

South Caldecotte

Arboricultural Impact Assessment

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9646_AIA.001

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Executive Summary

- i) **Introduction.** Aspect Arboriculture are commissioned by HB (South Caldecotte) Ltd to prepare an Arboricultural Survey and Impact Assessment relating to the introduction of employment led development to land at South Caldecotte, Milton Keynes.
- ii) **Proposals.** The application seeks planning permission for the Development of up to 241,548 m² of Storage, Distribution buildings (B8), with ancillary offices (B1 (a)), car and HGV parking areas, a new primary access off Brickhill Street, with earthworks, drainage and attenuation features and other associated infrastructure.
- iii) **Surveys.** The site was surveyed by Aspect during May 2018 following the guidance contained within BS5837:2012. Copies of the tree survey information are available within appendices A and B.
- iv) **Statutory Designations.** Background checks have revealed that the site does not fall within a Conservation Area nor are any of the site's trees afforded protection within a Tree Preservation Order.
- v) **Arboricultural Impact.** The arboricultural impact of the proposed development majors on the removal of internal tree cover as a result of the nature of the development and necessary levels changes. The boundary tree cover will be retained and reinforced where possible; the only removals from the site boundary are required to accommodate the vehicular access, and associated highways and visibility improvements.

The tree removals total six Category A trees, sixteen category B trees and 21 category C trees, alongside the removal of one category A, six category B and seven category C groups of trees, and eleven category C hedgerows. The partial removal of one further category A and category C groups of trees, and six category C Hedgerows will be required to accommodate the proposals; a preliminary tree protection drawing is provided to demonstrate the deliverability of safeguarding measures for retained trees.

1 Introduction

1.1 Background & Proposals

1.1.1 Aspect Arboriculture are instructed by HB (South Caldecotte) Ltd to establish and report on the arboricultural impact of proposed employment led development of land at South Caldecotte, Milton Keynes.

1.1.2 The application seeks planning permission for the Development of up to 241,548 m² of Storage, Distribution buildings (B8), with ancillary offices (B1 (a)), car and HGV parking areas, a new primary access off Brickhill Street, with earthworks, drainage and attenuation features and other associated infrastructure.

1.2 Site Overview

1.2.1 The application area falls within the administrative control of Milton Keynes Council (MKC) as the Local Planning Authority and is allocated to receive strategic employment development within the adopted Plan:MK 2016-2031. The site is currently comprised of a number of agricultural fields, both under arable and pastoral usage, which are separated by a network of typical field boundary hedgerows.

1.2.2 The site is bound by the Bedford to Bletchley Railway Lane to the north, Brickhill Street to the east and the A5 to the southwest.

1.3 Existing Tree Stock

1.3.1 The existing tree stock is considered to represent a typical assemblage for the site's locality and usage, whereby the existing field pattern is largely defined by native broadleaved hedgerows which contain the occasional English Oak, Ash and parcel of unmanaged scrub.

1.3.2 The Oak and Ash range from semi-mature to mature examples of their species and are distributed irregularly across the existing field network. They vary in quality, although those of value are predominantly present within, or adjacent to, the network of pasture fields within the south eastern extent of the site (refer to trees T16, T40-T45, T53, T54, T56 and T59 within appendix B). Although they occur less frequently, other trees of value have also been recorded within this area of the site, including a high-quality Pear (T62), alongside moderate quality Field Maple (T57), Crab Apple (T61), Crack Willow and Black Poplar (G12 and T25-T27).

1.3.3 Mature Crack Willow and Black Poplar occur intermittently along the banks of the watercourse which bisects the southern extent of the site east to west (refer to trees T20, T25-T27, T32, T52, T64-T71, G12 and G22 within appendix B). The majority comprise lapsed pollards and, as is typical of the species, a high number have impaired structural conditions; demonstrated through scaffold limb failures and significant decay within their trunks or boles.

1.3.4 Collections of broadleaves have also been introduced within and adjacent to the small holding within the south western extent of the site (Crossroads Farm), where they

screen the property from Brickhill Street and define the property's boundaries (refer to tree groups G9-G11, G16 and G26 within appendix B). The dominant species present include English Oak, Silver Birch, Crack Willow, Ash, Cherry, Lombardy Poplar, Norway Maple and Goat Willow, and as cohesive collections they are considered to represent features of moderate quality, although as individual trees they are of limited merit.

- 1.3.5 Within the northern extent of the site, where the fields are currently under arable usage, there are two copses of early-mature to mature English Oak (refer to tree groups G2 and G8 within appendix B). As collections they form cohesive canopies and features which are prominent within internal views, and accordingly are considered to be of high arboricultural quality.

2 Statutory Designations

2.1 Conservation Area

- 2.1.1 Background checks have revealed that the site does not fall within a Conservation Area (MKC, June 2018).

2.2 Tree Preservation Orders

- 2.2.1 Background checks have also confirmed that no trees within the site are afforded protection within a Tree Preservation Order (MKC, June 2018).

3 Policy Review

3.1 The National Planning Policy Framework

- 3.1.1 The NPPF (2019) provides planning policy guidance at a National level. With respect to arboriculture, it considers *that 'decisions should contribute to and enhance the natural and local environment by: recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland'* (para 170b), and; *'development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists'* (para. 175c).

- 3.1.2 For clarity, there are no veteran or ancient trees, or any designated areas of ancient woodland within influence of the site, against which the tests of para. 175c can be applied.

3.2 Plan:MK 2016-2031 (2019)

- 3.2.1 In terms of development control at a local level, Milton Keynes Council (MKC) has a statutory obligation to ensure adequate provision is made for the preservation of trees through Section 197 of the Town and Country Planning Act (1990). Plan:MK 2016-2031 (adopted March 2019) is the Council's current primary development control document

with reference to trees. Within Plan:MK, site specific Policy SD14 is the test considered relevant to trees in the context of development (relevant parts reproduced below):

3.2.2 POLICY SD14 - Strategic Employment Allocation, Land South of Milton Keynes, South Caldecotte

A. *The development must accord with the following principles:*

8. *Existing vegetation to site boundaries should be maintained and enhanced to screen the development from wider views where a LVIA deems this necessary. New planting should be of native species to mitigate the loss of hedgerows necessary to facilitate development.*

3.2.3 The application area is also subject to an emerging Supplementary Planning Document: South Caldecotte Development Framework SPD (February 2018). Although currently only a Consultation Draft, it is understood that the SPD will be a material consideration against which the proposed development will be tested. Within the supporting text to Policy 3.4 (Landscape and Open Space Strategy), the SPD states that:

3.2.4 *The large footprint nature of the development will result in large development parcels and will require a certain amount of cut and fill. As a result it is unlikely that any meaningful retention of existing hedgerows and trees within the site can practically be achieved. Hedgerows on the edge of the site should be retained and enhanced, except where to provide access. Where hedgerows or trees are lost, compensatory planting should be provided elsewhere within the site.*

4 Arboricultural Impact

4.1 Net Tree Removals¹

4.1.1 Trees are recommended for removal where: a) it is necessary and unavoidable to site development within proximity to existing trees, such that they cannot be confidently retained in the long-term as living features, and/or b), where the amenity value of the tree will be significantly reduced as a result of the proposals, particularly if already of a low retention priority.

4.1.2 Aspect's tree survey information was provided during the early stages of site design, and has been used to inform the proposals. Unfortunately, and as anticipated within the LPA's Site Allocation SPD, the nature of the development, and necessary levels changes throughout the site has meant that the retention of the majority of the internal tree cover is not possible. Tree removals required to accommodate the development are detailed by category within Table 1 overleaf.

¹All tree works should be timed to avoid the main nesting season for birds between 1st March and 31st August. If scheduled within this period it is recommended that an ecologist is present to advise on any necessary protective measures, and on hand to confirm that tree works are not likely to cause disturbance to nesting birds.

4.1.3 **Table 1: Net Tree Removals by BS5837 Category.**

Category A	Category B	Category C
T41-T43, T45-T46	T13, T40, T56 English Oak	T3, T18, T19, T22 Ash
English Oak	T14-T16, T33, T44, T53, T54	T17, T23, T30 English Oak
T62 Pear	Ash	T20, T32, T34-T36, T38, T39,
G2+	T25-T27 Black Poplar	T50-T52, T64, T70
G8+Δ	T57 Field Maple	Crack Willow
	T58 Hawthorn	T21 Field Maple
	T61 Crab Apple	T69 Hawthorn
	G9+, G16+, G26+	G6+, G13+, G18+, G20+
	G10 Lombardy Poplar	G17, G22 Crack Willow
	G11 Ash	G21+Δ
	G12 Crack Willow	G23 Blackthorn
		H1Δ, H3, H9, H10+Δ
		Elm & Hawthorn
		H4+, H5+, H7+, H8+, H13+, H18+,
		H19+, H20+
		H12 Privet
		H2+Δ, H11+Δ, H14+Δ, H15+Δ

+ Denotes mixed species assemblage of three or more species – refer to Appendix B

Δ Denotes partial clearance

4.1.4 By reference to Table 1 above, the tree removals have been focussed on the internal components of the tree stock, whilst retaining and reinforcing the boundaries where possible. The proposed hedgerow removal from the boundaries is necessary to accommodate the site access, associated highways improvements and visibility splays.

4.2 Pruning Works²

4.2.1 Although not required to facilitate construction, it is recommended that dead branches are removed from the canopies of retained trees from the boundaries where oversailing the site. This will help mitigate the risk of future tree related hazards emerging and associated apprehension.

4.2.2 Pruning works should be undertaken in accordance with section 7.3 (for removal of deadwood) of BS3998:2010, by a competent tree contractor, to ensure that cuts are performed correctly and positioned to avoid future structural defects or physiological issues, facilitate growth and maintain aesthetic value.

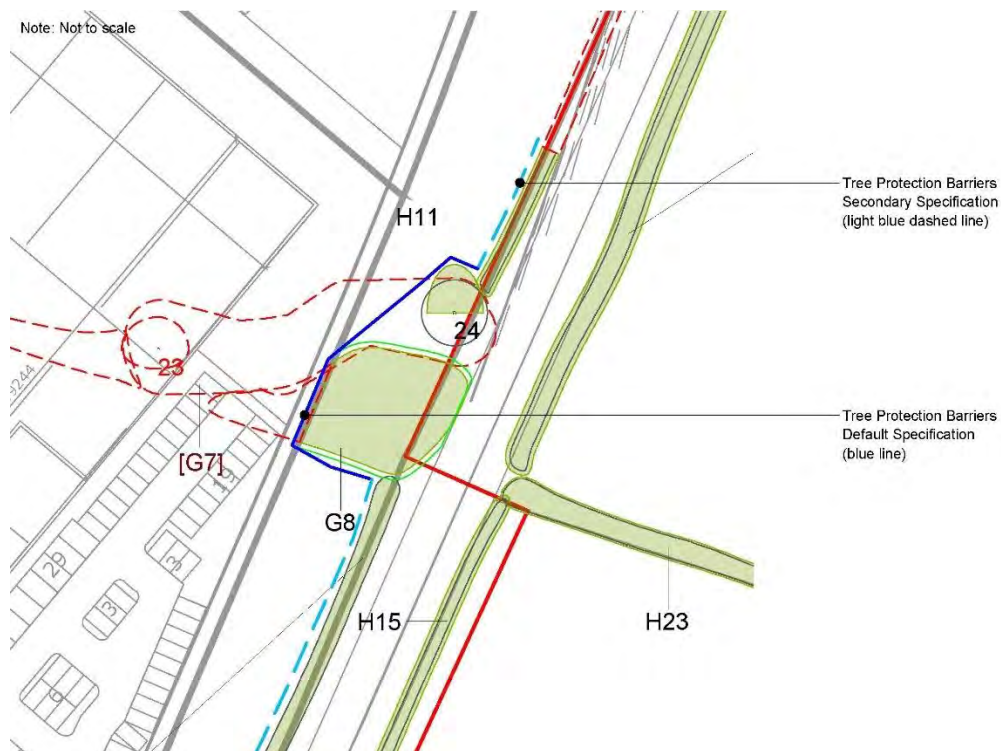
4.3 Protective Barriers

4.3.1 It will be important to protect the retained boundary trees' above-ground structures and underlying RPAs from damage during construction works. To achieve this, tree protection barriers should be erected prior to the commencement of any development works and, with the exception of the where hedges are to be protected, consist of the default barrier specification provided in BS5837:2012. Where the hedges which define the boundaries are to be protected, it is recommended that a reduced specification barrier is used, which omits the diagonal bracing to the rear and is

² All tree works should be timed to avoid the main nesting season for birds between 1st March and 31st August. If scheduled within this period it is recommended that an ecologist is present to advise on any necessary protective measures, and on hand to confirm that tree works are not likely to cause disturbance to nesting birds.

secured with 100x100mm timber posts every second panel. The locations for default protective fencing are illustrated within the Tree Protection Plan (Appendix C) with a bold blue line, and for the reduced specification, with a light blue dashed line (refer to figure 1 below).

4.3.2 Figure 1: Tree Protection Barrier Specification



4.4 Mitigation Replanting

4.4.1 The proposed development necessitates the removal of the majority of the site's internal tree cover, generating a requirement for significant mitigation planting. This has been recognised during the development of the layout, which provides for significant buffers to the boundaries, alongside wide verges to accommodate tree planting throughout the site interior.

4.4.2 Aspect have produced a Landscape Strategy Plan (ref. 6340.LSP.04.A) which illustrates the proposed approach to maximising replacement trees and new soft landscape within the application area. It is strongly recommended that detailed planting plans are secured by condition.

4.4.3 The Landscape Strategy includes extensive tree and native woodland planting within linear park areas to reinforce the retained boundary tree cover to the west and north. In addition, an extensive landscape buffer is provided adjacent to the eastern boundary to replace hedgerows which are to be removed to accommodate highways improvement works and the vehicular access.

4.4.4 Internally, the strategy includes formal avenues of large canopied tree species adjacent to the spine road and primary thoroughfares, alongside 'green fingers' defining the boundaries of the development parcels. The strategy maximises the

extent of replacement tree planting achievable within the allocation, resulting in a net increase in the number of trees present within the application area.

5 Conclusions

- 5.1.1 The development proposals have been informed by a survey of the existing tree stock, and a review of relevant policy tests.
- 5.1.2 A deliverable scheme for safeguarding retained boundary trees has been prepared which relies on the use of protective barriers.
- 5.1.3 Due to the nature of the development, and necessary level changes across the site, the loss of the site's internal tree cover is unavoidable. The extent of tree loss within the allocation has been anticipated by the LPA during the production of the site specific Supplementary Planning Document. To mitigate for the necessary removals, a scheme of soft landscaping has been prepared, making use of the areas of landscaping provided adjacent to the boundaries, lining the spine road, and between development parcels.
- 5.1.4 The extent of tree loss necessary to introduce the proposed development to the allocated site is not insignificant. It is Aspect's opinion however, that , subject to the implementation of a scheme of landscaping which is in accordance with the submitted strategy, the proposed development accords with the LPA's adopted allocation within Plan:MK and the draft SPD for the site.

6 Recommendations

- 6.1.1 Pursuant to the Council's preference to ensure confident boundary tree retention during development, ongoing arboricultural input should be sought during detailed design. It is also strongly recommended that detailed planting proposals are produced to ensure that the principles of the landscape strategy are adhered to; this could be secured by Condition.

Prepared By:

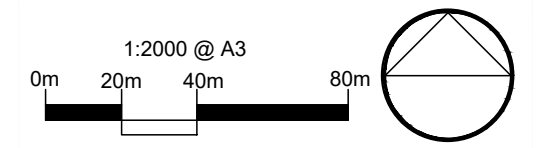
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APPENDICES

APPENDIX A

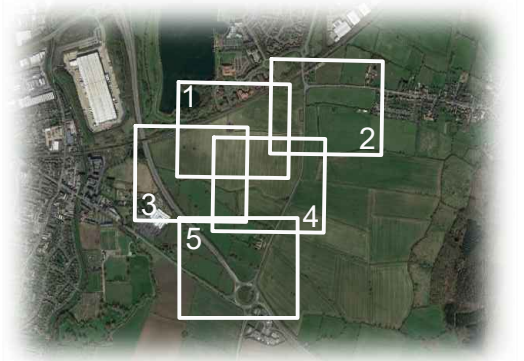
TREE CONSTRAINTS PLAN (9646 TCP 01)



- KEY:**
- Site Boundary
 - 15 Tree Numbers
 - Tree Canopies
 - [8] Category 'U' Trees
 - Category 'A' RPA
 - Category 'B' RPA
 - Category 'C' RPA

Note: Trees 5, 32, 50-51, 60, 63, 68-69, 71, 74, 76, 80-81, Groups G1, G3-G6, G9, G12-G14, G16-G17, G21, G23-G25, G27 and Hedgerows H1, H2-H7, H10-H12, H14-H15, H18-H22, H24-H30 are not on the topographical survey and their locations have been approximated using a scaled aerial photograph combined with measurements taken on site.

Note: Trees 1, 5, 31, 46-48, 76, 78, 81, Groups G3, G8-G10, G16, G25-G26 and Hedgerow H14 have been manipulated to allow for various site features, i.e. roads, structures or changes in levels.



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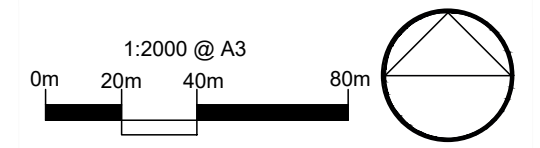


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**South Caldecotte
 Tree Constraints Plan**

CLIENT
HB (South Caldecotte) Ltd

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DRAWING NUMBER 9646 TCP 01 (1/5)		REVISION

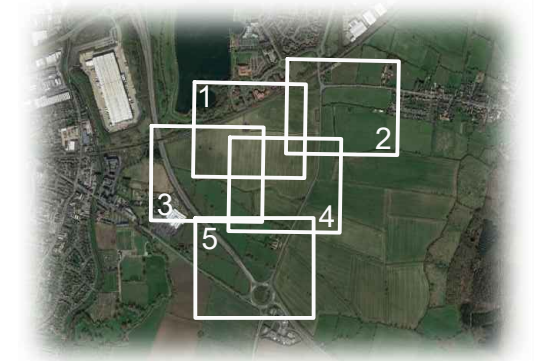
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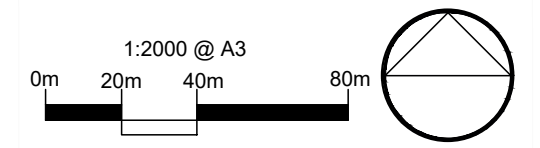


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CLIENT
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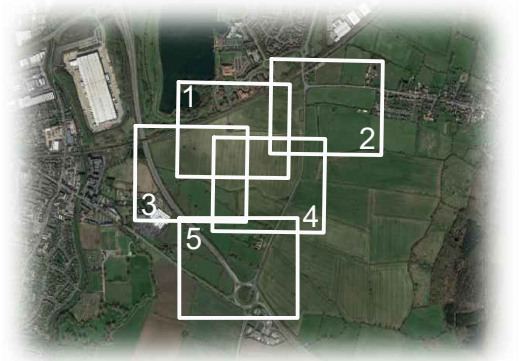
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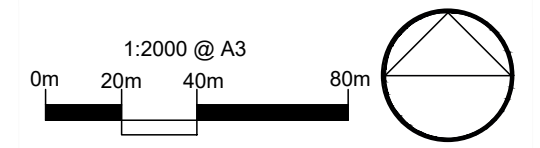


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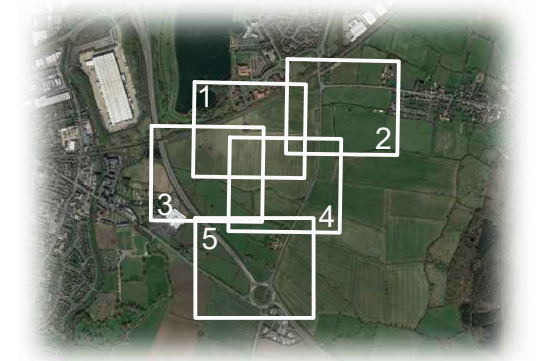
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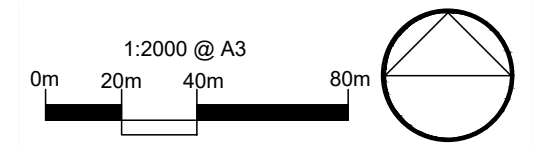


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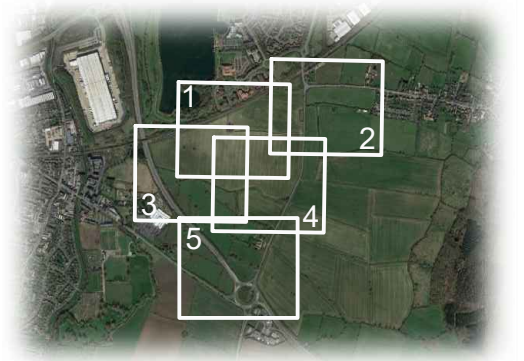
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APPENDIX B

TREE SURVEY SCHEDULE (9646 TS 01 Rev A)

BS 5837:2012 Tree Schedule: South Caldecotte

BS5837:2012 Tree Survey: Explanation of Survey Criteria

Tree Number	Common Species Name	Trunk Diameter (mm)	Height (m)	Crown Spread (m)					Crown Clearance (m)	Life Stage	Physiological Condition	Structural Condition	Comments	BS5837 Category	RPA Radius (m)
				N	E	S	W	radial							

Sequential reference number cited on all aspect drawing.

Height and Crown spread measured to the nearest half meter; # denotes where this is estimated.

e.g.: young, semi-mature, early-mature, mature or over-mature

*Area around tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of roots and soil structure is a priority. *The RPA has been manipulated to allow for various site features, i.e. roads, structures or changes in levels. Please refer to the Tree Constraints Plan for these changes.*

Category prefix A-C denotes arboricultural quality, decreasing from A (high) to C (low); Subcategories 1, 2 and 3 highlight associated arboricultural (1), landscape (2) and ecological (3) qualities.

Category U trees are those in such a condition that they cannot be realistically retained as living trees in the current context for the long term.

Measured to the nearest 10mm; # denotes estimated diameter where access is not possible.

e.g.: above-average, average, below average or dead

General observations, i.e. defects, preliminary management recommendation, presence of pests/disease, perceived significance.

Height of first significant branch and/or canopy

e.g.: good, indifferent, poor, or hazardous

Colour band key:

- Category A
- Category B
- Category C
- Category U

The following survey should not be interpreted as a report on tree health and safety. Aspect's opinion of tree condition and structural potential is valid for a limited period of 12 months from the date of inspection. Validity is assumed in the absence of inclement weather and no change to the trees existing setting.

Tree Number	Common Species Name	Trunk Diameter (mm)	Height (m)	Crown Spread (m)					First Significant Branch (m)	Crown Clearance (m)	Life Stage	Physiological Condition	Structural Condition	Comments	BS5837 Category	RPA Radius (m)
				N	E	S	W	Radial								
1	Ash	600#	11m	6.25	5#	6.75	5		2	2	Early Mature	Below Average	Poor	Field boundary Ash Desiccated Inonotus brackets on trunk to west Cavity visible at base to west Clad in dead Ivy Leans towards road Above average dieback and deadwood	U	N/A
2	Ash	520#	12m	7#	6.5	5.25	6.25		2.25	2.5	Early Mature	Below Average	Poor		C12	6.3
3	Ash	520#	14m	4.5	6.25	4.5	5.25		5	2	Early Mature	Below Average	Poor		C12	6.3
4	Ash	400#	14m	5#	6.25	8	6.75		3	3	Early Mature	Below Average	Poor	Field boundary Ash Sparse upper canopy Above average deadwood Low quality	U	N/A
5	Ash	350#	10m					4.75	2	2	Early Mature	Average	Poor		C12	4.2
6	Ash	2*270#	10.5m	1#	5.25	6.75	5.25		3	3	Early Mature	Average	Poor		C12	4.5
7	Ash	520	11m					5.5	2.5	2.25	Early Mature	Below Average	Poor	Above average dieback and large diameter deadwood within upper scaffold Woodpecker holes on scaffold	U	N/A
8	Ash	610	12m	7.75	4.75	4	6.5		2.5	2.5	Early Mature	Below Average	Poor	Above average dieback and large diameter deadwood within upper scaffold Woodpecker holes on scaffold	U	N/A
9	Ash	525	14m	5.5	0	5	9		2.5	2.5	Early Mature	Below Average	Poor	Above average dieback and large diameter deadwood within upper scaffold Woodpecker holes on scaffold Desiccated Inonotus on lower trunk and scaffold Leans heavily to west Column of decay on east side of trunk	U	N/A
10	Ash	415	12m	6	0	2.5	5.5		2	3.5	Early Mature	Below Average	Poor	Above average dieback and large diameter deadwood within upper scaffold Woodpecker holes on scaffold	U	N/A
11	Ash	480	13m	1	1	5.75	6		4	3.5	Early Mature	Below Average	Poor	Above average dieback and large diameter deadwood within upper scaffold Woodpecker holes on scaffold	U	N/A
12	Ash	420	14m	4	4.25	6.5	2		1.75	2.5	Early Mature	Below Average	Poor	Above average dieback and large diameter deadwood within upper scaffold Woodpecker holes on scaffold	U	N/A
13	English Oak	1450	15m	8.25	7	8	7.5		2	2	Mature	Average	Indifferent	Established standalone English Oak Some dieback and deadwood within canopy Ganoderma at base to south Epicormic growth on lower trunk Prominent within views across site	B12	15
14	Ash	635	16m	7.75	8.25	7.5	9		3	2.5	Mature	Average	Indifferent	Established standalone Ash Basal wound to east and west - partially occluded but with decay present Upper canopy contains minor deadwood Typical for species	B12	7.5

Tree Number	Common Species Name	Trunk Diameter (mm)	Height (m)	Crown Spread (m)					First Significant Branch (m)	Crown Clearance (m)	Life Stage	Physiological Condition	Structural Condition	Comments	BS5837 Category	RPA Radius (m)
				N	E	S	W	Radial								
15	Ash	595	12.5m	7	7.75	5.75	6.5		3	2	Mature	Average	Indifferent	Established standalone Ash Contains average minor deadwood Appears typical for species Moderate arboricultural quality	B12	7.2
16	Ash	820 385 220	16m	7.5	8	7#	6		1.75	2.5	Mature	Average	Indifferent	Clad in dense Ivy Scaffold obscured Forms multiple leaders from c. 2m to 5m	B2	11.1
17	English Oak	450#	10m	9.75	7	8#	9.75		1.5	4	Early Mature	Average	Indifferent		C12	5.4
18	Ash	320 2* 200	12m	6.5	3.5	5#	6.75		5.25	4.5	Early Mature	Average	Poor		C12	5.1
19	Ash	345 170 100 200	13.5m	8	6.75	4	6.5		3.5	4	Early Mature	Average	Poor		C12	5.4
20	Crack Willow	1200#	9m	8.25	2	2	12.5		1.5	0	Over Mature	Average	Poor		C12	14.4
21	Field Maple	385 450	9.5m	4	4.25	5	5.5		3	1.75	Mature	Average	Indifferent		C12	7.2
22	Ash	630 320	12m	5	8.5	5	7.75		3	1.5 to 3	Mature	Average	Poor		C12	8.4
23	English Oak	400	11m	5.25	5	3.25	6		3.5	2.5	Early Mature	Average	Poor		C12	4.8
24	Ash	460	14m	8	4.75	0	4.5		4	3.5	Early Mature	Average	Indifferent		C12	5.4
25	Black Poplar	910	17.5m	7.5	8	8	7		3	3	Mature	Average	Poor	Established on bank of stream Appears to have suffered historical storm damage within upper scaffold or previously pollarded at c. 10m Leans to north east Lower trunk clad in Ivy	B2	10.8
26	Black Poplar	910	18m	9#	9.5	9	8		4	3.5	Over Mature	Average	Poor	Established on bank of stream Appears to have suffered historical storm damage within upper scaffold or previously pollarded at c. 10m Leans to north east Lower trunk clad in Ivy Kink in stem at c. 2.5m to north	B2	10.8
27	Black Poplar	985	15m	8.5	9	11.25	7.5		2.5	1.5	Over Mature	Average	Poor	Pollarded at c. 3 - 4.5m Decaying stubs present at unions Mature regrowth	B2	11.7
28	Ash	200#	6m					2.75	1.5	1.75	Semi Mature	Average	Indifferent		C12	2.4
29	English Oak	145	5m					2.75	0.5	0.5	Semi Mature	Average	Indifferent		C12	1.8
30	English Oak	265	6m					3.5	1	0.5	Semi Mature	Average	Indifferent		C12	3.3
31	Ash	9*100#	10m					4.5	0.5	1.75	Semi Mature	Average	Poor		C12	3.6
32	Crack Willow	750#	12m	7.5	6.25	7	9.75		1.5	1.5	Mature	Average	Poor		C12	9
33	Ash	545	15m	8	6.25	8.25	9.75		4	1.25	Mature	Average	Indifferent	Mature field boundary Ash Structure typical for species Balanced scaffold Ganoderma bracket at base to north	B12	6.6
34	Crack Willow	900#	11m	9	9.5	7	7		1.5	1.5	Mature	Average	Poor		C12	10.8
35	Crack Willow	700	14m	4.75	8.25	7.5	4		1	2	Mature	Average	Poor		C12	8.4
36	Crack Willow	1050	14m	8	8.5	6.75	7.5		1.75	1	Mature	Average	Poor		C12	12.6

Tree Number	Common Species Name	Trunk Diameter (mm)	Height (m)	Crown Spread (m)					First Significant Branch (m)	Crown Clearance (m)	Life Stage	Physiological Condition	Structural Condition	Comments	BS5837 Category	RPA Radius (m)
				N	E	S	W	Radial								
37	Crack Willow	800#	14m	7.25	6.5	6.25	7	1.5	1.75	Mature	Average	Hazardous	Union at base and c. 2m is separating Partially failed Lapsed pollard Large open cavity with active decay within hole	U	N/A	
38	Crack Willow	520	13m	9.5	6.5	5	7	1	2.5	Early Mature	Average	Poor		C12	6.3	
39	Crack Willow	800	10m					6.5	0	Mature	Average	Poor		C12	9.6	
40	English Oak	745	13m	6.25	6	5.5	6	2.25	1.5	Mature	Below Average	Indifferent	Mature field boundary Oak Some deadwood and dieback visible within upper canopy Slightly squat canopy Moderate example of species	B12	9	
41	English Oak	1025	20m	11.5	4	10.75	10.5	4.5	2.5	Mature	Average	Indifferent	Cohesive with companion Mature field boundary Oak Structure appears typical for species Average minor deadwood Good example of species	A12	12.3	
42	English Oak	780#	20m	11.5	7	10.5	6.25	4.5	2.5	Mature	Average	Indifferent	Cohesive with companion Mature field boundary Oak Structure appears typical for species Average minor deadwood Good example of species	A12	9.3	
43	English Oak	1110	21m	11.5	10.75	11.25	10.5	2.25	1.5	Mature	Average	Indifferent	Cohesive with companion Mature field boundary Oak Structure appears typical for species Average minor deadwood Good example of species	A12	13.2	
44	Ash	515	13m	6	6.25	5.5	6.5	4	1 to S 5 to N	Early Mature	Average	Indifferent	Previously unsympathetically crown lifted Average deadwood throughout canopy structure Moderate example of species	B12	6.3	
45	English Oak	1050	19m	8.75	8.5	8	9	2.25	1.75	Mature	Average	Indifferent	Mature field boundary Oak Structure appears typical for species Balanced scaffold and canopy Average minor deadwood throughout canopy Good example of species at maturity	A12	12.6	
46	English Oak	1025	18m	10.5	9.25	9.75	8.75	4	5.5	Mature	Average	Indifferent	Mature field boundary Oak Minor deadwood present throughout canopy Structure appears typical for species Some epicormic growth on lower trunk Previously crown lifted	A2	12.3	
47	English Oak	850#	8m	3.75	3#	4.5	2.5	2.5	2.5 to E	Mature	Below Average	Poor	Heavily clad in Ivy Significant dieback Appears to have lost most of upper scaffold structure Terminal decline	U	N/A	
48	English Oak	925	14m	6.5	5.75	8	6.25	3	1 av 5 over carriageway	Mature	Below Average	Poor	Mature field boundary Oak Clad in Ivy Historical failures within upper scaffold structure Unbalanced structure prominent along road	B2	11.1	
49	Ash	560	14m	7.75	8.5	8.5	6.25	3.5	0.5	Early Mature	Average	Good	Standalone Ash Balanced scaffold structure and canopy Good example of species	A12	6.6	
50	Crack Willow	240	1.75m					0.5	1	-	Semi Mature	Average	Poor		C12	3

Tree Number	Common Species Name	Trunk Diameter (mm)	Height (m)	Crown Spread (m)					First Significant Branch (m)	Crown Clearance (m)	Life Stage	Physiological Condition	Structural Condition	Comments	BS5837 Category	RPA Radius (m)
				N	E	S	W	Radial								
51	Crack Willow	310	1.5m					1	0.5	-	Semi Mature	Average	Poor		C12	3.6
52	Crack Willow	2*450 2*220#	10m	10.25	1	6	10		0.5	2	Mature	Average	Poor		C12	8.4
53	Ash	780	13m	8.25	6	6.25	7.25		4.25	2	Mature	Average	Poor	Sub-dominant/lower bough to east has failed Remnants decaying with a cavity visible extending down into main trunk Majority of canopy appears to be formed by established epicormic growth but appears well balanced and structured Moderate example of species	B2	9.3
54	Ash	1350 at c. 0.5m	15m	6	6	7.5	6.5		1.75	2.25	Mature	Average	Poor	Lapsed coppice Previously maintained as part of hedgerow Multi-stemmed from c. 1m to 1.5m Epicormic growth throughout canopy Occluded lower stems to west Small cavity within lower bole to west Moderate example of a lapsed coppice Ash	B2	15
55	Ash	285	11m					5.5	4	4	Semi Mature	Average	Indifferent		C12	3.3
56	English Oak	1170	17m	6.75	11.75	9.5	10		2	2	Mature	Average	Poor	Standalone English Oak Structure appears typical for species Balanced scaffold structure and canopy spread Longitudinal column of exposed heartwood on north side of trunk from ground level to c. 5.5m now partially occluded Moderate example of species	B12	14.1
57	Field Maple	520	7.5m	5.25	6	5.5	5		2.25	2	Mature	Average	Indifferent	Mature component of former hedgerow Structure appears typical for species at maturity Canopy slightly bias to south east	B12	6.3
58	Hawthorn	370 405 200	8.5m					7	1.5	1.5	Mature	Average	Indifferent	Overgrown component of hedgerow Multi-stemmed from ground level Structure typical for species	B1	6.9
59	English Oak	370 510	13.5m	6.75	7	7	7#		1.5	2.25	Early Mature	Average	Poor	Co-dominant stems from ground level West column has a weak union at c. 5m which appears to be separating Moderate example of species	B2	7.5
60	Goat Willow	3*250 3*180#	9.5m	7.5	7	8	6#		1	1	Early Mature	Average	Poor		C12	6.3
61	Crab Apple	2*440	9.5m	5	6.25	6.5	5.75		1.5	1.5	Mature	Average	Indifferent	Co-dominant stems from c. 0.5 stems occluded at c. 1.5m Historic failure at point of occlusion Average minor deadwood throughout canopy Moderate example of species Overgrown component of hedgerow	B1	7.5
62	Pear	730	12m	7.5	6.5	6.75	5.5		2	2	Mature	Average	Indifferent	Mature component of former hedgerow Standard form Structure appears typical for species at maturity Scaffold slightly bias to north east Good canopy form Considered to be of high arboricultural quality	A1	8.7
63	Crack Willow	700#	10m					5.5	0.5	1	Mature	Average	Poor	Lapsed Willow pollard Bole deteriorating and has partially collapsed Extensive decay within bole	U	N/A
64	Crack Willow	4*865#	12m	11.5	17	16.5	11.5		1	0	Mature	Average	Poor		C1	15

Tree Number	Common Species Name	Trunk Diameter (mm)	Height (m)	Crown Spread (m)					First Significant Branch (m)	Crown Clearance (m)	Life Stage	Physiological Condition	Structural Condition	Comments	BS5837 Category	RPA Radius (m)
				N	E	S	W	Radial								
65	Crack Willow	780	8m	2.5	2	5#	5#		2	1.5	Mature	Average	Poor	Lapsed pollard East side of trunk has a large open cavity with active decay within Cohesive with companion Eastern co-dominant failed from bole	U	N/A
66	Crack Willow	720	13m	4	6.75	3#	3		1.5	2	Mature	Average	Poor	Lapsed pollard Large longitude cavity on west side of trunk with active decay within	U	N/A
67	Crack Willow	510	11m	6.5	4	2.5#	5.25		3	2	Early Mature	Below Average	Poor	Bark stripped on lower east side of trunk Significant dieback within upper east canopy	U	N/A
68	Crack Willow	1260	5m					1.5	2	2	Mature	Dead	Hazardous	Standing deadwood Fallen stem to south (still partially attached) Has re-rooted and established on bank of stream	U	N/A
69	Hawthorn	235 3*185	5m	5	4.25	2.5#	5		1.5	1.5	Mature	Average	Indifferent		C1	4.8
70	Crack Willow	2*870#	13m	15	14	5#	12		0.5	0	Mature	Average	Poor		C1	14.7
71	Crack Willow	1000#	8m					5	1.5	1	Mature	Average	Poor	Lapsed pollard Partially collapsed Main trunk/bole has split and is heavily decayed	U	N/A
72	Ash	520#	14m	6.75	4.5#	3.25	5.25		5.5	6	Early Mature	Below Average	Poor		C12	6.3
73	Ash	220 4* 180 260#	11m					4.5	4.75	5	Early Mature	Average	Poor	Lapsed Ash coppice Significant decay within bole Anticipating structural failure	U	N/A
74	Ash	7*180#	10m					5	4	4	Early Mature	Average	Poor		C12	5.7
75	Ash	350 6*150 2*280 av	15m					5.5	2.5	1.5	Early Mature	Average	Poor		C12	7.2
76	Ash	620#	13m					6.75	3	5	Early Mature	Below Average	Poor		C12	7.5
77	Field Maple	260#	7m					4	1.75	2	Early Mature	Average	Indifferent		C12	3
78	Ash	300 450#	13m					6.5	4	4.5	Early Mature	Average	Indifferent	Trunk inaccessible Co-dominant from ground level Structure appears typical for species Moderate quality	B12	6.6
79	Lawson Cypress	3*150	4.5m					2	1	1.5	Semi Mature	Average	Poor		C12	3
80	Beech	300#	10m					4.75	1.75	3	Early Mature	Average	Indifferent		C12	3.6
81	Beech	400#	9.5m					4.75	2.5	2	Early Mature	Average	Indifferent		C12	4.8
G1	Hawthorn Elm Blackthorn	250# max	7 max					2.5	0.5	0.5	Semi Mature to Early Mature	Average	Poor		C12	3
G2	English Oak Ash Elm	820 max	20 max					9 max	2.5 av	2 av	Early Mature to Mature	Average	Indifferent	Cohesive collection of predominantly English Oak Occasional boundary Ash identified as individual due to poor condition Prominent collection within views across site Average internal deadwood	A2	9.9
G3	Hawthorn Elder Damson	5*150# max	9 max					5 max	1.5 av	1.5 av	Semi Mature to Mature	Average	Indifferent		C12	3.9

Tree Number	Common Species Name	Trunk Diameter (mm)	Height (m)	Crown Spread (m)					First Significant Branch (m)	Crown Clearance (m)	Life Stage	Physiological Condition	Structural Condition	Comments	BS5837 Category	RPA Radius (m)
				N	E	S	W	Radial								
G4	Ash Alder Hawthorn Elder Crack Willow	605 max	19m					9.25 max	2.5 av	1 to 3	Semi Mature to Mature	Average	Indifferent	Established tree cover on rail embankment Predominantly Ash and Crack Willow Alder introduced on edge of Caldecotte Park Dense Elder scrub understorey	B2	7.2
G5	Field Maple Ash	3*200 max	10m					5.75	1.5 av	1.5 av	Early Mature to Semi Mature	Average	Indifferent		C12	3.3
G6	Hawthorn Pear Field Maple Ash Hawthorn Elder	290 max	8 max					5.5 max	1.5 av	1 av	Semi Mature to Early Mature	Average	Indifferent		C12	3.6
G7	Ash Elm Hawthorn Blackthorn	450 av	15 max					5.75 max	2.5 av	2.5 av	Early Mature to Mature	Below Average	Poor	Collection of Ash forming western edge to copse All are showing signs of decline Above average deadwood and dieback Decayed lower trunks and scaffold Dense understorey of predominantly Elm	U	N/A
G8	English Oak Elm Hawthorn	960 oi	18 max					10.5	3	3 to 5	Early Mature to Mature	Average	Indifferent	Cohesive collection of English Oak forming a small copse adjacent to road Structure appears typical for species 7no. dense understorey of Elm and Hawthorn	A2	11.4
G9	English Oak Silver Birch Crack Willow Norway Maple Ash Cherry Weeping Willow	400 max 190 av	14 max					5 max	2 av	1.75 av	Semi Mature	Average	Indifferent	Planted copse of predominant English Oak and Silver Birch with some Willow scrub established around ditch and pond features Low individual significance	B2	4.8 max 2.4 av
G10	Lombardy Poplar	430 max	18 max					2 max	1 max	1.5 av	Semi Mature	Average	Indifferent	Cohesive collection Low individual significance	B2	5.1
G11	Ash	200 max	16 max					4 max	3 av	2.5 av	Semi Mature	Average	Indifferent	Cohesive collection Low individual significance	B2	2.4
G12	Crack Willow	960 av	15m					8.5 max	2 av	1 av	Over Mature	Average	Poor	Collection of previously pollarded Crack Willow on bank of brook Mature regrowth Typical failures throughout and decay within majority of boles Recommend repolled Low individual significance	B2	11.4

Tree Number	Common Species Name	Trunk Diameter (mm)	Height (m)	Crown Spread (m)					First Significant Branch (m)	Crown Clearance (m)	Life Stage	Physiological Condition	Structural Condition	Comments	BS5837 Category	RPA Radius (m)
				N	E	S	W	Radial								
G13	Crack willow Silver Birch Hawthorn Field Maple Cherry Hazel Ash Rowan Black Poplar Sycamore	320 max	14.5 max					5.5 max	1.5 av	1.5 av	Semi Mature	Average	Indifferent		C12	3.9
G14	Ash Elm Hawthorn Blackthorn	5*100 max	8 max					5 max	1 av	1 av	Semi Mature to Early Mature	Average	Indifferent to Poor		C12	2.7
G15	Ash Goat Willow	9*150 max	8m					5 max	0.5	0.5	Semi Mature to Early Mature	Average	Indifferent		C12	5.4
G16	Silver Birch Norway Maple Norway Spruce Goat Willow Box Laurel Leyland Cypress Lawson Cypress Snowy Mespilus Crack Willow Pear Apple Cherry False Acacia	450 max	13 max					7 max	2 av	2 av	Semi Mature to Early Mature	Average	Indifferent to Poor	Mixed collection of plantings within existing property's garden/amenity sparse Cohesive canopies Structure appears typical for species Moderate quality due to collective canopy coverage only Low individual significance Mostly unmaintained and require intervention/maintenance works	B2	5.4
G17	Crack Willow	240 @ base max	5 max					2.75	1 av	1 av	Semi Mature	Average	Poor		C12	3
G18	Hawthorn Elder Crack Willow	300 max	9 max					4.5 max	1 av	1 av	Semi Mature to Mature	Average	Poor to Indifferent		C12	3.6
G19	Ash Crack Willow	250 max	9.5 max					4 max	2 av	1.75 av	Semi Mature	Average	Indifferent		C12	3
G20	Cherry Alder	250 max	14 max					4 av	1.75 av	1.75 av	Semi Mature to Early Mature	Average	Indifferent		C12	3
G21	Hawthorn Ash Goat Willow Blackthorn Crack Willow	200 max 90 av	6 av 10 max					4 av	1 av	1 av	Early Mature to Semi Mature	Average	Indifferent		C12	2.4 max 1.2 av
G22	Crack Willow	370 max	150max					7 max	2 av	1.5 av	Semi Mature to Early Mature	Average	Indifferent		C12	4.5
G23	Blackthorn Gorse	75 max	5 max					2 max	0.5 av	0.5 av	Semi Mature	Average	Indifferent		C12	0.9
G24	Hawthorn Blackthorn	75 max	1.5 max					2 max	0 av	0 av	Semi Mature to Early Mature	Average	Indifferent		C12	0.9

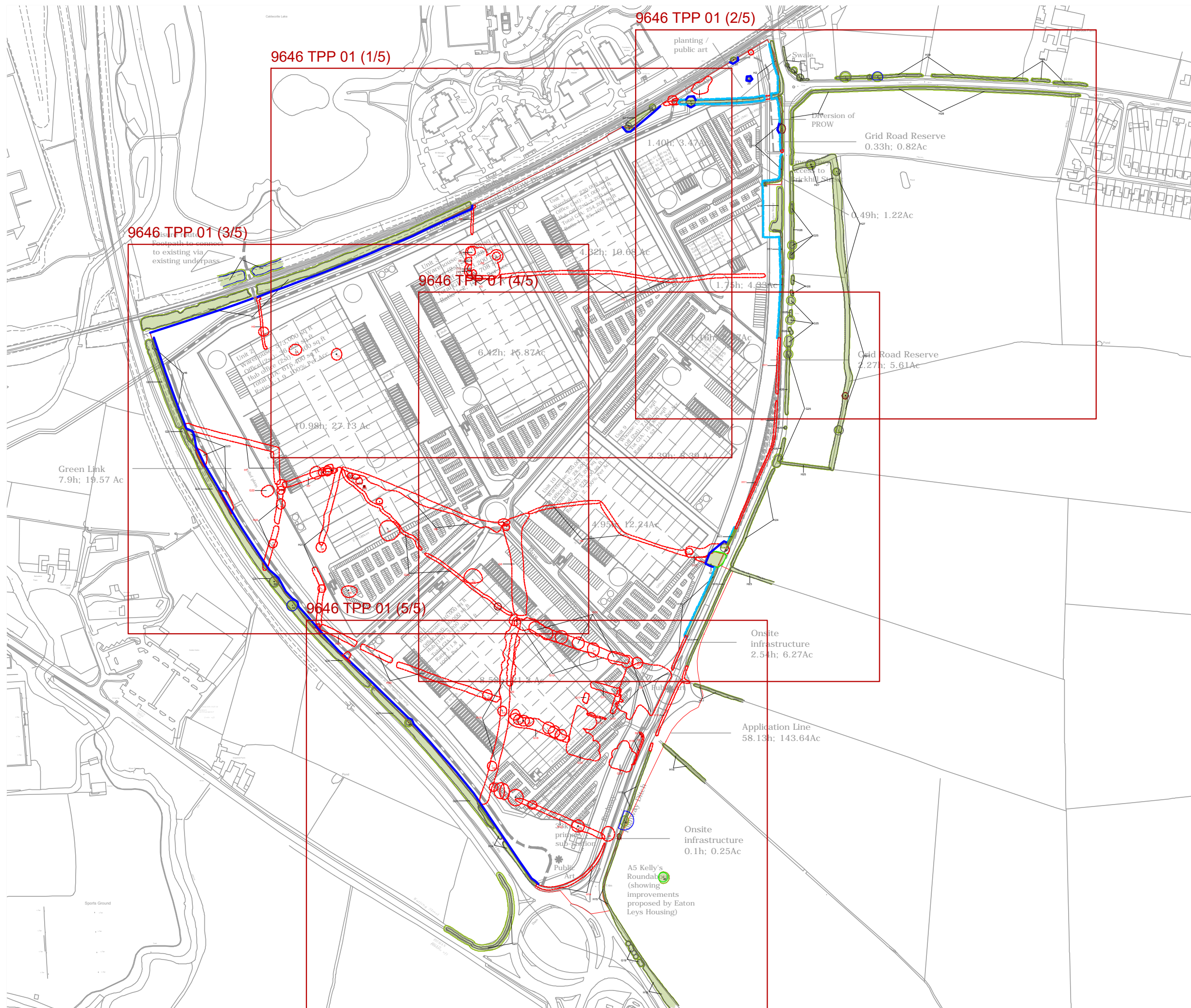
Tree Number	Common Species Name	Trunk Diameter (mm)	Height (m)	Crown Spread (m)					First Significant Branch (m)	Crown Clearance (m)	Life Stage	Physiological Condition	Structural Condition	Comments	BS5837 Category	RPA Radius (m)
				N	E	S	W	Radial								
G25	Ash	280 3*200 2*150 max 4*175# av	10 max					6.5 av	3 av	3 av	Semi Mature to Early Mature	Average to Below Average	Poor to Indifferent		C12	7.2
G26	Silver Birch Cherry English Oak Whitebeam	365 max	11 max					7.25 max	2 av	2 av	Semi Mature to Early Mature	Average	Indifferent	Cohesive collection of ornamental plantings Structure typical for species Moderate value as a collection and of low individual significance	B2	4.5
G27	Ash English Oak Hawthorn Goat Willow	120#	10m# max					4.5# max	0.5 to 1.5	1.5# av	Young to Semi Mature	Average	Poor to Indifferent		C12	1.5
H1	Elm Hawthorn	80	2 to 4					2	0.5	0.5	Semi Mature to Early Mature	Average	Indifferent		C12	0.9
H2	Hawthorn Elm Ash	150 max	7m					2.5	1	1	Early Mature	Average	Indifferent		C12	1.8
H3	Elm Hawthorn	80 max	2 to 3					2 max	5	0.5	Early Mature to Semi Mature	Average	Indifferent		C12	0.9
H4	Elder Hawthorn Field Maple	4*70 max	1.75m					1.5	0.5	0.5	Semi Mature to Early Mature	Average	Poor to Indifferent		C12	1.8
H5	Dog Rose Willow Field Maple Hawthorn	75 max	1.75 max					1.5 max	0.5 av	0.5 av	Semi Mature	Average	Indifferent		C12	0.9
H6	Hawthorn Ash	75 max	1.75 max					0.75 max	0.5 av	0.5 av	Semi Mature	Average	Indifferent		C12	0.9
H7	Hawthorn Hazel Damson Blackthorn	75 max	1.75 max 7 av					0.75 max	0.5 av	0.5 av	Early Mature to Mature	Average	Poor		C12	0.9
H8	Hawthorn Elm Blackthorn	150 max	6 max					2.5 av	0.5 av	0.5 av	Early Mature	Average	Indifferent		C12	1.8
H9	Elm Hawthorn	120 max	2 to 4					2 max	0.5 av	0.5 av	Early Mature	Average	Indifferent		C12	1.5
H10	Elm	120 max	2.5m					1.5 max	0.5 av	0.5 av	Early Mature	Average	Indifferent		C12	1.5
H11	Ash Elm Blackthorn Field Maple	80 av	3 to 4					1.5 av	0.5 av	0.5 av	Early Mature	Average	Indifferent		C12	0.9
H12	Privet	50 max	2 max					1 av	0.6 av	0.5 av	Young	Average	Indifferent		C12	0.9
H13	Hawthorn Blackthorn Ash English Oak Elm Elder	140 max	1.75 max					2 max	0.5 av	0.5 av	Mature	Average	Indifferent		C12	1.8

Tree Number	Common Species Name	Trunk Diameter (mm)	Height (m)	Crown Spread (m)					First Significant Branch (m)	Crown Clearance (m)	Life Stage	Physiological Condition	Structural Condition	Comments	BS5837 Category	RPA Radius (m)
				N	E	S	W	Radial								
H14	Hawthorn Blackthorn Ash English Oak Elm	140 max	1.5 max					1.25 max	0.5 av	0.5 av	Mature	Average	Indifferent		C12	1.8
H15	Hawthorn Blackthorn Elder Elm	80 max	2.5 max					1.5 max	0.5 av	0.5 av	Semi Mature to Early Mature	Average	Indifferent		C12	0.9
H16	Hawthorn Blackthorn Elm Elder	80 max	2 max					1.5 max	0.5 av	0.5 av	Early Mature	Average	Indifferent		C12	0.9
H17	Hawthorn Blackthorn Elm Elder	80 max	2 max					1.5 max	0.5 av	0.5 av	Early Mature	Average	Indifferent		C12	0.9
H18	Hawthorn Ash Blackthorn Crack Willow	75 max	1.5m max					1 max	0.5 av	0.5 av	Semi Mature	Average	Indifferent		C12	0.9
H19	Hawthorn Blackthorn Field Maple Elder	280 max	7m max					5.5 max	1 av	1.5 av	Mature	Average	Indifferent		C12	3.3
H20	Hawthorn Blackthorn Ash Elder Goat Willow Field Maple	285 max	6m max					4 max	1 av	1 av	Early Mature to Mature	Average	Poor to Indifferent		C12	3.3
H21	Hawthorn	250# max	5.5m max					3.5	1 av	1 av	Mature	Average	Indifferent		C12	3
H22	Hawthorn Hazel	2*140 max	6m max					3.75 max	1 av	1 av	Mature	Average	Indifferent		C12	2.4
H23	Hawthorn Elm	100 mx	2m av					1.5 max	0.5 av	0.5 av	Early Mature	Average	Indifferent		C12	1.2
H24	Elm, Hawthorn	120 max	2m max					2.25 max	0.5	0.5	Early Mature	Average	Indifferent		C12	1.5
H25	Hawthorn Blackthorn Field Maple Elm	90 max	2 to 3					2 max	0.5 av	0.5 av	Early Mature	Average	Indifferent		C12	1.2
H26	Hawthorn Elm Blackthorn	150 max	6m max					2.5 av	1 av	1 av	Early Mature	Average	Poor to Indifferent		C12	1.8
H27	Hawthorn Blackthorn Elm Field Maple	250 max	8.5m max					3.5 max	1 av	0.5 av	Early Mature	Average	Indifferent		C12	3

Tree Number	Common Species Name	Trunk Diameter (mm)	Height (m)	Crown Spread (m)					First Significant Branch (m)	Crown Clearance (m)	Life Stage	Physiological Condition	Structural Condition	Comments	BS5837 Category	RPA Radius (m)
				N	E	S	W	Radial								
H28	Hawthorn Blackthorn Elm Ash	100 max	2m max					2.5 max	0.5	0.5	Early Mature	Average	Indifferent		C12	1.2
H29	Hawthorn	100 max	2m max					2.5 max	0.5 av	0.5 av	Early Mature	Average	Indifferent		C12	1.2
H30	Beech Lawson Cypress Laurel Blackthorn	90# max	2.5m max					1.25 max	0.5 av	0.5 av	Early Mature	Average	Indifferent		C12	1.2

APPENDIX C

TREE PROTECTION PLAN (9646 TPP 01 Rev A)



KEY:

- Site Boundary
- 15 Tree Numbers
- Tree Canopies
- Category 'U' Trees
- Category 'A' RPA
- Category 'B' RPA
- Category 'C' RPA
- 7 Trees to be Removed
- Tree Protection Barrier
- Tree Protection Barrier (Secondary Specification)



Cited from Google Earth

REV	DATE	NOTE	Drawn	Chk'd
REVISIONS				



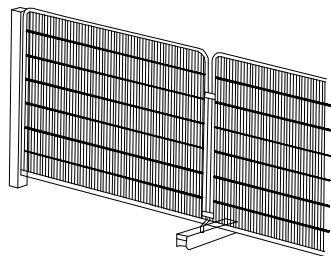
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**South Caldecotte
 Tree Protection Plan**

CLIENT
HB (South Caldecotte) Ltd

SCALE	DATE	DRAWN
Not to scale	JUL 2019	GW
DRAWING NUMBER		REVISION
9646 TPP 01 (Overview)		A

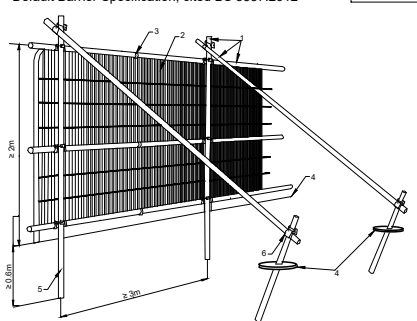
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Secondary Reduced Hedgerow Barrier Specification

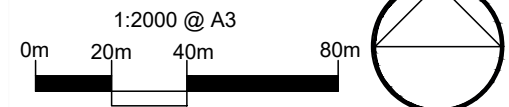
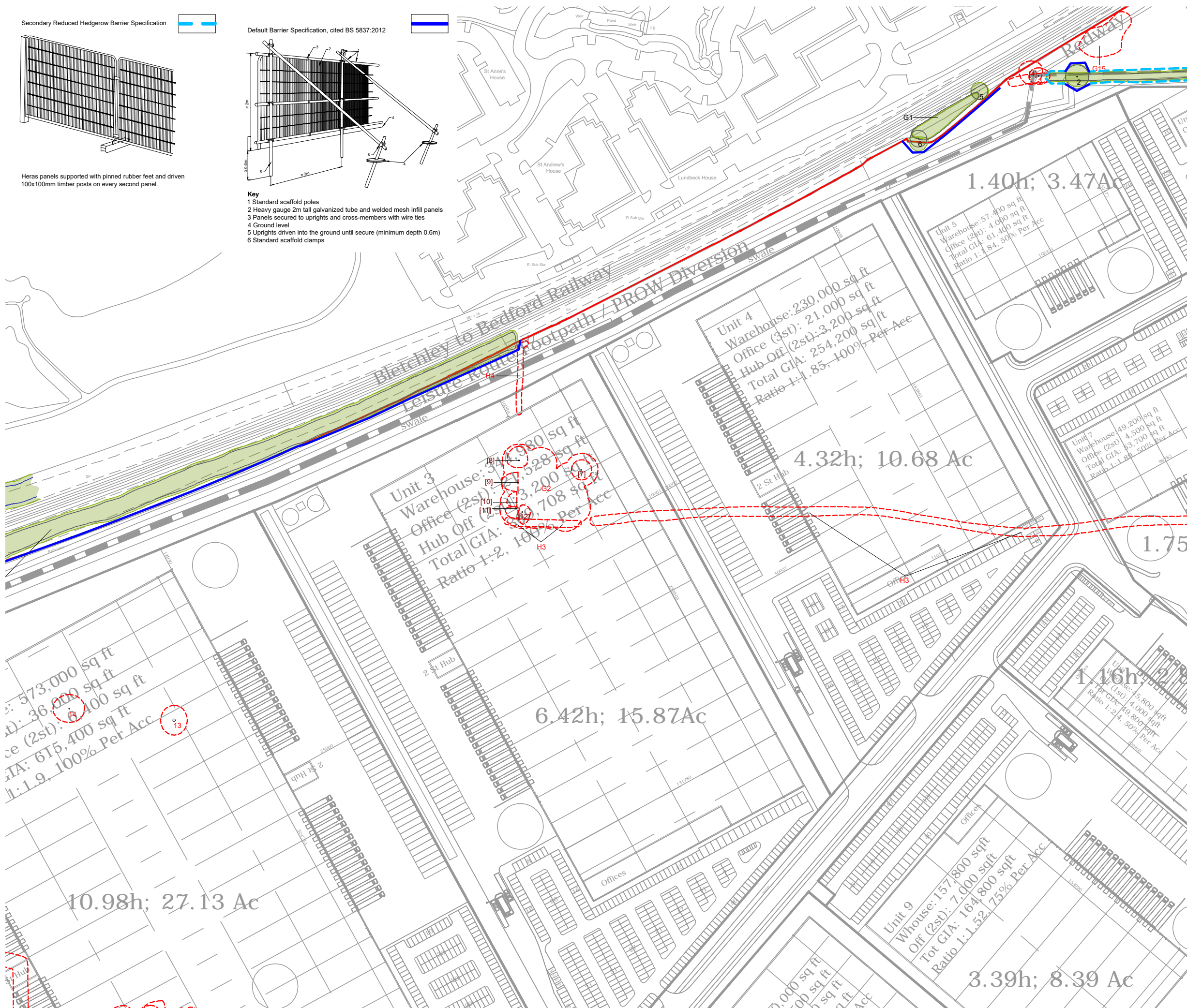


Heras panels supported with pinned rubber feet and driven 100x100mm timber posts on every second panel.

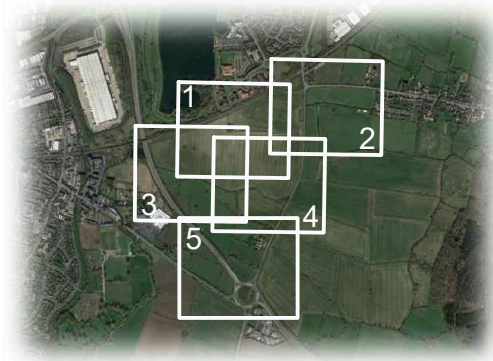
Default Barrier Specification, cited BS 5837:2012



Key
 1 Standard scaffold poles
 2 Heavy gauge 2m tall galvanized tube and welded mesh infill panels
 3 Panels secured to uprights and cross-members with wire ties
 4 Ground level
 5 Uprights driven into the ground until secure (minimum depth 0.6m)
 6 Standard scaffold clamps



- KEY:**
- Site Boundary
 - Tree Numbers
 - Tree Canopies
 - Category 'U' Trees
 - Category 'A' RPA
 - Category 'B' RPA
 - Category 'C' RPA
 - Trees to be Removed
 - Tree Protection Barrier
 - Tree Protection Barrier (Secondary Specification)



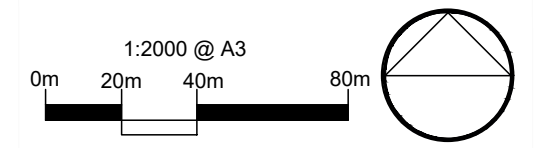
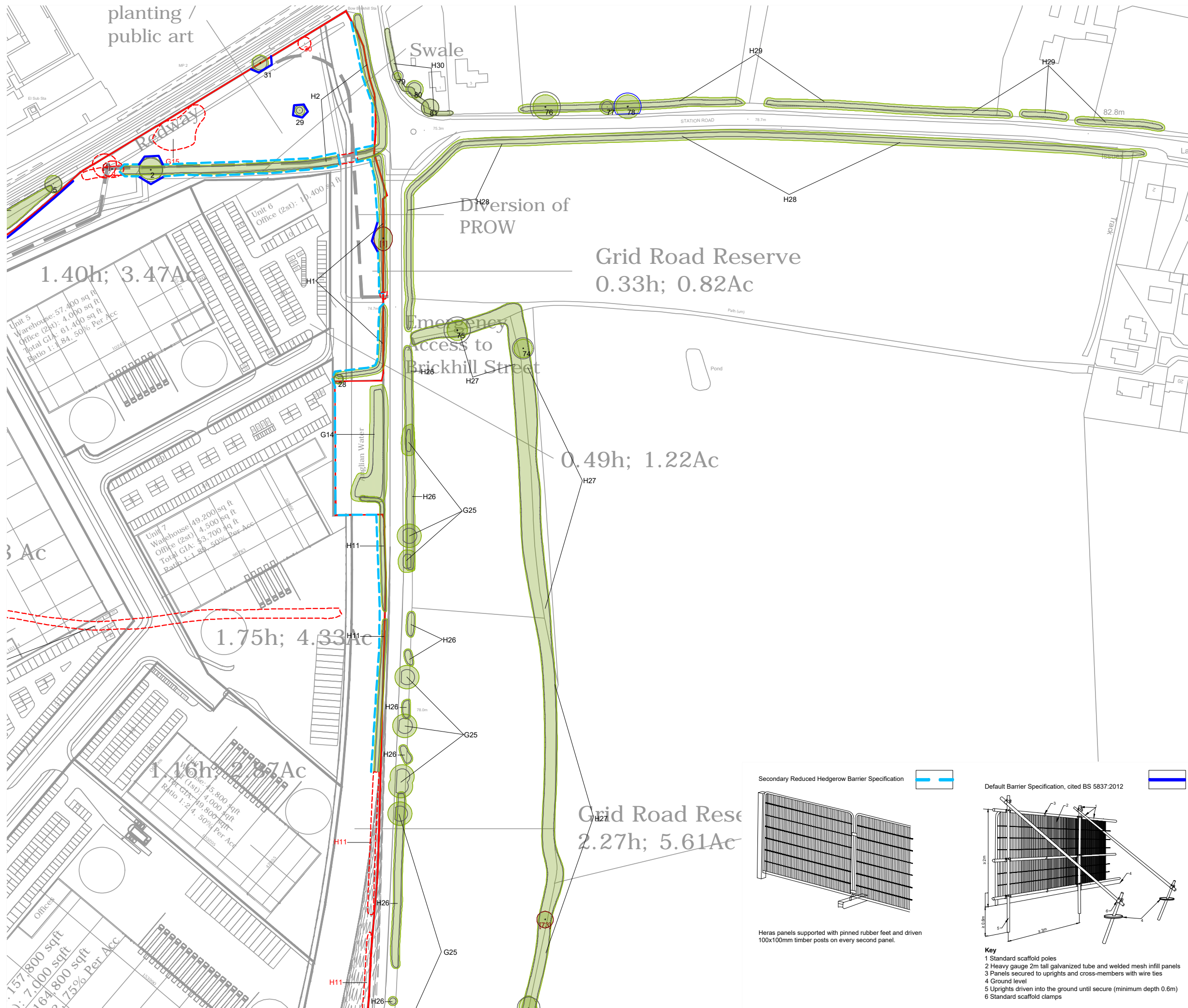
Cited from Google Earth

REV	DATE	NOTE	Drawn	Chk'd
REVISIONS				

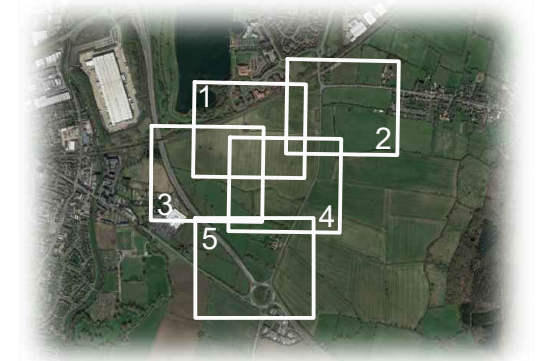


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South Caldecotte Tree Protection Plan		
CLIENT		
HB (South Caldecotte) Ltd		
SCALE	DATE	DRAWN
1:2000 @ A3	JUL 2019	GW
DRAWING NUMBER	REVISION	
9646 TPP 01 (1/5)	A	

Based on: a-16-048-01-SGP-XX-00-DR-A-1006-P5 Indicative Masterplan.dwg

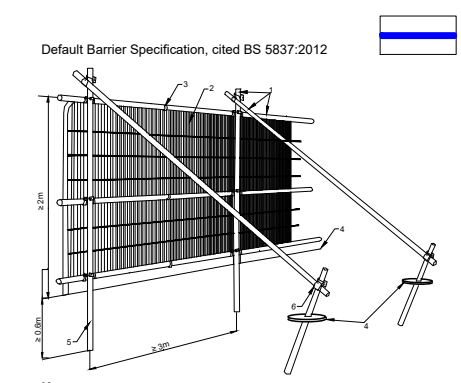
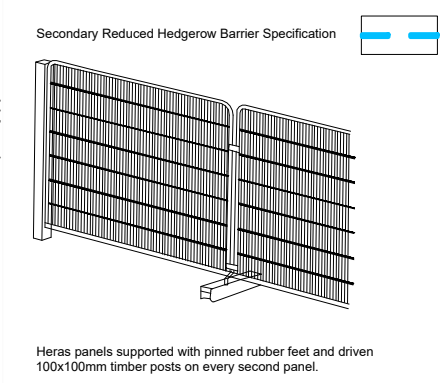


- KEY:**
- Site Boundary
 - Tree Numbers
 - Tree Canopies
 - Category 'U' Trees
 - Category 'A' RPA
 - Category 'B' RPA
 - Category 'C' RPA
 - Trees to be Removed
 - Tree Protection Barrier
 - Tree Protection Barrier (Secondary Specification)



Cited from Google Earth

REV	DATE	NOTE	Drawn	Chk'd



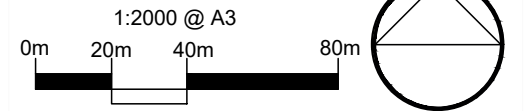
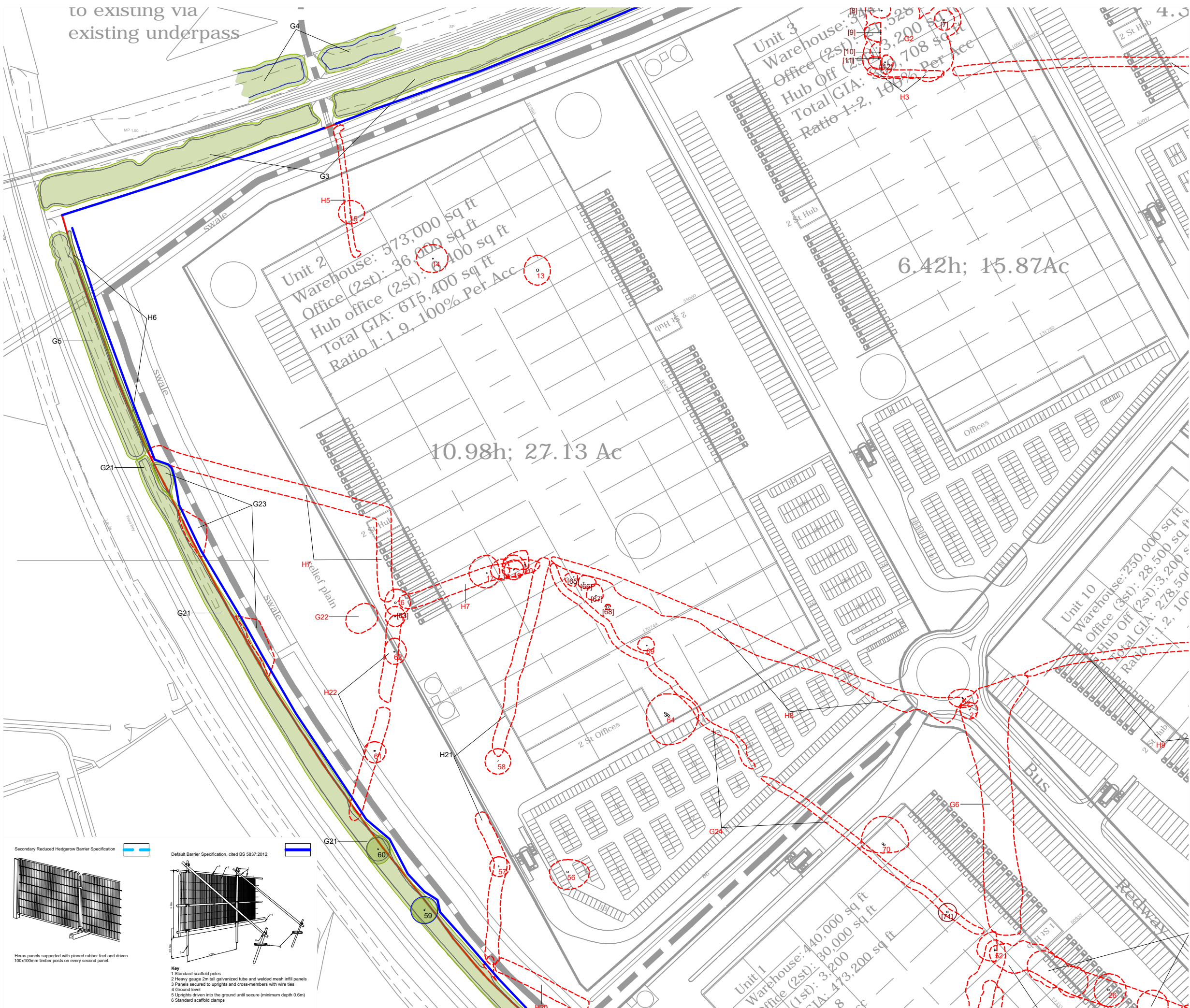
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 - 2 Heavy gauge 2m tall galvanized tube and welded mesh infill panels
 - 3 Panels secured to uprights and cross-members with wire ties
 - 4 Ground level
 - 5 Uprights driven into the ground until secure (minimum depth 0.6m)
 - 6 Standard scaffold clamps

aspect arboriculture

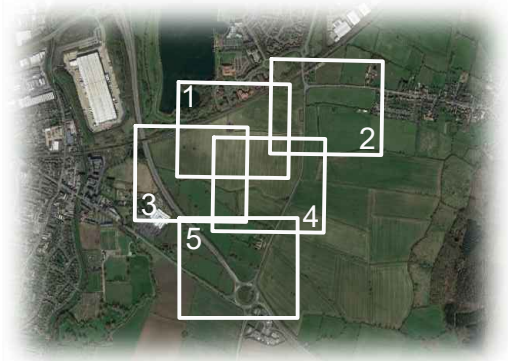
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CLIENT HB (South Caldecotte) Ltd		
SCALE 1:2000 @ A3	DATE JUL 2019	DRAWN GW
DRAWING NUMBER 9646 TPP 01 (2/5)		REVISION A

Based on: a-16-048-01-SGP-XX-00-DR-A-1006-P5 Indicative Masterplan.dwg

to existing via
existing underpass



- KEY:**
- Site Boundary
 - Tree Numbers
 - Tree Canopies
 - Category 'U' Trees
 - Category 'A' RPA
 - Category 'B' RPA
 - Category 'C' RPA
 - Trees to be Removed
 - Tree Protection Barrier
 - Tree Protection Barrier (Secondary Specification)



Cited from Google Earth

REV	DATE	NOTE	Drawn	Chk'd

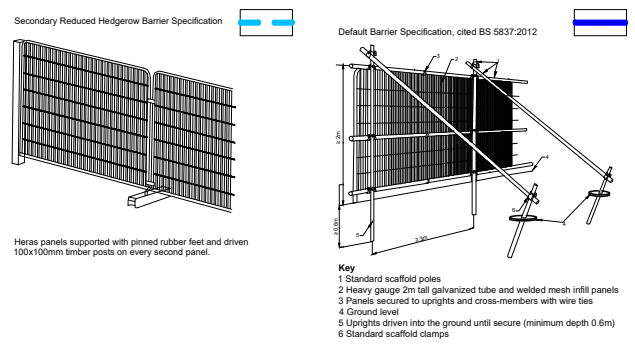


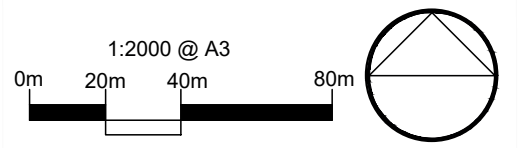
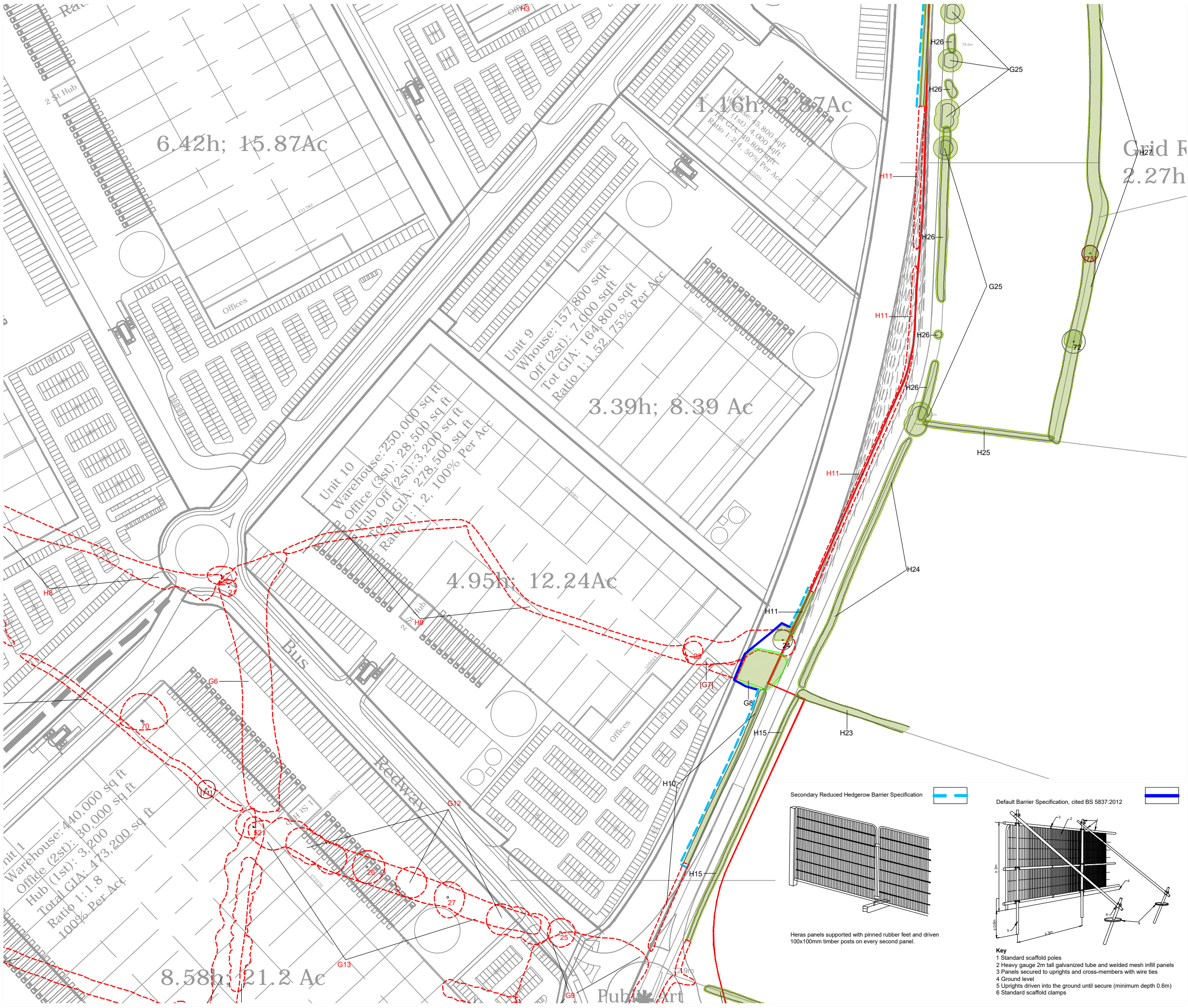
TITLE
**South Caldecotte
Tree Protection Plan**

CLIENT
HB (South Caldecotte) Ltd

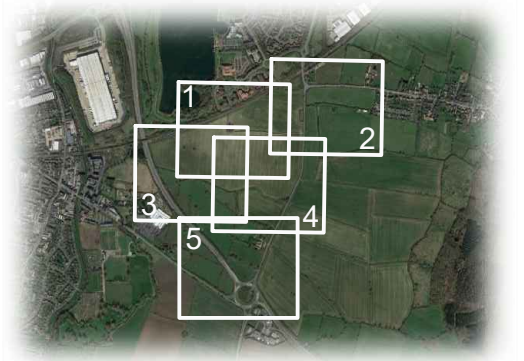
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DRAWING NUMBER	REVISION	
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Based on: a-16-048-01-SGP-XX-00-DR-A-1006-P5 Indicative Masterplan.dwg





- KEY:
- Site Boundary
 - Tree Numbers
 - Tree Canopies
 - Category 'U' Trees
 - Category 'A' RPA
 - Category 'B' RPA
 - Category 'C' RPA
 - Trees to be Removed
 - Tree Protection Barrier
 - Tree Protection Barrier (Secondary Specification)



Cited from Google Earth

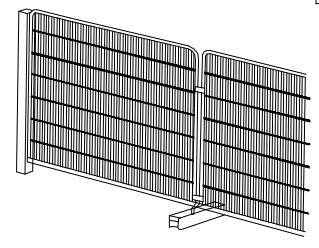
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REVISIONS				



TITLE		
South Caldecotte Tree Protection Plan		
CLIENT		
HB (South Caldecotte) Ltd		
SCALE	DATE	DRAWN
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DRAWING NUMBER	REVISION	
9646 TPP 01 (4/5)	A	

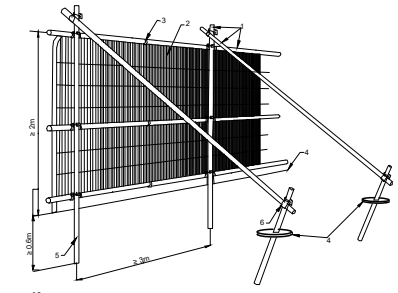
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Secondary Reduced Hedgerow Barrier Specification

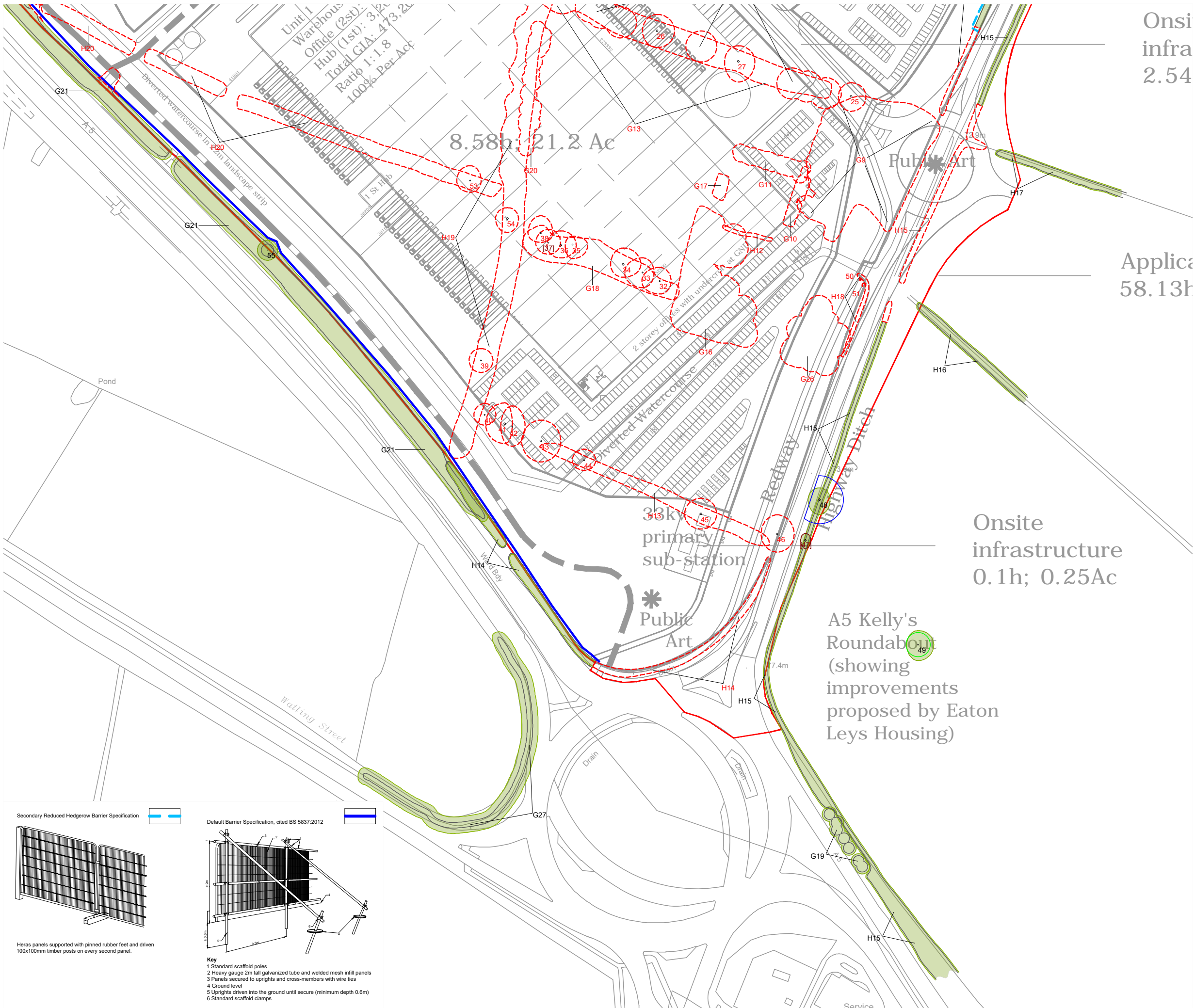


Heras panels supported with pinned rubber feet and driven 100x100mm timber posts on every second panel.

Default Barrier Specification, cited BS 5837:2012



- Key
- 1 Standard scaffold poles
 - 2 Heavy gauge 2m tall galvanized tube and welded mesh infill panels
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 - 6 Standard scaffold clamps

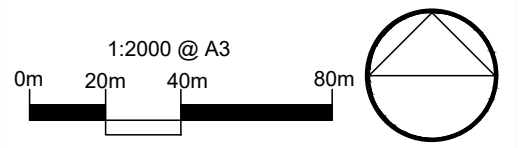


Onsite
infra
2.54h

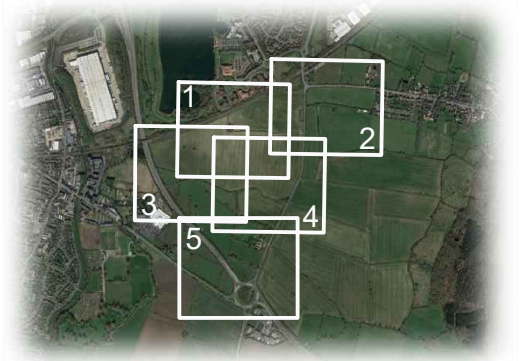
Applica
58.13h

Onsite
infrastructure
0.1h; 0.25Ac

A5 Kelly's
Roundabout
(showing
improvements
proposed by Eaton
Leys Housing)



- KEY:
- Site Boundary
 - Tree Numbers
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 - Category 'B' RPA
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 - Trees to be Removed
 - Tree Protection Barrier
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Cited from Google Earth

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REVISIONS				

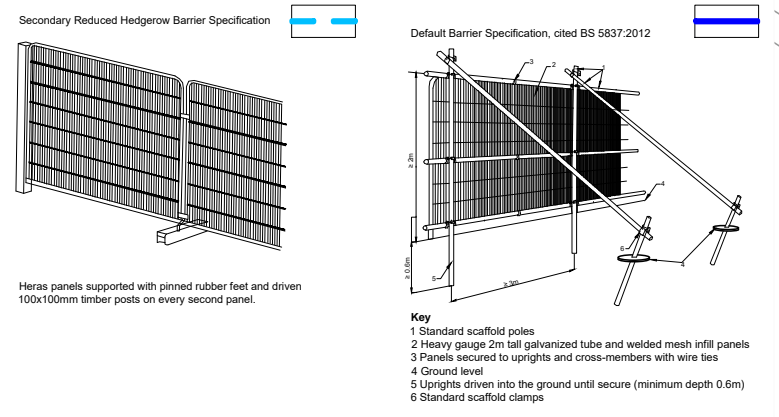
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TITLE
**South Caldecotte
Tree Protection Plan**

CLIENT
HB (South Caldecotte) Ltd

SCALE	DATE	DRAWN
1:2000 @ A3	JUL 2019	GW
DRAWING NUMBER	REVISION	
9646 TPP 01 (2/5)	A	

Based on: a-16-048-01-SGP-XX-00-DR-A-1006-P5 Indicative Masterplan.dwg



APPENDIX D

TREE SURVEY METHODOLOGY

Tree Survey Methodology

The tree survey is a form of Visual Tree Assessment undertaken during May 2018. Tree locations are identified via a topographical survey; locations of any trees excluded from the topographical survey were plotted on site. The purpose of the survey is to record information about trees on or adjacent to the site to inform design options. In keeping with clause 4.4 of BS5837: 2012 'Trees in Relation to Design, Construction and Demolition', the survey provides a record of the following parameters:

Tree Numbers: all individual trees are sequentially numbered. Groups of trees, woodlands and hedgerow are also sequentially numbered with a corresponding prefix relevant to their type e.g. G, W or H respectively; the identification of trees as woodland, groups of trees or within hedgerows is undertaken where appropriate. The identification of trees as individuals within collections has been made where it is considered sensible to make such a differentiation.

Species: listed by common name

Stem Diameter: given in millimetres and obtained by measuring single/multiple stems at 1.5m using a diameter tape in accordance with Annex C within BS5837:2012. Diameters of inaccessible trunks are estimated and provided with the suffix '#'.

Tree Heights: determined using a clinometer and measured to the nearest 500mm. Heights are estimated where specific triangulation is not achievable and by reference to measured trees nearby (provided with the suffix '#').

Crown Spreads: measured at cardinal points using a Leica Disto™ laser distance measurer. Measurements were recorded to the nearest 250mm. Inaccessible crown spreads are estimated based on measured canopies nearby and provided with the suffix '#'

Crown Clearance: The height of the first significant living branch and/or canopy (as appropriate) is recorded using a Leica Disto™ laser distance measurer to inform vertical ground clearance. Crown clearance may be higher or lower than the first significant branch. Estimated clearances are provided with the suffix '#'. Height of first significant branch will be provided where considered advantageous to make the distinction.

Life Stage – The age of trees, groups of trees, hedges and woodlands are defined as follows:

- Young (within the first 1/4th of life expectancy)
- Semi-mature (within the second 1/4th of life expectancy)
- Early Mature (within the third 1/4th of life expectancy)
- Mature (within the fourth 1/4th of life expectancy)
- Over Mature and Veteran (exceeding normal life expectancy)
- Veteran (significantly exceeding normal life expectancy)

Physiological and structural condition: physiological condition defined as follows; good, above average, average, below average, poor or dead. Structural condition is defined as: good, moderate, indifferent, poor or hazardous

Comments: further observations were recorded where necessary i.e. details regarding defects, preliminary management recommendations, presence of pest/disease and perceived significance.

BS5837 Category: pursuant to BS5837:2012 section 4.5 and cascade chart for tree quality assessment (refer to reproduced Table 1 overleaf). Trees qualifying under a given category (A-C and U) and any appropriate subheading (1-3) are considered to fall within the scope of that category's definition.

Estimated Remaining Contribution. Described` as a guideline only and in terms of years: <10, 10+, 20+ and 40+ relevant to category U, C, B and A respectively. This information is not provided on the tree schedule to avoid conclusions based upon 'life expectancy'.

Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)		
Trees unsuitable for retention (see Note)			
<p>Category U</p> <p>Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years</p>	<ul style="list-style-type: none"> Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality <p><i>NOTE</i> Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</p>		
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation
Trees to be considered for retention			
<p>Category A</p> <p>Trees of high quality with an estimated remaining life expectancy of at least 40 years</p>	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)
<p>Category B</p> <p>Trees of moderate quality with an estimated remaining life expectancy of at least 20 years</p>	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value
<p>Category C</p> <p>Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm</p>	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value

landscape planning • ecology • arboriculture

aspect

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