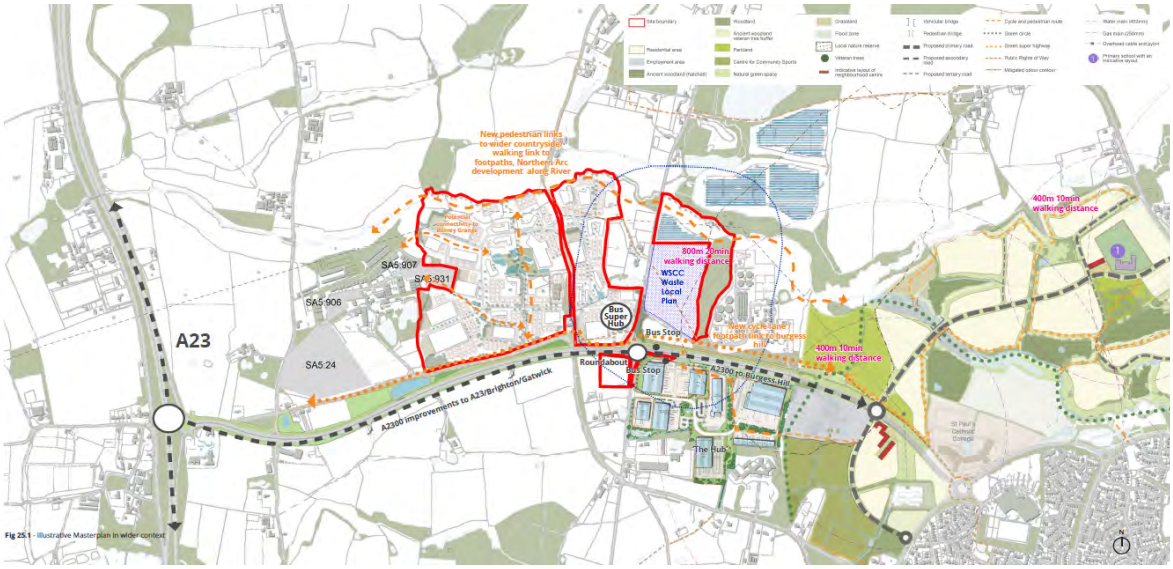


Fig 25.1 - Illustrative Masterplan in wider context

Policy Context

The NPPF (2019) sets out three interdependent objectives for achieving sustainable development which are:

a) an economic objective – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;

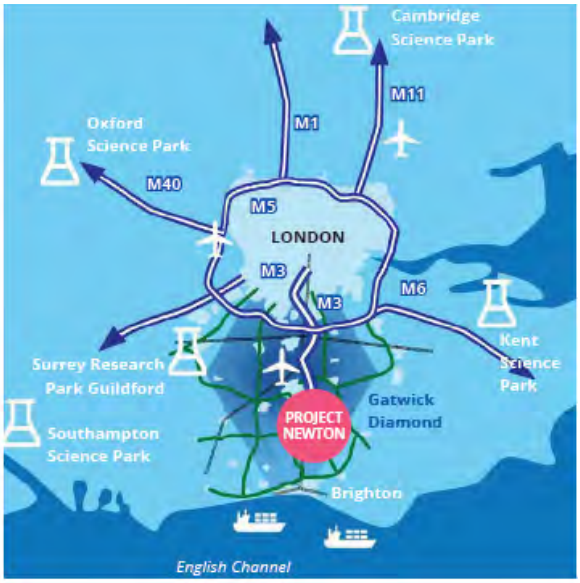
b) a social objective – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering a well-designed and safe built environment, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being; and

c) an environmental objective – to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.

Paragraph 9 of the NPPF (2019) states that these three objectives should be delivered through the plan-making process and should play an active role in achieving sustainable solutions for new development, taking into account the local circumstances of each area, to reflect its character, needs and opportunities.

The MSDC District Plan (2014-2031) is committed to achieving sustainable development in line with the NPPF (2019) and sets out a vision for the District to *"…to maintain, and where possible, improve the social, economic and environmental well-being of our District and the quality of life for all, now and in the future."*

The Science & Technology Park proposals aim to deliver c.1.4 million sq ft of employment floorspace, providing increased job provision in the District over the Plan period and beyond. The site's locality, adjoining the Northern Arc and Burgess Hill to the East and adjacent to the A2300, provides opportunities for the Science & Technology Park proposals to align with its surrounding context; to provide a 'golden thread' for development that will support the needs of local communities and economy both within the District and wider South-east, in alignment with elements of the NPPF's economic and social objectives (2019).



Given the challenges faced with climate change, it is critical that a new development makes every opportunity to minimise its impact on the environment and wherever possible, deliver solutions for mitigating and adapting to the impacts of climate change. MSDC District Plan Policy DP39: Sustainable Design and Construction requires all new development to improve its sustainability through incorporating measures, where appropriate and feasible and according to the type, size and location of development. These measures include:

- Minimise energy use through the design and layout of the scheme including through the use of natural lighting and ventilation;
- Explore opportunities for efficient energy supply through the use of communal heating networks where viable and feasible;
- Use renewable sources of energy;
- Maximise efficient use of resources, including minimising waste and maximising recycling/ re-use of materials through both construction and occupation;
- Limit water use to 110 litres/person/day in accordance with Policy DP42: Water Infrastructure and the Water Environment;
- Demonstrate how the risks associated with future climate change have been planned for as part of the layout of the scheme and design of its buildings to ensure its longer term resilience.

MSDC District Plan Policy DP42: Water Infrastructure and the Water Environment requires new development proposals to be developed in accordance with the Water Framework Directive objectives and, the Gatwick Sub Region Water Cycle Study findings in relations to water quality, water supply and wastewater treatment. This requires development to demonstrate sufficient surface and foul water capacity can be achieved and, that there is an adequate water supply to service the development.

Policy DP42 sets out a requirements for the following water consumption standards to be met:

- As a minimum, non- residential buildings should meet the equivalent of a 'Good' Standard, with regard given to the BREEAM water consumption targets for the development type.

The Science & Technology Park proposals are at the early stages of indicative Masterplanning and therefore, detailed design strategies to address the criteria set out in policy DP39 and DP42 will form part of the planning application stages, following allocation. However, even at this early stage, measures have been taken to demonstrate the commitment to maintaining a green ethos and sustainability at the centre of our proposals. The site's close proximity to adjacent solar farms, Southern Water operations and 5 ha of land allocated for non-municipal solid waste in the WSCC Waste Local Plan, provides opportunity for maximising resource efficiency through the reduction and reuse of energy, waste and water. We are therefore committed to ensuring that our proposals align with the aspirations of the District Plan to achieve sustainable development and specifically will be compliant and look to build on the requirements of policy DP39 and DP42 for sustainable construction, operations, and resource efficiency.

The Science & Technology Park aims to be visionary and forward thinking in its approach to tackling climate change and will designed in such a way that it is future-proofed against the challenges faced in rising temperatures and extreme weathers, whilst also reducing the impact of development on our environment and local communities, through innovative and aspirational design strategies. Site specific examples of how we may address this at formal planning stage are explored in the next section " Meeting the Challenge".

Meeting the Challenge

In 2019, the Royal Institute of British Architects (RIBA) launched their '2030 Climate Challenge' to identify targets and provide significant opportunities for the construction sector (including building professionals and developers/ owners), with a clear direction on the issues. The RIBA, alongside the Construction Leadership Council's (CLC) Green Construction Board, have developed progressive 10-year targets for operational energy use, embodied carbon, potable water and health and well-being, with the ultimate goal to meet net zero (or better) whole life carbon for new and retrofitted buildings by 2030.

The targets within the RIBA 2030 Challenge present ambitious yet measurable and progressive targets that also sit within MSDC's own District Plan period (to 2031). These same targets will form industry recommendations to the Government for future Building Regulation requirements on Energy and Sustainability.

Given that this project is in the early stages of development, the proposals have not reached a detailed level of design which would demonstrate that targets have been met, including demonstrating that a target of net zero carbon is achievable. However, the Concept Masterplan, Positioning Statement and supporting evidence base submitted as part of the Regulation 19 stage of the emerging Site Allocations DPD, including this Sustainability Document, demonstrate how the Science & Technology Park will provide the opportunity to meet and challenge targets on energy and climate change, in line with national and local commitments.

The project team consider it both fitting and appropriate that the Science & Technology Park should aspire to tackle these targets where it can be demonstrated viable to do so, and indeed hopes to provide a catalyst for both attracting and retaining high quality, sustainable businesses to the Park.

What are the RIBA 2030 Targets?

The nature, scale, context and typology of the future buildings on the new Science & Technology Park, as well as their ultimate end-users should enable these aspirational targets to be met; through the detailed design and development of the proposals.

The following text summarises and sets out the Targets identified within the RIBA's 2030-Challenge.

- **Whole life carbon**

  Target net zero whole life carbon for new (and retrofitted) buildings by 2030, by looking to follow the progressive RIBA 2030 Climate Challenge targets:

RIBA 2030 Climate Challenge target metrics for non-domestic buildings

RIBA Sustainable Outcome Metrics	Current Benchmarks	2020 Targets	2025 Targets	2030 Targets	Notes
Operational Energy kWh/m²/y	225 kWh/m²/y DEC D rated (CIBSE TM46 benchmark)	< 170 kWh/m²/y DEC C rating	< 110 kWh/m²/y DEC B rating	< 0 to 55 kWh/m²/y DEC A rating	UKGBC Net Zero Framework 1. Fabric First 2. Efficient services, and low-carbon heat 3. Maximise onsite renewables 4. Minimum offsetting using UK schemes (CCC)
Embodied Carbon $kgCO_2e/m^2$	1100 $kgCO_2e/m^2$ (M4i benchmark)	< 800 $kgCO_2e/m^2$	< 650 $kgCO_2e/m^2$	< 500 $kgCO_2e/m^2$	RICS Whole Life Carbon (A-C) 1. Whole Life Carbon Analysis 2. Using circular economy Strategies 3. Minimum offsetting using UK schemes (CCC)
Potable Water Use Litres/person/day	>16 l/p/day (CIRA W11 benchmark)	< 16 l/p/day	< 13 l/p/day	< 10 l/p/day	CIBSE Guide G

RIBA 2030 Climate Challenge target metrics for all buildings

Best Practice Health Metrics		References
Overheating	25-28 °C maximum for 1% of occupied hours	CIBSE TM52, CIBSE TM59
Daylighting	> 2% av. daylight factor, 0.4 uniformity	CIBSE LG10
CO_2 levels	< 900 ppm	CIBSE TM40
Total VOCs	< 0.3 mg/m^3)	Approved Document F
Formaldehyde	< 0.1 mg/m^3)	BREEAM

- **Operational energy and carbon emissions**

  Aspire to target <55 kWh/m2/y operational energy use for non-domestic buildings by 2030 (minimum DEC A or 75% reduction in operational energy as compared to CIBSE TM46 benchmarks), including maximising the use of on-site renewables.

  Design using realistic predictions of the operational energy target to avoid the performance gap and report the energy use by fuel type and include the full breakdown of regulated and unregulated energy use. The RIBA recommends the use of rigorous design for performance methods such as CIBSE TM5412 or Better Building Partnership Design for Performance 13.

  Use low carbon heating, for example heat pumps or connections to district heat networks, and target no new connections to the gas grid or use of fossil fuel boilers, and target space heat demand of 15-20 kWh/m2/y, by 2025 at the latest, as recommended in the Committee of Climate Change UK housing: 'fit for the future?'

  Offset remaining carbon emissions by contributing to UK renewable energy projects that work towards decarbonising the national and/or local grid.

- ***Embodied energy and carbon emissions***

  Use the RICS Whole Life Carbon Assessment for the Built Environment professional statement 201715 to assess embodied carbon.

  Target embodied carbon of 500 kgCO2e/m2 for non-domestic buildings (minimum 50-70% reduction in embodied carbon compared to the Movement for Innovation benchmarks16), using low carbon healthy materials that are responsibly and ethically sourced.

  Offset remaining carbon emissions by UK offsite renewable energy projects and/or certified woodland and reforestation projects17.

- **Water use**

  Target 10 litres/person/day for non-domestic buildings (minimum 40% reduction in potable water use compared to CIRIA guidance18 and UK Building Regulations requirements19), by minimising water demand, optimising building systems, and harvesting rainwater as well as recycling and reusing water on-site.

- **Indoor health**

  Avoid unintended consequences of poor health and wellbeing by meeting key health metrics set out in the RIBA 2030 Climate Challenge.

- **Biodiversity**

  Leave a site with significantly enhanced biodiversity and more green cover than before development.

Why Should Project Newton explore this approach, and *How* might it be achievable in reality?

A Science & Technology Park should be a hive for supporting and enhancing the collaborative efforts, bringing together the brightest minds and most forward thinking, creative industries and companies; from new start-up businesses through to world-leading branded names. For our Science & Technology Park proposals, the evolution of the design strategy and concepts have sought to create a landmark 'destination' site that will be a catalyst for innovative and forward-thinking technologies, as the golden thread of the Science & Technology Park Masterplan. Over recent years the need to respond to Climate Change has become high on the agenda for many businesses, with many committing to the declaration of a 'Climate Emergency' or publishing ambitious targets to achieve a net zero carbon footprint themselves or even through their supply chains.

The framework for new business accommodation within the Project Newton Outline Masterplan in a landscape-led setting may therefore, provide the perfect location to attract and further retain such environmentally- conscious and progressive businesses to the region, helping make this commercially and financially viable as an approach.

Our Science & Technology Park proposals place a Green ethos at the centre and careful consideration will be given to ensuring that each phase of the development is future-ready, to support the technologies and innovative solutions that continue to evolve for increasing the efficiency and carbon neutrality of development. Examples include the installation of electrical vehicle charging points and other green technology infrastructure as well as laying out development so that it is oriented to make the most of the adjoining solar farms and waste allocation, therefore, increasing energy and waste efficiencies on-site.

Sustainable travel is also a key factor in minimising carbon impact. The site's connection to the Northern Arc has presented unique opportunities for sustainable transport modes through on-going liaison with Homes England, WSCC and bus services providers including Metrobus and Compass, to develop sustainable solutions to travel between the Science & Technology Park, Northern Arc and links to the A23 connection between Brighton and Gatwick. Further detail on the proposed green modes of travel for the Science & Technology Park and reducing a dependence on vehicle trips is explored in the separate Mobility Statement (Connect Consultants).

The last 5 years have seen a greater awareness in Work/Life Balance and the health (physical and mental) of employees when at work. The recent Covid-19 pandemic has further reinforced the need for companies to recognise and support a balanced approach to achieve Social Sustainability. The Science & Technology Park outline masterplan and Positioning Statement illustrate the processes developed to date to ensure that the development of this site is carried out within a landscape-led framework to create a 'destination' and a 'place' to come to work.

This framework accommodates carefully considered buildings to meet the current and future needs of businesses within a high quality built environment, complete with the amenity and associated facilities that reflect the future Park community's needs in support of health, social and cultural well-being at work. This vision has sought to deliver a mixed-use neighbourhood centre, co-ordinated with the emerging Northern Arc development and plans for improving the quality of living and sustainable future for the Burgess Hill area. This collaborative approach is essential for achieving social sustainability to benefit existing and new residents in the District, through high-quality design and placemaking.

The next steps for the design and proposals for this Science & Technology Park are encouraged to review the targets within the 2030 Challenge as a means to demonstrate and achieve a development which is both viable and sustainable and that remains attractive to emerging, new and existing businesses and remains forward-thinking and progressive - all as outlined through the various topics and sections within the supporting Positioning Statement document. The detailed design and phasing strategy for development will help to deliver these objectives, through high-quality design, form and orientation that will unlock the full potential of this unique site, through a landscape-led approach to Masterplanning.

Given the aspirational nature but also the importance of the Challenge and Targets identified here, the need for a robust 'partnership approach' will be important in making this a reality, especially with political support through Climate Change being central to both MSDC and WSCC:

- WSCC have declared a climate change emergency (April 5th 2019) and MSDC have accepted a ring fenced allocation of £100,000 to address sustainability and climate change.
- MSDC also adopted the (Feb 2018) 'Sustainability Strategy 2018-2023' to be a Sustainable Council, in a Sustainable Environment with Sustainable Communities.

APPENDIX VIII

PROJECT NEWTON SCIENCE & TECHNOLOGY PARK, BURGESS HILL

TRANSPORT AND HIGHWAYS STATEMENT

REGULATION 19, 28TH SEPTEMBER 2020

1.0 Introduction

1.1 Connect Consultants Limited is a firm of transport planning and highway design consultants that have been instructed by Dacorar (Southern) Limited and Wortleford Trading Company Ltd in relation to the promotion of their land to the north of the A2300 at Goddards Green, West Sussex, for a future Science & Technology Park, known as Project Newton.

1.2 In the context of the MSDC Draft Site Allocations DPD Pre-Submission (Regulation 19) Consultation, MSDC has identified the Project Newton site as site SA9 – the location for the Science & Technology Park (S&TP).

1.3 At the Regulation 18 stage, Connect Consultants produced a Technical Note (TN), dated 14th November 2019, which was submitted in response to the highways and transport evidence base published by MSDC alongside the Draft DPD, and which referred to strategic traffic modelling undertaken on behalf of MSDC (the Mid Sussex Strategic Traffic Study model [MSTS]).

1.4 Project Newton commissioned additional MSTS modelling to be undertaken, to further inform the Regulation 18 consultation representation, and a second TN was produced and submitted by Connect Consultants, dated 16th January 2020.

1.5 Since the Regulation 18 stage, further work has been undertaken, including work with MSDC's strategic traffic modelling.

1.6 Connect and the Project Newton Design Team are continuing to work in close collaboration with West Sussex County Council (WSCC) and Highways England, as well as with MSDC and their transport consultants, and have agreed with all parties a defined scope and methodology for the assessment of the Project Newton traffic effect.

1.7 As the technical analysis and traffic assessment are ongoing; this Transport and Highways Statement sets out the agreed scope/methodology of the traffic assessment, as agreed with all parties which includes developing a Mobility Strategy and which continues to include analysis of traffic flow data from MSDC's MSTS model.

1.8 It is intended that the outputs will support the promotion of the Project Newton site through MSDC's Regulation 19 consultation and to submission and Examination of the DPD. It is also proposed that this evidence-base work and joint partnership working will also be carried forward to support the future submission of a planning application. For this reason, the agreed approach seeks to meet the requirements of the following parties:

- Project Newton's submission to the MSDC Regulation 19 consultation and subsequent planning application/s;
- MDSC's requirements to inform the S&TP's allocation in the Sites DPD;
- West Sussex County Council (WSCC) requirements as the Local Highway Authority;
- Highways England (HE) requirements as the highway authority responsible for the Strategic Road Network (SRN), namely the A23 in the vicinity of the S&TP.

2.0 Project Newton Mobility Strategy

2.1 The MSDC Submission Draft Site Allocations DPD sets out the specific requirements of site SA9: Science and Technology Park; an excerpt is provided below at Figure 2.1, showing the requirements for the specific topics of Sustainability and Highways and Access.

Figure 2.1 – Excerpt from Submission Draft Site Allocations DPD: Site SA9

Sustainability
• Provision of electric vehicle charging points in accordance with the Council's adopted standards. • Ensure the design would make the development future-ready for improvements in technology and sustainability such as (but not limited to) green technology, artificial intelligence and automation.
Highways and Access
• Provision of sustainable transport measures and other infrastructure requirements, including measures to mitigate impacts on the local and Strategic Road Network. • The first priority is to mitigate development impacts by maximising sustainable transport interventions. Remaining impacts must be addressed through physical highway mitigation measures in consultation with the local Highways Authority and Highways England. • Demonstrate that the development would not adversely affect the safe and efficient operation of the A23 and the A23/A2300 junction to the satisfaction of the local Highways Authority and Highways England. • Demonstrate that access can be achieved to the satisfaction of the Highways Authority, minimising disruption and delay on the A2300 and surrounding roads. • Provision of new bus routes or diversion of existing routes to connect with key hubs including railway and bus stations and Burgess Hill town centre. • Provision of new pedestrian and cycle links to ensure connectivity with the Northern Arc, The Hub (south of A2300), Burgess Hill and surrounding countryside. • Provision of pedestrian and cycle connectivity with Bolney Grange Business Park. • Provision of car parking and cycle storage in accordance with the Council's adopted standards.

2.2 A key element of the Project Newton S&TP has always been that it will incorporate a comprehensive sustainability strategy which will ensure that sustainable travel is at the centre of the development's ethos. Part of this is also covered by the over-arching positioning document (September 2020) and the HNW sustainability strategy that has been submitted as part of the design team's technical evidence base.

2.3 This aligns with the DPD requirement of Site SA9, and the first priority is to mitigate development impacts by maximising sustainable transport interventions.

2.4 The DPD also identifies the requirement to provide new and/or diverted bus routes, and new pedestrian and cycle links, to connect to the surrounding area.

2.5 The Project Newton Mobility Strategy is an evolving strategy, being developed with regard to the Burgess Hill Public Transport Strategy (BHPTS) (2016), and also the Public Transport Strategy of the adjacent Northern Arc strategic development site.

2.6 Our emerging Mobility Strategy will provide a wide range of benefits to both the site itself and to the wider population which would achieve a wider-reaching regional mode-shift than just the S&TP users.

2.7 It is anticipated that the Mobility Strategy will include the following elements:

- Public Transport Strategy (incorporating bus viability analysis)
- Walking and Cycling Strategy
- On-Site Care Share Scheme
- On-Site Electric Car Club
- On-Site Bike-Hire Scheme

Agreed Approach

2.8 As part of the partnership working with MSDC, WSCC and Highways England we have agreed the following work will be covered by our Mobility Strategy:

2.9 Undertake further work on potential travel mode shift including the use of S&TP traffic origin/destination data extracted from the MSTS.

2.10 Refer to Census data and MSTS traffic data to understand more about the likely travel patterns that will be associated with Project Newton, to identify potential bus service improvements.

2.11 Undertake a bus viability study to consider the feasibility of potential bus service improvements, and subsequently identify the potential for travel mode shift.

2.12 Continue discussions and establish collaborations with the local bus operators Metrobus and Compass, electric car-club and cycle-scheme operators, as well as the Northern Arc development (Homes England), to align the public transport and sustainable access strategies and to ensure a realistic and feasible bus / public transport solution is possible, to address the requirement of the proposed SA9 allocation.

2.13 Project Newton to produce a robust and well-evidenced Mobility Strategy to target a 10% reduction in predicted vehicular trip rates associated with the S&TP to be agreed ahead of submission.

3.0 Junction Impacts, Mitigation, and Improvements

3.1 Identify the predicted future traffic conditions at key local junctions in the MSTS '2031 Sites DPD' scenario both without and with the S&TP, to identify the specific level of impact of the proposed S&TP.

3.2 Key local junctions to include:

- A23/A2300 Hickstead dumbbell roundabout junction (as per forthcoming A2300 improvement scheme)
- A2300 / Stairbridge Lane / Pookbourne Lane (as per forthcoming A2300 improvement scheme)
- A2300 / Cuckfield Road roundabout (as per forthcoming A2300 improvement scheme)
- A2300 / Northern Arc Spine Road (yet to be constructed)
- A2300 / Jane Murray Way
- Cuckfield Road / B2036 south of Ansty
- A272/B2036 roundabout in Ansty

3.3 Assess the operation and capacity of the A23/A2300 Hickstead Junction and the A272/B2036 roundabout in Ansty in the '2031 Sites DPD' scenario without and with the S&TP to allow the identification of the need for S&TP-specific mitigation and the outline design thereof.

3.4 In line with the requirement of the proposed SA9 allocation, mitigation is to initially focus on maximising sustainable transport interventions to lead to a reduction in predicted S&TP traffic. The scale of modal-shift traffic reduction to be agreed with WSCC, Highways England, and MSDC through the Mobility Strategy. The remaining development traffic impacts will be addressed through appropriate physical mitigation measures.

3.5 Assess the predicted operation and capacity of the proposed S&TP access roundabout on Cuckfield Road (north of the A2300) and the proposed upgraded roundabout junction of the A2300/Cuckfield Road

A23/A2300 Hickstead

3.6 As this junction connects to part of HE's SRN, it is subject to a specific assessment methodology which has been agreed with Highways England.

3.7 The methodology for the A23/A2300 Hickstead junction is as follows:

- Modelling to be based on the forthcoming layout of the junction following completion of the WSCC A2300 improvement scheme (as included in the MSTS 2031 reference case).
- Use the computer modelling of the A23-A2300 junction, which was used in the WSCC A2300 Improvement Scheme Business Case, supplied by WSCC.
- Use traffic data extracted from the MSTS '2031 Sites DPD' scenario (as per the Regulation 19 evidence base).
- Test the operation and capacity of the future layout of the A23/A2300 Hickstead junction in the '2031 Sites DPD' scenario, and with the agreed reduction in predicted S&TP traffic (to be achieved through the Mobility Strategy's sustainable travel mode shift).

- Assess the need for physical mitigation, and identify appropriate mitigation measure/s (including a merge/diverge assessment in line with DMRB CD122).
- Test the effectiveness of the potential physical mitigation by incorporating it into the A23/A2300 Hickstead junction model.
- Provide MSDC/SYSTRA with details of the identified physical mitigation measure/s to be coded into the MSTS to create a new scenario '2031 Sites DPD with mitigation' (or other appropriate name) which will simulate the resultant 're-routing' of traffic on the road network.
- Traffic flows from the 'with mitigation' scenario to be supplied to Connect to rerun the junction capacity assessment.
- Produce outline design of the appropriate proposed mitigation measure/s in accordance with DMRB standards, including WCHAR and RSA stage 1.
- Outline design of the proposed mitigation measure/s to be agreed with Highways England and WSCC.

Project Newton Phasing

3.8 Assess the traffic impact of the proposed Project Newton phases to identify the trigger point/s for mitigation measures, and the point at which the soon-to-be improved A2300/Cuckfield Road roundabout will need to be upgraded further.

3.9 MSTS model to be used to derive baseline traffic flows (excluding the S&TP traffic) at the study junctions for 2023, 25, 27, 29 and 2031, to represent the five two-year phases of Project Newton.

3.10 MSDC to supply development build-out trajectory to inform the baseline traffic conditions in each of the phases. WSCC / MSDC to supply estimates for completion of highway schemes during the phasing period.

3.11 Connect to add the traffic associated with each phase of Project Newton across the study area, based on the same S&TP traffic distribution as used in the MSTS.

3.12 Develop a phasing strategy for mitigation, to align with the overall Project Newton masterplan phasing.

4.0 Conclusions

4.1 Connect Consultants and our clients Dacora (Southern) Limited and Wortleford Trading Company Limited are committed to the delivery of the STP and a robust evidence base to support its allocation within the Site Allocations DPD.

4.2 Connect and the wider Project Newton design Team will continue to work alongside MSDC, WSCC and HE in partnership to complete the work ahead of submission and continue to work towards technical detail to support both the allocation and subsequent future planning applications