

Site Allocations DPD

MSDC-09: Response to Action Point 10

Matter 3.3: SA28: Land south of The Old
Police House, Birchgrove Road, Horsted
Keynes

12th July 2021

MSDC-09: Response to Action Point 10

Matter 3.3: SA28: Land south of The Old Police House, Birchgrove Road, Horsted Keynes

1.0 Introduction

- 1.1 This note has been prepared in response to queries raised in the Matter 3 Hearing session on the 10th June 2021, at the request of the Inspector [ID-05]. This note responds to Action Point 10 which requested:

A note from the Council on whether the proposed vehicular access impacts harmfully on any existing trees.

- 1.2 This note is in relation to the proposed site allocation SA28: Land south of The Old Police House, Birchgrove Road, Horsted Keynes. The proposed housing allocation is for 25 dwellings.
- 1.3 A third party at the Hearing session queried the impact of the proposed site access on Birchgrove Road on the nearby Oak tree and if the Oak tree would be retained.

2.0 Retention of the Oak tree

- 2.1 In the AONB section of the proposed policy wording for SA28, the following requirement is included:

Protect the rural character of Birchgrove Road and this edge of settlement by retaining, where possible, the Oak tree and hedgerow on the frontage of the site.

- 2.2 The Matter 3.3 Hearing Statement submitted by Strutt & Parker on behalf of the developer, Sunley Estates Ltd, [M3-779] stated that safe access to the site exists and the existing Oak tree along the frontage can be retained (paragraphs 2.5 and 2.21).
- 2.3 To inform and support the response to this Action Point 10, the site promoter has provided additional information in the form of a technical note (Appendix 1) setting out that delivery of the site for housing would not necessitate the removal of the Oak tree and that there are technical solutions available that would seek to minimise any impact on the tree. There are opportunities available to refine the proposed site access arrangement and to use construction techniques that would minimise any impact on the Root Protection Area of the Oak tree. The detail of the site access and tree retention is expected to be considered as part of any future planning application.

Technical Note

Project No: ITB15584
Project Title: Birchgrove Road, Horsted Keynes
Title: MSDC Allocations DPD Examination – Site SA28 Access Summary Note
Ref: ITB15584-001 TN
Date: 14 June 2021

SECTION 1 Introduction

- 1.1.1 Sunley Estates Ltd are promoting development on land to the south of Birchgrove Road, Horsted Keynes. The site is capable of accommodating 25-30 residential units and is identified as a draft allocation (re: site SA28) within the Mid Sussex District Council 'Development Plan Document' (DPD).
- 1.1.2 The DPD was submitted for examination on the 14th December 2020 and Examination Hearings are ongoing. During the Hearing on the 10th June a query was raised by a 3rd party in respect of the impact of the site access on the Oak tree situated to the south of Birchgrove Road and to the north of the proposed development site. The Inspector has invited the submission of further information on this point.
- 1.1.3 While the detailed resolution of access and tree retention would be matters for consideration as part of any future planning application, this Technical Note (TN) has been prepared to present information gathered to date to provide reassurance that allocation of the site for the delivery of housing would not necessitate the removal of the Oak tree and that there are technical solutions available that would seek to minimise any impact on the tree.
- 1.1.4 The remainder of this Technical Note is structured as follows:
- Section 2 – provides a summary of the identified tree;
 - Section 3 – presents the preliminary site access proposals;
 - Section 4 – overviews the means of mitigating the impact on the tree; and
 - Section 5 – summaries and concludes the report.

SECTION 2 Oak Tree

2.1.1 The Oak tree identified during the Hearing is located on the northern site boundary, immediately to the south of Birchgrove Road. The tree is shown in a Streetview extract in **Image 2.1**, looking westbound along Birchgrove Road from a position towards northwest of the proposed development site.

Image 2.1: Birchgrove Road Oak Tree



Source: Google Streetview

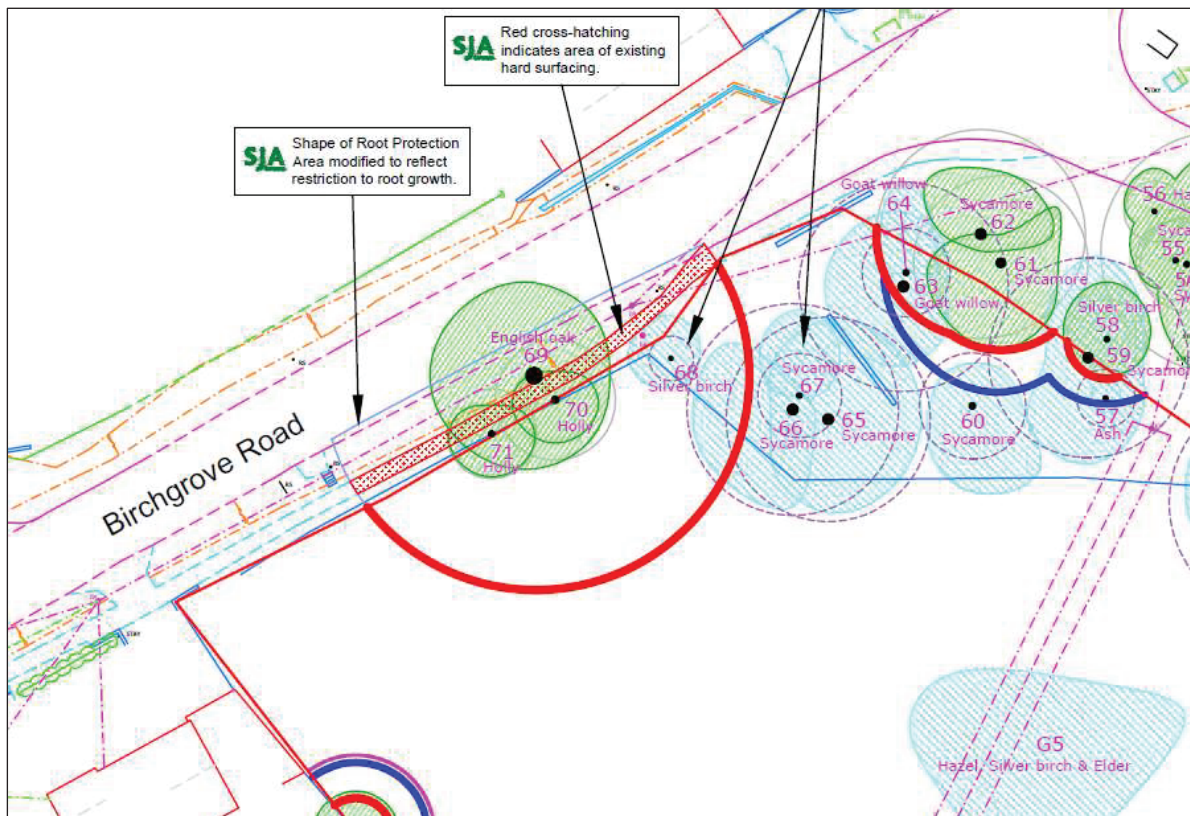
2.1.2 The tree is located on the embankment, circa 1m above the adjacent carriageway level. The tree has been subject to a Tree Survey prepared by SJA Arboricultural Planning Consultants (dated February 2021) and has been identified as having the following characteristics:

- Species – English Oak
- Category: B
- Height – 11.5
- Trunk Diameter – 1010mm
- Crown Break – 3m
- Age Class – Over-mature

- Comments: Wounding to buttress roots adjacent to footpath; prominent buttress roots; slightly degraded fungal fruiting body, consistent with the decay fungus *Ganoderma Applanatum* at base; established epicormic contributes to lower canopy; historic stem removal at 6.5m N, to provide clearance to overhead cables; historically heavily reduced; broken branches hung up in crown; deadwood scattered throughout canopy, typical of age and species; multiple cavities on main structural branches; in poor physiological conditions; possible retrenchment with evidence of some minor epicormic growth forming a smaller internal canopy; readily visible from Birchgrove Road and junction with Danehill Lane; a feature of the street scene; of potential ecological interest.

2.1.3 The extent of the Root Protection Area (RPA) associated with the Oak is shown in **Image 2.2**.

Image 2.2: Extent of Root Protection Area



2.1.4 As identified by the Tree Survey, the Oak is not an excellent specimen, as reflected by its 'B' categorisation, and is in a poor physiological condition. Notwithstanding, Sunley recognise that the Oak has a role to play in the local street scene and that its retention would be beneficial.

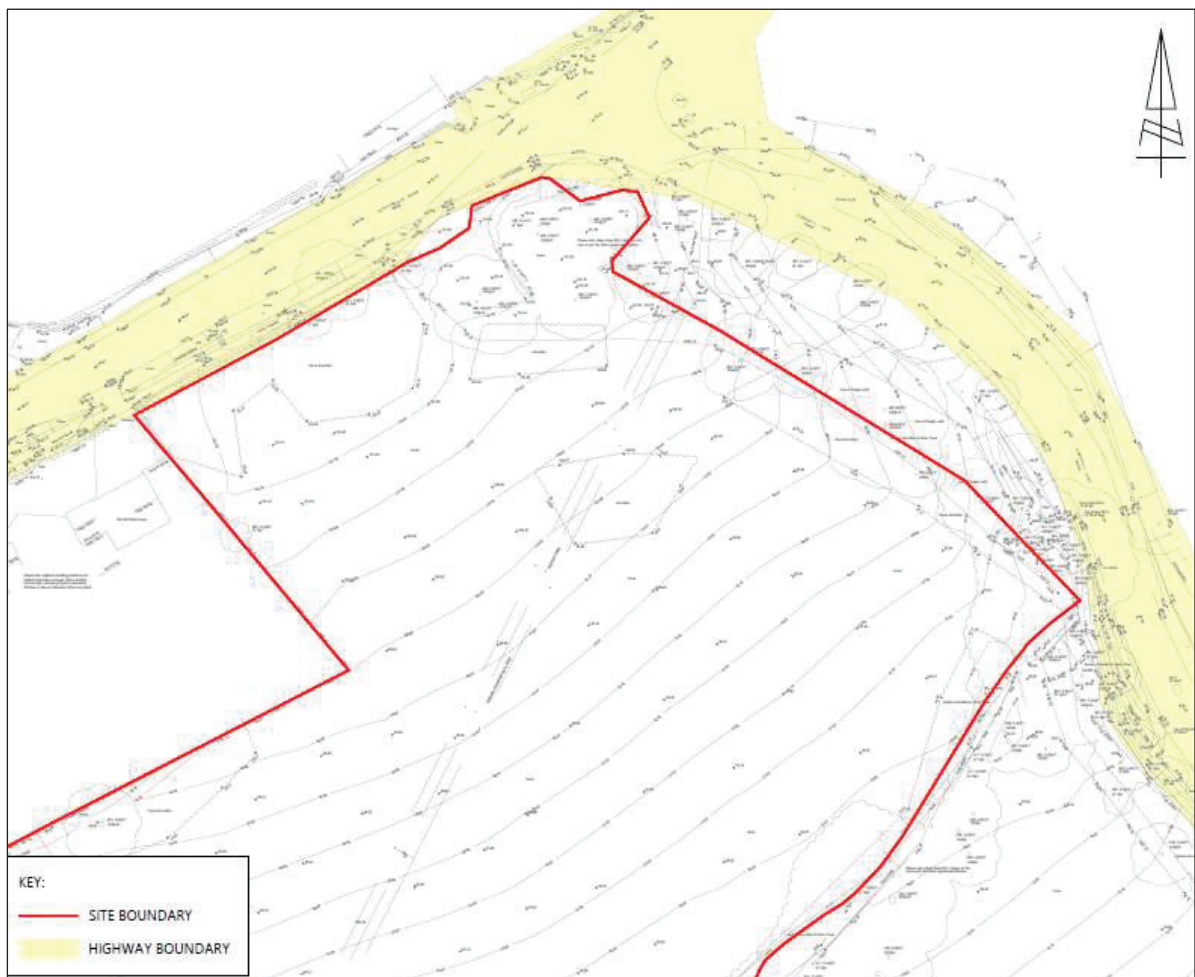
SECTION 3 Preliminary Access Arrangements

3.1.1 Initial access appraisal has been undertaken to establish a strategy for access to the site. This section of the TN summarises the strategy.

3.2 Access Location

3.2.1 In order to establish the locations at which access can be achieved, the Public Highway records have been obtained from West Sussex County Council and overlaid with the Title Boundary of the site. The overlay is shown in **Drawing ITB15584-GA-001**, an extract of which is shown in **Image 3.1**.

Image 3.1: Overlay Extract



Source: ITB15584-GA-001

3.2.2 The assessment identifies that the site boundary and the public highway are contiguous along Birchgrove Road. Access cannot be obtained from Danehill Road due to the separation of the boundaries.

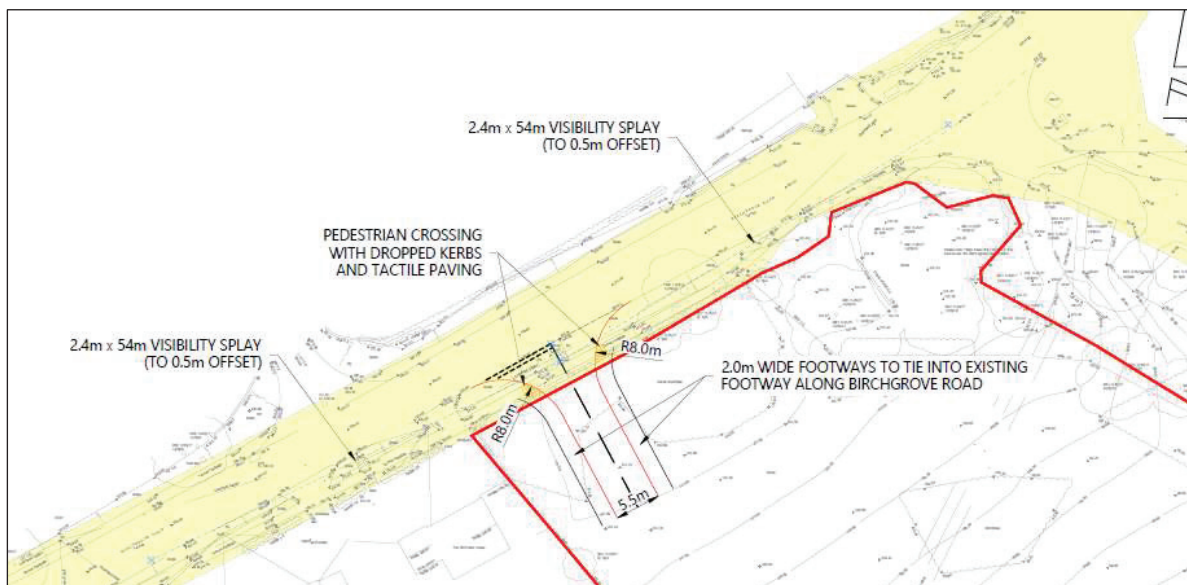
3.3 Access Design

- 3.3.1 The site access has been designed in accordance with Manual for Streets parameters. A simple priority junction arrangement provides more than sufficient capacity to accommodate a development of circa 30 residential dwellings, which would be expected to generate approximately 15-20 vehicle trips during the morning and evening peak hours.
- 3.3.2 Historic speed data has been used to inform visibility splays at the site access. The observed 85th percentile speeds are summarised in **Table 3.1** alongside the corresponding Manual for Streets visibility splay distance.

Direction	85 th Percentile Speed	Visibility Distance
Eastbound	35mph	54m
Westbound	35mph	54m

- 3.3.3 The preliminary site access arrangement is presented in **Drawing ITB15584-GA-002**, an extract of which is shown in **Image 3.2**.

Image 3.2: Preliminary Access Arrangement



Source: ITB15584-GA-002

- 3.3.4 The preliminary access drawing identifies the carriageway as having width of 5.5m, with footways to be provided on either side of the site access road extending into the site at a width of 2.0m. The proposed footways tie into the existing footway provision on Birchgrove Road, which extend east and west from the site access.

SECTION 4 Potential Impact on Oak Tree

4.1 Introduction

4.1.1 This Section of the TN summarises the potential impact of the proposed access on the identified Oak tree and sets out measures that could be used to mitigate the impact of the development.

4.2 Site Access Visibility

4.2.1 Visibility splays extending 54m have been identified from the site access; as demonstrated in Drawing ITB15584-GA-002, the extent of the splay is situated in front of the trunk of the Oak tree, and the tree does not present an obstruction to the visibility available to emerging drivers.

4.2.2 In accordance with contemporary highway design guidance, the visibility splay is required to be kept clear obstructions below the height of 2m. As identified in the Tree Survey summarised in Section 2, the Crown commences at 2m, and thus does not obstruct visibility.

4.2.3 It should also be noted that regardless of development proceeding, the existing Birchgrove Road carriageway requires a greater clearance than 2m to maintain day-to-day operation as not to impede the progress of vehicles using the road. As such, the proposed development would not alter any cyclical maintenance required to maintain operation of the existing highway.

4.3 Footway Connection

4.3.1 The existing footway along Birchgrove Road extends along the northern site boundary and terminates the junction of Danehill Road and Birchgrove Road. From this point, there is no continuation of the footway either to the east or south.

4.3.2 The existing footway on Birchgrove Road is relatively narrow and typically of a width of 1m – 1.4m. The existing footway is situated above the height of the carriageway, approximately 1m above the carriageway level, at the top of an embankment. The embankment drops steeply towards the carriageway. Streetview images of the footway in the vicinity of the proposed site access and at the point it terminates at Danehill Road are provided at **Images 4.1** and **4.2**.

Image 4.1: Birchgrove Road Footway – Site Access Location



Source: Google Streetview

Image 4.2: Footway – Danehill/Birchgrove Termination



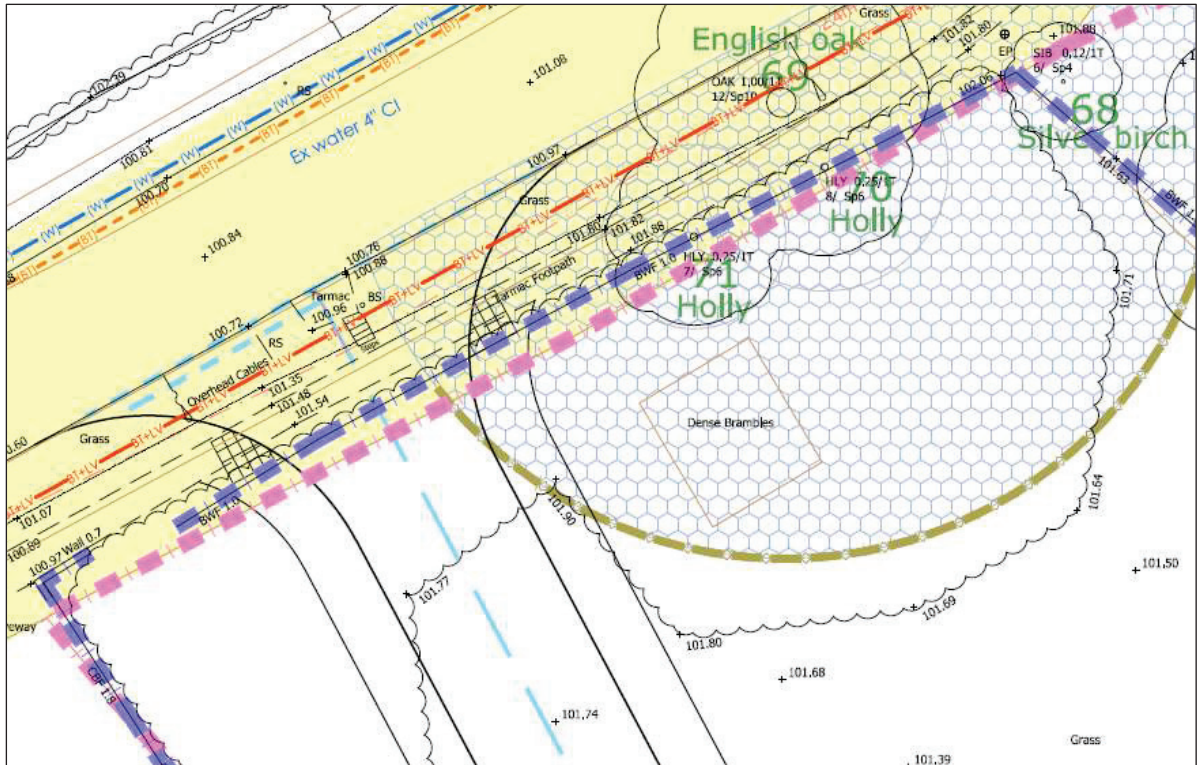
Source: Google Streetview

- 4.3.3 As the site access road will need to connect with Birchgrove Road at a suitable gradient, any adjoining footways would also need to be regraded to ensure that it crosses the road at a suitable level. In the event that regrading of the existing footway to the east of the site access road would result in works that may have a detrimental impact on the Oak tree. There are alternative options to reposition the footpath so that it does not have a negative impact on the tree.

Root Protection Area

4.3.4 An overlay of the preliminary access arrangements and the RPA identifies that there is potential for the access to encroach within the RPA – this overlay is shown at **Image 4.4**, with the blue hatching denoting the extent of the RPA.

Image 4.4: Access and RPA Overlay



Source; Consultants' image

4.3.5 However, there are a number of means of mitigating the impact that will be explored as part of any future planning application.

Refinement of the Access

4.3.6 In the first instance, the preliminary access will be refined in order to remove or minimise any incursion into the RPA.

4.3.7 The preliminary access identifies a carriageway width of 5.5m, suitable for 2 large vehicles (e.g. servicing vehicles) to pass one another. While this is typically a 'starting point' for contemporary highway design, such a width would not be necessary to accommodate the needs of a residential development such as that proposed – the likelihood of 2 HGV's required to pass one another on a residential site is low. For comparison, Manual for Streets identifies a carriageway width of 4.8m being a sufficient width to which to accommodate a car passing a larger vehicle. The proposed internal footways can be

narrowed in width, so that they are more consistent with the existing provision on Birchgrove Road, or only provided on the western side of the access road to complement the pedestrian desire line.

- 4.3.8 Utilisation of an alternative pedestrian arrangement would also reduce the extent of the encroachment into the RPA, with construction of a new footway outside of the RPA. The existing footway could be returned to verge to the benefit of street scene upon entry into the village.
- 4.3.9 The location of the access can also be positioned slightly further to the west while retaining the requisite visibility splays, and this would have the effect of further reducing the encroachment into the RPA.

Construction Technique

- 4.3.10 As the tree is not classified as being a veteran tree, in the event that an area of hard surface is required within the RPA, then an alternative construction technique can be used should detailed investigation of the RPA identify that standard construction techniques could result in the loss of rooting that is harmful to the tree.
- 4.3.11 In this instance, a 'no-dig' specification can be used, consistent with that recognised in Section 7.4 of BS5837:2012 *Trees in Relation to Design, Demolition and Construction – Recommendations*. BS5837 cautions that no more than 20% of the currently unsurfaced RPA should be covered in new hard surface. In this instance, the area of new hard surfacing would be well below this 20% even before any refinement to the access arrangement. An extract of the relevant section of BS5837:2012 is provided at **Appendix A**.
- 4.3.12 A 'no-dig' construction specification avoids excavation within the RPA and utilises geotechnology to form a reduced depth, and stabilised, subbase for construction typically utilising a three-dimensional cellular confinement system suitable for the load bearing associated with vehicular use. Such techniques are commonly used and enable trees, including Oaks, to continue to thrive – as can be seen across the country, particularly in urban areas where trees are often managed through such techniques.

SECTION 5 Summary and Conclusions

5.1 Summary

- 5.1.1 Sunley Estates Ltd are promoting development on land to the south of Birchgrove Road, Horsted Keynes. The site is capable of accommodating 25-30 residential units and is identified as a draft allocation (ref: Site SA28 within the Mid Sussex District Council 'Development Plan Document' (DPD)).
- 5.1.2 The DPD was submitted for examination on the 14th December 2020 and Examination Hearings are ongoing. During the Hearing on the 10th June, a query was raised by a 3rd party in respect of the impact of the site access on the Oak tree situated to the south of Birchgrove Road and to the north of the proposed development site.
- 5.1.3 The Inspector has invited the submission of further information in relation to the impact on the tree and this Technical Note has been prepared to provide reassurance that the impact on the tree can be suitably mitigated.
- 5.1.4 The Oak tree is located on the northern site boundary, immediately to the south of Birchgrove Road. The tree is located on the embankment, circa 1m above the adjacent carriageway level. The tree has been subject to a Tree Survey prepared by SJA Arboricultural Planning Consultants (dated: February 2021) and has been identified as a 'B' category tree in poor physiological condition. Nevertheless, Sunley recognises the role the tree plays in the street scene and seeks to mitigate the impact of the tree in the interests of its retention.
- 5.1.5 The access has been designed so that the tree does not present an obstruction to the visibility splays available to drivers emerging from the access. The Crown of the tree is already at a height where it will not obstruct visibility and, given the proximity of the tree to the existing Birchgrove Road carriageway, maintenance of the tree to ensure free passage of vehicles along Birchgrove Road already occurs.
- 5.1.6 Opportunities exist for the refinement of the preliminary access arrangement to minimise the impact on the Root Protection Area (RPA), which includes:
- Relocation of the access further west;
 - Repositioning of the footway outside of the RPA; and
 - Reducing the width of the internal access road to minimise encroachment.

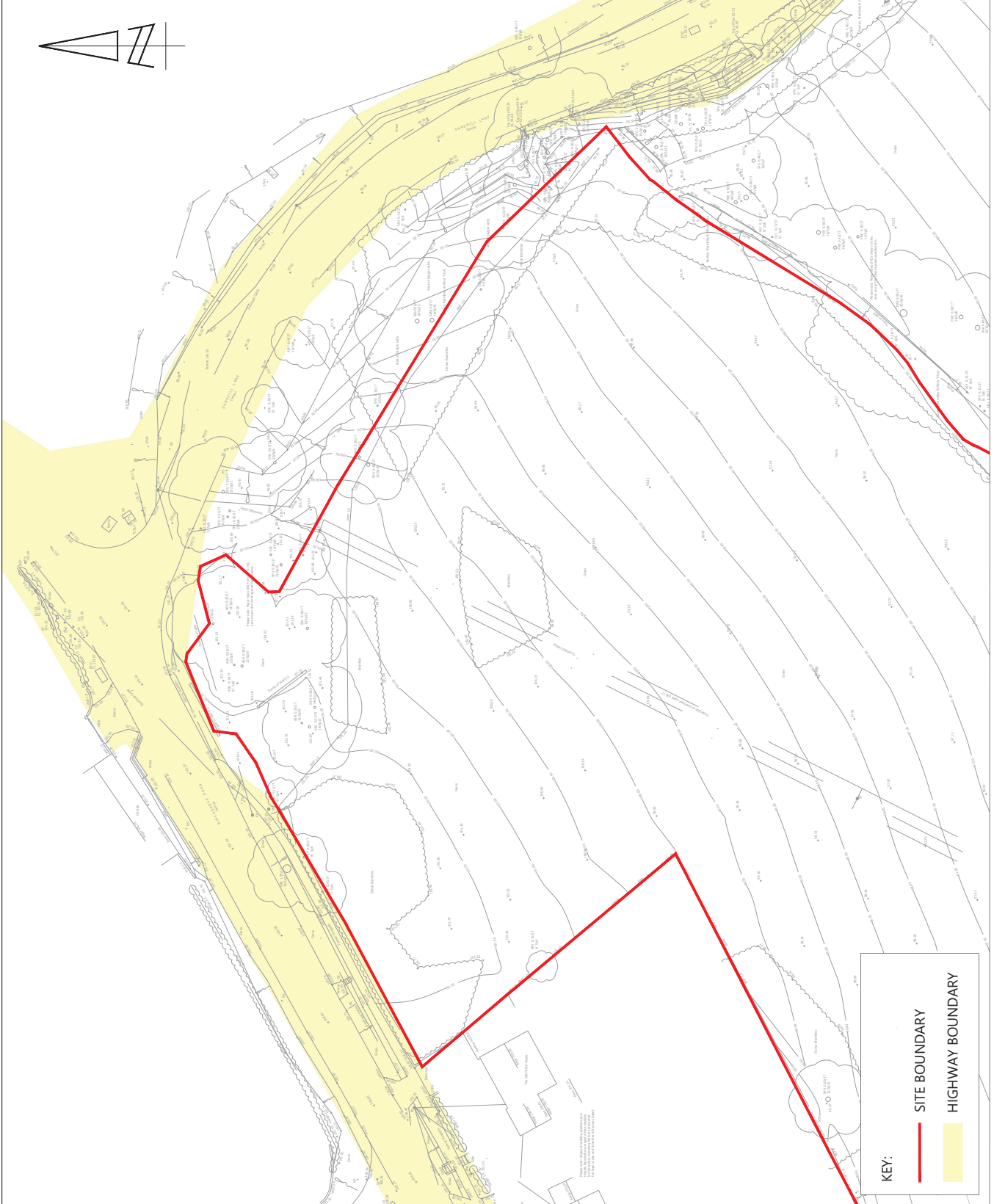
5.1.7 BS5837:2012 *Trees in Relation to Design, Demolition and Construction – Recommendations*, a 'no-dig' construction technique can be employed which avoids excavation in the RPA and utilises a cellular confinement system to construct the subbase. Such techniques are utilised across the country and enable trees to continue to thrive.

5.2 Conclusions

5.2.1 The preliminary access arrangement has been prepared with consideration given to the impact of the Oak tree adjacent to Birchgrove Road. This Technical Note demonstrates that there are a range of options available to mitigate the impact of the proposed development upon the tree, and that such measures will be explored further and in detail as development plans progress.

5.2.2 The presence of the Oak tree does not in any way present a fundamental and insurmountable issue that should prevent allocation of the site for development, with details of appropriate mitigation to be provided as part of any future planning application.

DRAWINGS



KEY:	—	SITE BOUNDARY
		HIGHWAY BOUNDARY

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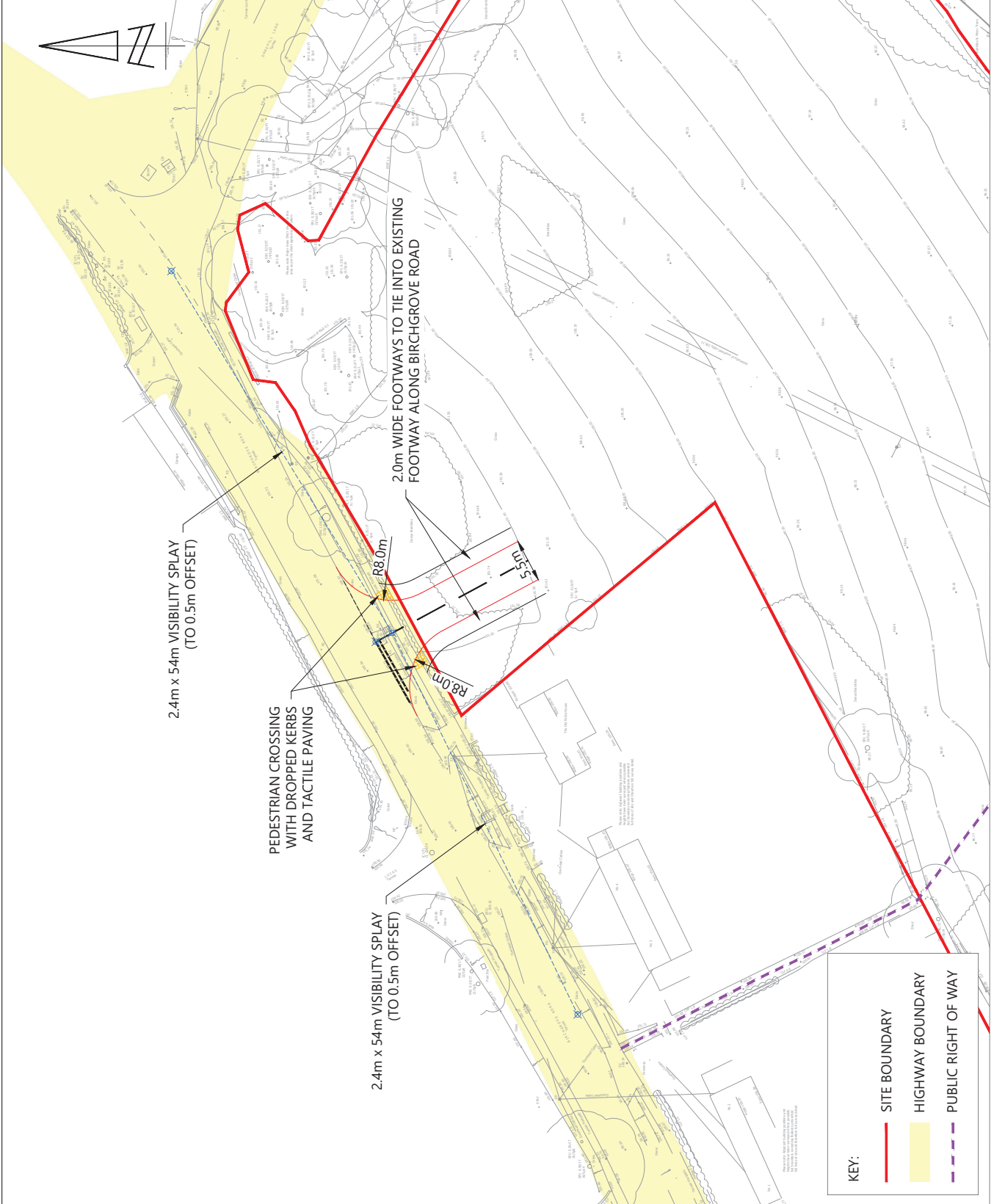
Grove House, Lutyens Close, Chimeham Basingstoke, Hampshire, RG24 8AG
 Tel: 01256 338640
 www.i-transport.co.uk

TITLE: SITE BOUNDARY / HIGHWAY BOUNDARY OVERLAY PLAN

PROJECT: POLICE HOUSE, HORSTED KEYNES

CLIENT: SUNLEY ESTATES LTD

DRAWN: JD	CHECKED: GT	APPROVED: DS
PROJECT No: ITB15584	SCALE @ AS: 1:500	DATE: 18.03.21
DRAWING No: ITB15584-GA-001	REV: -	



KEY:

- SITE BOUNDARY
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Grove House, Lutyens Close, Chimeham Basingstoke, Hampshire, RG24 8AG
 Tel: 01256 338640
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TITLE: POTENTIAL SITE ACCESS ARRANGEMENT		
PROJECT: POLICE HOUSE, HORSTED KEYNES		
CLIENT: SUNLEY ESTATES LTD		
DRAWN: JD	CHECKED: GT	APPROVED: DS
PROJECT No: ITB15584	SCALE @ AS: 1:500	DATE: 18.03.21
DRAWING No: ITB15584-GA-002	REV: -	

APPENDIX A. BS5837:2012 EXTRACT

7.4 Permanent hard surfacing within the RPA

NOTE This subclause does not apply to veteran trees, where it is recommended that no construction, including the installation of new hard surfacing, occurs within the RPA.

7.4.1 General

Where permanent hard surfacing within the RPA is considered unavoidable, site-specific and specialist arboricultural and construction design advice should be sought to determine whether it is achievable without significant adverse impact on trees to be retained.

NOTE Specialist arboricultural advice includes, for example, advice on the tolerance of a tree species to the installation of a permanent hard surface within the RPA or tolerance of salt damage (see 7.4.2.4).

7.4.2 Design recommendations

7.4.2.1 The design should not require excavation into the soil, including through lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation. If it is intended to use the new surface for construction access, it is essential that the extra loading and wear arising from this are taken into account during the design process.

7.4.2.2 The structure of the hard surface should be designed to avoid localized compaction by evenly distributing the loading over the track width and wheelbase of any vehicles expected to use the access.

7.4.2.3 New permanent hard surfacing should not exceed 20% of any existing unsurfaced ground within the RPA.

7.4.2.4 If the new surface is likely to be subject to de-icing salt application, an impermeable barrier should be incorporated to prevent contamination of the rooting area. Run-off should be directed away from the RPA (see also 8.6.5).

7.4.2.5 Where a permeable surface is to be used by vehicular traffic, a geotextile should be used at the base of construction to help prevent pollution contamination of the rooting area below.

7.4.2.6 Permeable hard surfacing can result in soil volume moisture content remaining at or near field capacity for long periods. Where there is a risk of waterlogging, the design should incorporate appropriate land drainage (see also 4.3 and 8.6.5). Land drainage within the RPA should be designed to avoid damage to the tree and the soil structure, e.g. sand slitting formed by compressed air soil displacement with the slits set radially to the tree.

7.4.2.7 The hard surface should be resistant to or tolerant of deformation by tree roots, and should be set back from the stem of the tree and its above-ground root buttressing by a minimum of 500 mm to allow for growth and movement. Resulting gaps may be filled using appropriate inert granular material.

NOTE 1 Appropriate sub-base options for new hard surfacing include three-dimensional cellular confinement systems. Alternatively, piles, pads or elevated beams can be used to support surfaces to bridge over the RPA or, following exploratory investigations to determine location, to provide support within the RPA while allowing the retention of roots greater than 25 mm in diameter.

NOTE 2 The use of two-dimensional load suspension systems is not recommended for surfaces intended for use by vehicles.

7.4.2.8 When designing the hard surface, account should be taken of finished levels in relation to adjacent structures, including damp-proof courses, garage slabs and links to existing vehicular cross-overs.

NOTE Attention is drawn to the Building Regulations 2010 [8], the Building (Scotland) Regulations 2004, as amended [9] and the Building Regulations (Northern Ireland) 2000 [10], in respect of the need for accessible thresholds.

7.4.2.9 If a permeable surface is to be used by construction traffic, this should be protected with a temporary sacrificial surface laid over a geotextile separator to ensure that its permeability is retained (i.e. interstices should not become blocked during construction).

7.4.3 Edge supports

The excavation needed for the placement of kerbs, edgings and their associated foundations and haunchings can damage tree roots. Within the RPA, this should be avoided either by the use of alternative methods of edge support or by not using supports at all.

NOTE For example, where kerbing is required for light structures, such as footpaths, above-ground peg and board edging might be acceptable. Where areas of hard surface require edge support, the use of sleepers (pinned in place where required), gabions or other non-invasive ground-contact structures, including the use of proprietary products, can provide appropriate solutions.

7.4.4 Precautions

7.4.4.1 The soil structure including the area beneath the proposed new hard surface should be protected from compaction during installation. This may be achieved by:

- a) the use of temporary ground protection in accordance with **6.2.3** to safeguard the working area;
- b) constructing the new surface with machinery working forward from the surface as it is constructed (known as “rolling out”).

7.4.4.2 Where a herbicide is used to control vegetation prior to construction of hard surfacing, the manufacturer’s guidance should be strictly followed and care should be taken to avoid any damaging effects on trees or other vegetation to be retained.

NOTE The use of appropriate geotextiles can provide a barrier that inhibits weed growth but allows water and gases to pass freely.

7.4.4.3 The ground should not be skimmed to establish the new hard surface at the former ground level. Loose organic matter and/or turf should be removed carefully using hand tools. The new surface should then be established above the soil.

7.4.4.4 Raising levels should be achieved by use of a granular material which remains gas- and water-permeable throughout its design life.

7.4.4.5 Due to the highly alkaline leachate produced during the curing of wet concrete, concrete should not be poured within the RPA unless an impermeable liner has been installed.

7.5 Special engineering for foundations within the RPA

7.5.1 The use of traditional strip footings can result in extensive root loss and should be avoided. The insertion of specially engineered structures within RPAs may be justified if this enables the retention of a good quality tree that would otherwise be lost (usually categories A or B). Designs for foundations that would