ARBORICULTURAL IMPACT ASSESSMENT (OUTLINE)

Banbury Logistics Park,
Banbury

May 2022

Barton Hyett Associates
Arboricultural Consultants

Summary table		
Site Name:	Banbury Logistics Park	
Project reference:	4742	
Site Address:	Land east of Junction J.11, M40, Banbury	
Nearest Postcode:	OX17 2BS	
Central Grid reference:	SP 47648 42177	
Local Planning Authority:	Cherwell District Council (Main part of site) and West Northamptonshire Council (Far east portion of the site).	
Relevant planning policies:	Cherwell District Council - Cherwell Local Plan 2011-2031: Policy ESD 10: Protection and Enhancement of Biodiversity and the Natural Environment	
Statutory Controls:	**Tree Preservation Order**	**Conservation Area**
	TPO Reference: 025/1990: T4, T6, T8, T9, T10, T15, T17, T18, T19, T24, T26, T28, G3, G4, G5 (Part), G7, G10, G11 and 027/2021: T35, T38, T49, T50, G24 (part)	No
Soil Type: (Source: BGS online soils map © NERC 2022)	**Superficial/Drift**	**Bedrock**
	No superficial deposits recorded	Dyrham Formation - Siltstone and mudstone, interbedded
Topographical Survey:	Drawing No: MG2278 (sheets 1 - 5), dated: November 2021	
Notes:	None	
Report author:	Richard Hyett MSc, BSc (Hons), MICFor, MArborA	
Date of issue:	17th May 2022	

Arboricultural ASSOCIATION
Professional Member
PR3525

Institute of Chartered Foresters
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REPORT CONTENTS:

1. INTRODUCTION

1.1. I am Richard Hyett. I am a chartered arboriculturist and professional member of the Arboricultural Association with 17 years of experience in the arboricultural industry.

1.2. Barton Hyett Associates Ltd have been instructed by Greystoke CB to survey trees located to the east of Junction 11 of the M40 at Banbury ('the site') in accordance with the recommendations of British Standard 5837:2012 '*Trees in relation to design, demolition and construction - recommendations*'.

1.3. The scope of the instruction was to inspect trees relevant to an outline planning application for development and provide written advice on how they inform feasibility and design options for the site. The instruction also required an assessment of the potential impact (the Arboricultural Impact Assessment - Outline) of the proposed development on the site's arboricultural resource to be undertaken.

2. SITE DESCRIPTION

2.1. The site measures 73.07ha in area and is made up of agricultural land used for grazing cattle within field boundaries defined by a mixture of hedgerows, fences and ditches and field gates allowing vehicular access throughout the site. Close to the north of the site is the farmyard, complete with out-buildings.

2.2. The town of Daventry lies to the north-east of the site, approximately 14 miles away. The town of Banbury is located approximately 1.5 miles south-west of the site.

2.3. The surrounding area is largely agricultural land with areas of woodland and outlying rural dwellings with the A422 lying to the south of the site. The site slopes southwards and undulates throughout, with the average mean height above sea level varying between 115m at the north to 109m at the south.

2.4. There is an unnamed road, which leads into the site from the A361 and enters the farmyard on the western side.

2.5. There are several footpaths passing through the site and a mix of different size overhead power lines running across the land.

3. TREE SURVEY FINDINGS

3.1. A total of 189 features were surveyed (79 trees, 44 group features, 64 hedgerows and 2 woodlands). These are summarised in terms of their quality in accordance with the recommendations of BS5837 below, and shown in more detail on the Tree Survey and Constraints Plan (**Section 2**) and within the Tree Survey Schedule (**Section 3**).

	Total	A - High quality trees whose retention is most desirable.	B - Moderate quality trees whose retention is desirable.	C - Low quality trees which could be retained but should not significantly constrain the proposal.	U - Very poor quality trees that should be removed unless they have high conservation value.
Trees	**79**	23	41	12	3
Groups	**44**	9	24	11	-
Hedgerows	**64**	-	64	4	-
Woodlands	**2**	2	-	-	-
Total	**189**	**34**	**129**	**27**	**3**

Table 1: Summary of arboricultural features of each BS5837 quality category

4. KEY ARBORICULTURAL FEATURES

4.1. The site itself contains numerous trees, with the most significant trees being located within the site interior and within the existing hedgerows.

4.2. Of the individual trees surveyed, fifteen were identified as veteran trees. along with 3 tree groups. The majority of these trees are large English oaks. These trees have been identified as veteran trees by virtue of their large stem girths (as per Fig. 1.3 in Lonsdale, 2013)[1]. They have also been assessed as being veteran trees using the characteristic features found on veteran trees (in para. 2.1.1 in Read, 2000)[2]. All veteran trees were assigned to quality category A (high-quality) or category B (moderate-quality) dependent on their anticipated life expectancy.

[1] Lonsdale, D. (ed.) (2013). Ancient and other veteran trees: further guidance on management. London: The Tree Council

[2]Read, H. 2000. Veteran Trees: A guide to good management. London: English Nature.

4.3. The National Planning Policy Framework 2021 (NPPF) states in paragraph 180 that:

'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'.

4.4. Potential detrimental impacts from development upon veteran trees might include, but are not limited to, damage to roots and understorey fauna, damage to or compaction of soil around the tree roots, and changes to the water table or drainage within the trees rooting environment.

4.5. The Forestry Commission and Natural England standing advice within the Planning Policy Guidance (PPG) '*Ancient woodland, ancient trees and veteran trees: protecting them from development*' (https://www.gov.uk/guidance/ancient-woodland-and-veteran-trees-protection-surveys-licences) is a material planning consideration. In reaching a planning decision, the LPA should assess the potential impacts, and avoid, mitigate or compensate for identified impacts.

4.6. A key method of mitigation is the use of a 'buffer zone'. In accordance with the standing advice, an additional veteran tree buffer with a radius of 15 times the stem diameter has been applied to the identified veteran trees and shown as an orange dashed circle around each relevant tree on the Tree Survey and Constraints Plan (**Section 2**).

4.7. The standing advice also states that the area within buffer zones should consist of semi-natural habitats such as margin planting or a mix of scrub, grassland, heathland and wetland planting (dependent on the nature of the site). The area within a buffer zone should be part of the green infrastructure of the area and contribute to wider ecological networks, and only be planted with local and appropriate native species. Access within a buffer should be appropriate, and can be allowed if the habitat is not harmed by trampling. Sustainable drainage schemes should be avoided unless they respect the root protection area and any change to the water table does not adversely affect a veteran tree. The prosed parameter plan has adopted an appropriate approach through the provision of wide and extensive retained green corridors through the site.

4.8. A search of Natural England's Ancient Woodland Inventory within DEFRA's online mapping resource (MAGIC) has revealed that there are no areas of Ancient Semi Natural Woodland (ASNW) associated to the site.

4.9. A number of high-quality (category A) trees, groups and woodlands have been recorded, these being T2, T4, T12, T17, T18, T20, T22, T24, T28, T35, T38, T42, T43, T48, T50, T52, T56, T59, T71, T72, T73, T77, G7, G11, G12, G23, G28, G32, G37, G38, G40, W1 and W2.

4.10. A search undertaken with the Local Planning Authority has revealed two Tree Preservation Orders (TPO's) protect trees that are associated to the site. The Orders are, TPO No. 25 of 1990 and TPO No. 21 of 2021. A summary of which trees and groups are protected by the Orders is provided in table form below (Table 2). All of the trees protected by TPO are also identified on the Tree Survey and Constraints Plan (**Section 2**).

TPO Reference:	Tree Survey Tree/Group Reference:
TPO No. 25 of 1990	T4, T6, T8, T9, T10, T15, T17, T18, T19, T24, T26, T28, G3, G4, G5 (Part), G7, G10, G11
TPO No. 27 of 2021	T35, T38, T49, T50, G24 (part)

Table 2: Summary of Statutory protection in place on identified trees

4.11. The constraints posed by the identified arboricultural features, as detailed above, have fed into the parameter planning process and the preparation of the Illustrative Site Layout.

5. PROPOSED DEVELOPMENT

5.1. It is proposed to develop the site to provide employment floorspace. The description of the proposed development is:

'Outline planning application for the construction of up To 140,000 sqm of Employment floorspace (use class B8 with ancillary offices and facilities) and servicing and infrastructure including new site accesses, internal roads and footpaths, landscaping including earthworks to create development platforms and bunds, drainage features and other associated works including demolition of the existing farmhouse. all matters of detail reserved'.

5.2. A Parameter Plan has been prepared by Chetwoods (Drwg ref: 5166-CA-00-00-DR-A-00001-P10). This plan responds to the key arboricultural constraints identified. It is this plan for which outline planning consent is sought.

5.3. To assist in the assessment of the proposed development an Illustrative Site Layout has been produced by Chetwoods (Drwg: 5166/CA/00/00/DR/A/05001 - P8). The Illustrative Site Layout demonstrates one way the site could be developed within the parameters set out on the Parameter Plan. The following impact assessment provides a preliminary assessment of the anticipated arboricultural impacts and is based on the current site conditions and the layout details shown on the Illustrative Site Layout.

6. IMPACT ASSESSMENT

6.1. The AIA considers the effects of any tree loss required to implement the indicative site layout design as well as any reasonably foreseeable potentially damaging activities proposed in the vicinity of retained trees. This is undertaken with reference to BS5837:2012 and considering the outline nature of the proposals. This can include tree removal to facilitate design, demolition of buildings and removal of existing hard surfacing, soil compaction in close proximity to trees and direct impact damage to canopy and roots of retained trees from construction activities. A summary of anticipated impacts resulting from the proposed development is provided below.

Trees anticipated to be removed

6.2. Of the 125 individual trees, groups of trees and woodlands identified only six moderate quality (category B) and 3 low-quality (category C) items will likely need to be removed in their entirety for the development shown on the Illustrative Site Layout to be implemented. The partial removal of a tree moderate quality tree group (G14) will also likely be required. These removals are summarised by quality category in the table below and shown on the Tree Retention and Removal Plan in **Section 3.**

6.3. **All the high quality (Category A), Veteran trees and TPO'd trees can be retained and adequately protected during construction activities to sustain their health and longevity.**

	Total	A - High quality trees whose retention is most desirable.	B - Moderate quality trees whose retention is desirable.	C - Low quality trees which could be retained but should not significantly constrain the proposal.
Trees	**79**	-	T7, T27, T37, T41	T7
Groups	**44**	-	G2, G9, (G14 - part)	G1, G8
Woodland	**2**	-	-	-
Total likely to be removed	**9**	**-**	**6**	**3**

Table 3: summary of proposed removals of each BS5837 quality category

6.4. The anticipated tree losses have been minimised with limited wider impact on the tree-scape or canopy cover of the the area. Due to the small number and the quality of the of trees likely to be removed, an overall enhancement of the arboricultural resource at the site could be provided.

6.5. The significance of this loss must be considered in the context of the scale pf the site and when considering the benefits that the potential new tree planting can deliver in terms of species diversity, longevity, ecological value and aesthetic contribution (particularly within the green corridors and the biodiversity improvement area) .

6.6. Despite the likely tree loss required the overwhelming majority of trees associated to the site (including the most significant and high quality trees) will be retained. The trees with the highest public visual amenity value and potential to contribute to the appearance and setting of the development when viewed from the adjacent public highways, will be retained.

Hedgerows anticipated to be removed

6.7. In total, approximately 1200 linear metres of hedgerow (1000m of Category B hedgerow and 200m of Category C hedgerow) will likely need to be removed for the development shown on the Illustrative Site Layout to be implemented. The hedgerow removal is summarised below and shown on the Tree Retention and Removal Plan in **Section 3.**

- *Moderate quality - Category B:* H1 (part), H4 (part), H5 (part), H11, H17 (part), H19 (part), H23 (part) H25 (part), H26 (part), H27, H28, H29, H31 (part) H33
- L*ow quality - Category:* H10, H16, H22

6.8. The majority of hedgerows to be removed are moderate in quality however, the vast majority of these hedgerows have been intensively managed in the past using mechanical flail. Many hedgerows will be retained within green corridors. For example, H17, H18 and H20 are retained within the main east/west green corridor. The most significant hedgerows, to the east of the main development area (H32, H34 and H15), will be retained. Mitigation planting can be delivered in the form of hedgerow and woodland group planting within the biodiversity improvement area. The quality of the retained hedgerows could be improved through changes in their management (i.e. to improve their structure, longevity and habitat value) this could also include supplementary planting to improve species diversity.

Anticipated Impacts Upon Retained Trees:

6.9. Once the anticipated tree removals have taken place, there is still potential for the retained trees to be adversely impacted during the construction phase of the project. To ensure these impacts are kept to an acceptable level all construction works should adhere to recommendations within this report and the subsequent detailed Arboricultural Impact Assessment.

6.10. The application is outline in nature with all matters of detail to be reserved. There will be some further opportunity and flexibility at the Reserved Matters stage to give further consideration to precise siting of proposed development, within the approved parameters, to avoid/minimise impacts on retained trees. However, it is important that any detailed layout design respects the arboricultural constraints identified and that retained trees are appropriately integrated into the proposed development.

6.11. Based on the current Illustrative Site Layout, no impacts upon retained trees are envisaged.

6.12. The site has variation in existing ground levels across its extent and this will require remodelling as part of the proposed development. However, where trees are located within the wide green corridors no ground level changes are required. All services and utilities can be located within the internal road network and out of the RPAs of retained trees. The proposed surface water drainage features have also been designed to respect the RPAs of retained trees.

6.13. There is adequate space within the site to allow the site compound, storage areas and contractor parking to be situated with no impact to retained trees. As a rule, these should be located away from tree canopies and RPAs. The project Arboriculturist will offer guidance as needed at the appropriate point in the detailed design and planning stages.

7. TREE PROTECTION MEASURES

7.1. Tree protection fencing will be required to protect retained trees during the site clearance, groundworks and construction phases. Given the location of the trees to be retained, their successful protection is achievable. However, the outline nature of the proposals do not facitllaite the production of the detailed tree protection plan at this stage. Sufficient information has been provided to allow a decision on the principle of the proposed development to be made. A detailed and informed tree protection plan can only be provided at the Reserved Matters planning stage.

7.2. This approach is in line with Figure 1 of BS5837:2012 which advises that detailed/technical design of tree protection and arboricultural methodologies should be resolved and finalised following on from the approval of the feasibility of a scheme by the Local Planning Authority.

8. ENHANCEMENTS

8.1. A series of potential enhancements to the arboricultural resource of the site could be provided through the delivery of the development. These are summarised in the non-exhaustive list below:

- Appropriate management of the veteran trees and green corridors to improve biodiversity value and longevity
- Extensive new tree planting within the biodiversity improvement area in the east of the site using appropriate, ecologically valuable tree and shrub species
- New tree planting along the western boundary of the site
- Delivery of appropriate high quality new amenity tree planting within the interior of the site.

9. HEADS OF TERMS FOR AN ARBORICULTURAL METHOD STATEMENT (AMS)

9.1. BS5837:2012 (Figure 1) recommends that detailed/technical design of tree protection and arboricultural methodologies should be resolved and finalised following on from the approval of the feasibility of a scheme by the Local Planning Authority.

9.2. Annex B and Table B.1 of BS5837:2012, an informative, advises that Arboricultural Method Statement Heads of Terms are a sufficient level of information in order to deliver tree-related information into the planning system. The table also advises that a *detailed* Arboricultural Impact Assessment and Arboricultural Method Statement might reasonably be required as part of a reserved matters submission.

9.3. A brief summary of the principles of tree protection on development sites is included in **Section 7**.

9.4. A draft, 'Heads of Terms' for an Arboricultural Method Statement is set out below but will need to be refined at the reserved matters stage:

- Project arboriculturist – schedule of monitoring and supervision to be agreed with the applicant and LPA
- Pre-commencement site meeting - to be attended by the project arboriculturist, client, site manager and other relevant parties. Project arboriculturist to ensure that all parties have copies of the tree protection plan and this report.
- Tree and hedgerow removals and facilitation pruning - as shown on the final (approved) Tree Retention and Removal Plan (TRR)
- Erection of tree protection barriers and temporary ground protection as may be required as per the final, approved Tree Protection Plan (TPP)
- Site preparation and ground works - no access for any machinery within the fenced tree protection areas.
- Ground works - all tree protection measures shall remain in situ and intact for the duration of the construction phase
- Main construction phase - all tree protection measures shall remain in situ and intact for the duration of the construction phase. Any site supervision and monitoring to be carried out as specified and approved
- Removal of tree protection barriers - only to occur following approval of site conditions by the project arboriculturist.
- Final landscaping including tree planting.

10. CONCLUSIONS AND RECOMMENDATIONS

10.1. The proposed development of the site in the form indicated on the Illustrative Site Layout and within the extent of the development parcels defined on the Parameters Plan, is feasible from an arboricultural perspective. All the high quality (Category A), Veteran trees and TPO'd trees can be retained and adequately protected during construction activities to sustain their health and longevity.

10.2. All likely tree losses can be mitigated through diverse tree and shrub planting. New trees are likely to have an extended useful life expectancy compared to some of those which will likely be removed. In addition, enhancement planting beyond that required to mitigate the losses could be provided.

10.3. A further Arboricultural Impact Assessment (detailed) as well an Arboricultural Method Statement and finalised Tree Protection Plan will need to be produced. Once the feasibility of a scheme has been agreed by the Local Planning Authority at the outline planning stage, these details can be secured through the reserved matters process.

10.4. On the basis that the recommendations and advice contained within this report are adhered to, and subject to detailed design, the proposed development of the site is, in my opinion, acceptable from an arboricultural perspective.

[redacted]

Richard Hyett
MSc, BSc (Hons), MICFor, MArborA
Chartered Arboriculturist
Director

Ref	Species	Height (m)	Life Stage	RPA Radius (m)	RPA (m2)
T1	Ash (Common)	9	M	6.7	142
T2	Oak (English)	17	M	10.8	366
T3	Ash (Common)	5	M	7.2	163
T4	Oak (English)	19	M	11	383
T5	Oak (English)	5	EM	2.6	22
T6	Oak (English)	18	M	12.8	518
T7	Ash (Common)	9	EM	5.5	96
T8	Ash (Common)	15	M	9.6	290
T9	Ash (Common)	18	M	10.8	366
T10	Ash (Common)	18	M	8.4	222
T11	Ash (Common)	18	M	10.7	358
T12	Oak (English)	14	M	14.4	651
T13	Oak (English)	14	M	11.4	408
T14	Oak (English)	14	M	9	254
T15	Oak (English)	14	M	10.2	327
T16	Oak (English)	8	EM	3.6	41
T17	Oak (English)	16.5	M	14.4	651
T18	Oak (English)	15.5	M	7.8	191
T19	Oak (English)	15	M	10.8	366
T20	Oak (English)	18	M	14.4	651
T21	Sycamore	13	EM	5.4	92
T22	Oak (English)	15	M	8.4	222
T23	Oak (English)	9	M	12	452
T24	Oak (English)	19	M	13.2	547
T25	Ash (Common)	16	M	9	254
T26	Ash (Common)	11.5	LM	14.4	651
T27	Ash (Common)	13	EM	7.8	191
T28	Oak (English)	18	M	10.2	327
T29	Oak (English)	8	EM	7.2	163
T30	Ash (Common)	8	M	7	152
T31	Oak (English)	17	M	9.6	290
T34	Ash (Common)	12.5	M	10.8	366
T33	Ash (Common)	7	EM	4.2	55
T32	Ash (Common)	13	M	12	452
T35	Oak (English)	13.5	M	13.2	547
T36	Ash (Common)	10	EM	5	80
T37	Ash (Common)	13.5	EM	6.8	147
T38	Ash (Common)	19	M	8.4	222
T39	Oak (English)	7.5	M	10.8	366
T40	Elder	3.5	M	2.4	18
T41	Ash (Common)	14	LM	7.2	163
T42	Oak (English)	16.5	M	12	452
T43	Oak (English)	19	M	14.4	651
T44	Ash (Common)	11.5	M	7.2	163
T45	Ash (Common)	17	M	12	452
T46	Ash (Common)	12	M	6.4	127
T47	Cypress (Leyland)	7	EM	3.6	41
T48	Oak (English)	13	M	9.6	290
T49	Ash (Common)	12	M	7	152
T50	Oak (English)	15.5	M	15	707
T51	Ash (Common)	6.5	EM	3.3	35
T52	Oak (English)	12	M	12.6	499
T53	Ash (Common)	12	M	7.2	163
T54	Oak (English)	4	EM	5.8	104
T55	Oak (English)	14	M	9.6	290
T56	Oak (English)	15	M	9.1	261
T57	Ash (Common)	14	EM	6.6	137
T58	Ash (Common)	16	M	10.2	327
T59	Oak (English)	15	M	15	707
T60	Oak (English)	15	M	10.8	366
T61	Sycamore	11	EM	5.4	92
T63	Ash (Common)	17	M	9.6	290
T64	Oak (English)	16	M	12	452
T66	Ash (Common)	15	EM	7.8	191
T65	Oak (English)	13	M	9	254
T67	Ash (Common)	16	M	8.4	222
T68	Ash (Common)	16	M	10.8	366
T69	Ash (Common)	5	M	9.6	290
T70	Ash (Common)	18	M	15	707
T71	Oak (English)	15	M	10.8	366
T72	Oak (English)	18	M	14.4	651
T73	Oak (English)	15	M	10.8	366
T74	Ash (Common)	12	M	6	113
T74	Ash (Common)	14	M	15	707
T75	Ash (Common)	18	M	11.4	408
T76	Ash (Common)	18	M	11.4	408
T77	Oak (English)	17	M	13.8	598
T78	Ash (Common)	15	M	15	707
T79	Ash (Common)	15	M	7.2	163
G1	Hawthorn	2-5	EM	1	3
G2	Ash, Cypress, Blackthorn, spruce, Holly	3-9	EM	3.6	41
G3	Ash (common)	15	M	6	113
G4	Ash (common)	15	M	6	113
G5	Willow, Ash, Hawthorn	2-17	M	12	452
G6	Ash, Blackthorn, Hawthorn	4-15	EM	6	113
G7	Oak, Ash	15-19	M	12	452
G8	Cypress, Blackthorn, Ash, Elder	2-11	M	4.8	72
G9	Pear, purple plum	8-9	M	4.8	72
G10	Ash (common)	15-17	M	7.8	191
G11	Oak	17-18	M	10.2	327
G12	Ash, Oak	17	M	9.6	290
G13	Willow, Ash	5-14	M	6	113
G14	Oak, Ash, Field maple, Hawthorn, Spindle, Blackthorn, Dogwood	2-12	EM	4.2	55
G15	Plum	7	M	4.8	72
G16	Hawthorn, Willow	2-14	M	6	113
G17	Hawthorn	5-6	M	6.5	132
G18	Ash (common)	12	M	12	452
G19	Ash (common)	11-12	M	10.8	366
G20	Ash (common)	10	M	12	452
G21	Ash (common)	14-16	M	12	452
G22	Ash (common)	14	M	9.6	290
G23	Oak (English)	18-19	M	13.2	547
G24	Oak	12-14	M	9	254
G25	Hawthorn	6-7	M	3.2	33
G26	Elm, Hawthorn	6-8	EM	2.7	23
G27	Ash, Field maple	6	EM	2.4	18
G28	Oak, Hawthorn	17-19	M	9	254
G29	Hawthorn	4-9	M	3	28
G30	Hawthorn	5-6	M	3.6	41
G31	Hawthorn, Cherry, Ash	4-8	EM	3	28
G32	Oak, Ash, Hawthorn, Cherry	4-19	M	12	452
G33	Ash, Oak, cherry, Field maple, Hawthorn	3-9	EM	3.6	41
G34	Field maple, Cherry, Hawthorn, Ash, Oak	4-8	EM	3.6	41
G35	Ash	14	M	8.4	222
G36	Oak, ash, sycamore, sweet chestnut, hawthorn, cypress, box, laurel	3-17	M	12	452
G42	Ash, hawthorn, elder	14	M	9.6	290
G37	Oak, ash, larch	5-15	M	9.6	290
G38	Ash	18	M	13.2	547
G39	Ash	12	M	6	113
G40	Oak, hawthorn	19	M	13.2	547
G41	Horse chestnut, elder	9	M	10.8	366
G42	Ash, oak, elm, hawthorn, blackthorn, laurel	3-16	M	9.6	290
G44	Beech, hawthorn, elder, cypress, laurel	5-10	SM	4.8	72
W1	Ash; Oak; Hawthorn; Elder; Spruce; Elm; Cypress	2-20	M	9.6	-
W2	Scots pine; Holm oak; Oak; Holly; Sycamore; Ash; Hawthorn	4-19	M	9.6	-
H1	Hawthorn; Dogwood; Elder	2.5	EM	1.3	-
H2	Hawthorn; Blackthorn	2.5	M	1.8	-
H3	Hawthorn; Blackthorn; Elder	2.5	M	1.8	-
H4	Blackthorn; Hawthorn	2.5	M	1.8	-
H5	Elder; Hawthorn; Rose; Blackthorn	2.5	M	1.8	-
H6	Blackthorn; Hawthorn; Pear	5.5	M	3	-
H7	Hawthorn; Blackthorn	6	M	3	-
H8	Blackthorn; Hawthorn; Ash	5	M	3	-
H9	Blackthorn; Elder; Hawthorn	2.5	EM	1.3	-
H10	Blackthorn; Elder	2.5	EM	1.3	-
H11	Elder; Hawthorn; Blackthorn; Elm; Field maple; Ash	2.5	EM	1.3	-
H12	Hawthorn	2.5	M	1.3	-
H13	Hawthorn; Blackthorn; Elder	3	M	1.3	-
H14	Hawthorn; Blackthorn	2.5	M	1.3	-
H15	Blackthorn; Hawthorn; Ash	2.5	M	1.3	-
H16	Blackthorn; Hawthorn	2	M	1.3	-
H17	Hawthorn; Blackthorn	2.5	M	1.3	-
H18	Blackthorn; Hawthorn	2	M	1.3	-
H19	Hawthorn; Blackthorn	3	M	1.3	-
H20	Elm; Blackthorn; Hawthorn; Elder	2	M	1.3	-
H21	Hawthorn; ash; Blackthorn	2.5	M	1.3	-
H22	Hawthorn	3	M	1	-
H23	Dogwood; Hawthorn; Blackthorn	2.5	M	1.3	-
H24	Ash; Hawthorn; Blackthorn; oak; Dogwood	3	EM	1.3	-
H25	Hawthorn; Blackthorn; Elder; Ash	2.5	M	1.3	-
H26	Hawthorn; Elm; Rose; Elder; Ash	2.5	M	1.3	-
H27	Blackthorn; Elm; Hawthorn	3	M	1.5	-
H28	Hawthorn; Elm; Elder	25	M	1.8	-
H29	Hawthorn	2.5	M	1.8	-
H30	Blackthorn; Hawthorn; Ash	2.5	M	1.3	-
H31	Hawthorn; Blackthorn; Elder; Ash; Elm	3.5	M	1.3	-
H32	Privet; Hawthorn; Elm; Blackthorn	4.5	M	1.8	-
H33	Elm; Willow; Hawthorn	5	M	1.8	-
H34	Ash; Elm; Hawthorn; Blackthorn; cherry; Gorse	3	M	1.3	-
H35	Elm; Hawthorn; Blackthorn	2.5	M	1.3	-
H36	Hawthorn	2.5	M	1.3	-
H37	Hawthorn; Rose; Elder	2.5	M	1.5	-
H38	Hawthorn; Elder	2.5	M	1.5	-
H39	Hawthorn	5.5	M	2.4	-
H40	Hawthorn; Elder	2.5	M	1.3	-
H41	Hawthorn; Elm	2.5	M	1.8	-
H42	Hawthorn	2.5	M	1.3	-
H43	Hawthorn	2.5	M	1.1	-
H44	Blackthorn	3	M	1	-
H45	Hawthorn; elder	2.5	M	1.1	-
H46	Hawthorn; elder; blackthorn	2.5	M	1.1	-
H47	Hawthorn; elder; blackthorn	2.5	M	0.8	-
H48	Hawthorn; elder	2.5	M	1.1	-
H49	Hawthorn; elder	2.5	M	1.1	-
H50	Hawthorn; ash	5.5	M	1.3	-
H51	Hawthorn; blackthorn	5.5	M	1.1	-
H52	Ash; field maple; hawthorn; blackthorn	9	EM	3.6	-
H53	Hawthorn; blackthorn; elder; holly	5	M	1.1	-
H54	Hawthorn	5	M	1.3	-
H55	Hawthorn; elder	2.5	M	0.8	-
H56	Hawthorn	2.5	M	0.8	-
H57	Hawthorn; blackthorn	2.5	M	0.8	-
H58	Hawthorn; blackthorn; elder; elm	5	M	1.3	-
H59	Hawthorn; blackthorn	5	M	1.3	-
H60	Hawthorn; blackthorn; field maple	5	M	1.3	-
H61	Hawthorn; elder	5	M	1.1	-
H62	Hawthorn; Blackthorn	5	M	2.4	-
H63	Hawthorn	2.5	M	1.3	-
H64	Hawthorn; elder; ash	2.5	M	0.8	-

TS - 'Section 2'

KEY

- Category A Tree - High quality (Retention highly desirable)
- Category A - Hedgerow, Group, Woodland - High quality (Retention highly desirable)
- Category B Tree - Moderate quality (Retention desirable)
- Category B - Hedgerow, Group, Woodland - Moderate quality (Retention desirable)
- Category C Tree - Low quality (May be retained but should not constrain development)
- Category C - Hedgerow, Group, Woodland - Low quality (May be retained but should not constrain development)
- Category U Tree - Very low quality (Mostly unsuitable for retention)
- Category U - Hedgerow, Group, Woodland - Very low quality (Mostly unsuitable for retention)
- Root Protection Area (RPA) - Layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and soil volume to maintain the tree's viability
- Shrub mass/offsite tree/out of scope (OOS)
- Ancient tree/woodland or Veteran tree: Important trees that require special consideration
- Ancient tree/woodland or Veteran tree buffer: As per published standing advice from Natural England and the Forestry Commission
- Tree Preservation Order (TPO): Trees under statutory protection. No tree works to be undertaken without specific consent or by relevant exception

Note: The original of this drawing was produced in colour – a monochrome copy should not be relied upon. This drawing should be interpreted with reference to the accompanying tree schedule and written advice

N
GRID NORTH

0 5 10 15 20 25
Metres

PROJECT TITLE
Banbury Logistics Plan

DRAWING TITLE
Tree Survey & Constraints Plan

SCALE	DRAWING NUMBER
1:2000 @ A3	BHA_4742_02

DRAWN BY	APPROVED BY	REVISION	SHEET	DATE
DV	DH	A	-	17/02/2022

LAYOUT USED WITHIN DRAWING **xxxxxxxxx**

CLIENT **Greystoke Land**

COORDINATE SYSTEM / DATUM **British National Grid / Newlyn Datum (AOD)**

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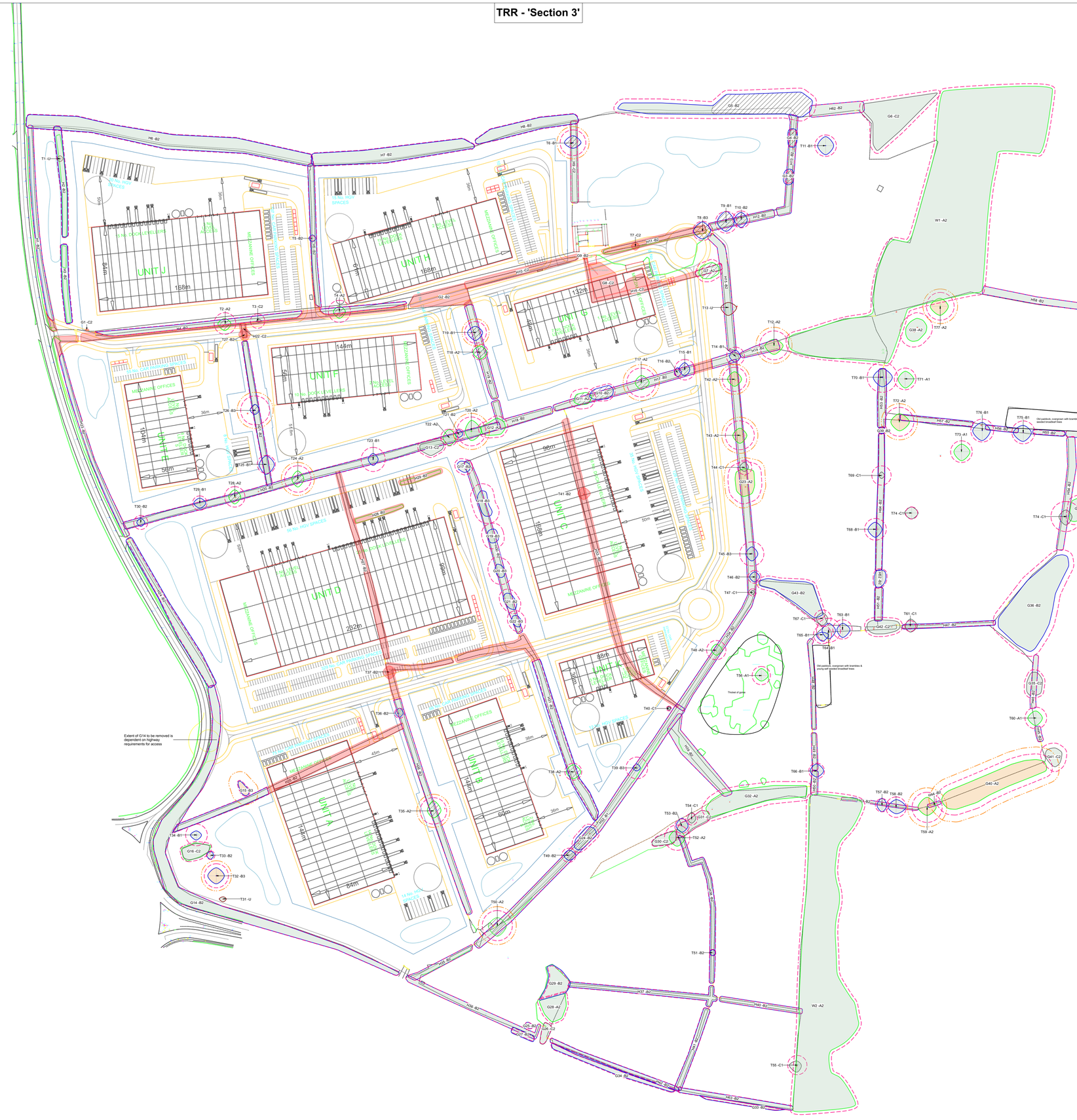
TRR - 'Section 3'

Ref	Species	Height (m)	Life Stage	RPA Radius (m)	RPA (m2)
T1	Ash (Common)	9	M	6.7	142
T2	Oak (English)	17	M	10.8	366
T3	Ash (Common)	5	M	7.2	163
T4	Oak (English)	19	M	11	383
T5	Oak (English)	5	EM	2.6	22
T6	Oak (English)	18	M	12.8	518
T7	Ash (Common)	9	EM	5.5	96
T8	Ash (Common)	15	M	9.6	290
T9	Ash (Common)	18	M	10.8	366
T10	Ash (Common)	18	M	8.4	222
T11	Ash (Common)	18	M	10.7	358
T12	Oak (English)	14	M	14.4	651
T13	Oak (English)	14	M	11.4	408
T14	Oak (English)	14	M	9	254
T15	Oak (English)	14	M	10.2	327
T16	Oak (English)	8	EM	3.6	41
T17	Oak (English)	16.5	M	14.4	651
T18	Oak (English)	15.5	M	7.8	191
T19	Oak (English)	15	M	10.8	366
T20	Oak (English)	18	M	14.4	651
T21	Sycamore	13	EM	5.4	92
T22	Oak (English)	15	M	8.4	222
T23	Oak (English)	9	M	12	452
T24	Oak (English)	19	M	13.2	547
T25	Ash (Common)	16	M	9	254
T26	Ash (Common)	11.5	LM	14.4	651
T27	Ash (Common)	13	EM	7.8	191
T28	Oak (English)	18	M	10.2	327
T29	Oak (English)	8	EM	7.2	163
T30	Ash (Common)	8	M	7	152
T31	Oak (English)	17	M	9.6	290
T34	Ash (Common)	12.5	M	10.8	366
T33	Ash (Common)	7	EM	4.2	55
T32	Ash (Common)	13	M	12	452
T35	Oak (English)	13.5	M	13.2	547
T36	Ash (Common)	10	EM	5	80
T37	Ash (Common)	13.5	EM	6.8	147
T38	Ash (Common)	19	M	8.4	222
T39	Oak (English)	7.5	M	10.8	366
T40	Elder	3.5	M	2.4	18
T41	Ash (Common)	14	LM	7.2	163
T42	Oak (English)	16.5	M	12	452
T43	Oak (English)	19	M	14.4	651
T44	Ash (Common)	11.5	M	7.2	163
T45	Ash (Common)	17	M	12	452
T46	Ash (Common)	12	M	6.4	127
T47	Cypress (Leyland)	7	EM	3.6	41
T48	Oak (English)	13	M	9.6	290
T49	Ash (Common)	12	M	7	152
T50	Oak (English)	15.5	M	15	707
T51	Ash (Common)	6.5	EM	3.3	35
T52	Oak (English)	12	M	12.6	499
T53	Ash (Common)	12	M	7.2	163
T54	Oak (English)	4	EM	5.8	104
T55	Oak (English)	14	M	9.6	290
T56	Oak (English)	15	M	9.1	261
T57	Ash (Common)	14	EM	6.6	137
T58	Ash (Common)	16	M	10.2	327
T59	Oak (English)	15	M	15	707
T60	Oak (English)	15	M	10.8	366
T61	Sycamore	11	EM	5.4	92
T63	Ash (Common)	17	M	9.6	290
T64	Oak (English)	16	M	12	452
T66	Ash (Common)	15	EM	7.8	191
T65	Oak (English)	13	M	9	254
T67	Ash (Common)	16	M	8.4	222
T68	Ash (Common)	16	M	10.8	366
T69	Ash (Common)	5	M	9.6	290
T70	Ash (Common)	18	M	15	707
T71	Oak (English)	15	M	10.8	366
T72	Oak (English)	18	M	14.4	651
T73	Oak (English)	15	M	10.8	366
T74	Ash (Common)	12	M	6	113
T74	Ash (Common)	14	M	15	707
T75	Ash (Common)	18	M	11.4	408
T76	Ash (Common)	18	M	11.4	408
T77	Oak (English)	17	M	13.8	598
T78	Ash (Common)	15	M	15	707
T79	Ash (Common)	15	M	7.2	163
G1	Hawthorn	2.5	EM	1	3
G2	Ash, Cypress, Blackthorn, spruce, Holly	3-9	EM	3.6	41
G3	Ash (common)	15	M	6	113
G4	Ash (common)	15	M	6	113
G5	Willow, Ash, Hawthorn	2-17	M	12	452
G6	Ash, Blackthorn, Hawthorn	4-15	EM	6	113
G7	Oak, Ash	15-19	M	12	452
G8	Cypress, Blackthorn, Ash, Elder	2-11	M	4.8	72
G9	Pear, purple plum	8-9	M	4.8	72
G10	Ash (common)	15-17	M	7.8	191
G11	Oak	17-18	M	10.2	327
G12	Ash, Oak	17	M	9.6	290
G13	Willow, Ash	5-14	M	6	113
G14	Oak, Ash, Field maple, Hawthorn, Spindle, Blackthorn, Dogwood	2-12	EM	4.2	55
G15	Plum	7	M	4.8	72
G16	Hawthorn, Willow	2-14	M	6	113
G17	Hawthorn	5-6	M	6.5	132
G18	Ash (common)	12	M	12	452
G19	Ash (common)	11-12	M	10.8	366
G20	Ash (common)	10	M	12	452
G21	Ash (common)	14-16	M	12	452
G22	Ash (common)	14	M	9.6	290
G23	Oak (English)	18-19	M	13.2	547
G24	Oak	12-14	M	9	254
G25	Hawthorn	6-7	M	3.2	33
G26	Elm, Hawthorn	6-8	EM	2.7	23
G27	Ash, Field maple	6	EM	2.4	18
G28	Oak, Hawthorn	17-19	M	9	254
G29	Hawthorn	4-9	M	3	28
G30	Hawthorn	5-6	M	3.6	41
G31	Hawthorn, Cherry, Ash	4-8	EM	3	28
G32	Oak, Ash, Hawthorn, Cherry	4-19	M	12	452
G33	Ash, Oak, cherry, Field maple, Hawthorn	3-9	EM	3.6	41
G34	Field maple, Cherry, Hawthorn, Ash, Oak	4-8	EM	3.6	41
G35	Ash	14	M	9.4	222
G36	Oak, ash, sycamore, sweet chestnut, hawthorn, cypress, box, laurel	3-17	M	12	452
G42	Ash, hawthorn, elder	14	M	9.6	290
G37	Oak, ash, larch	5-15	M	9.6	290
G38	Ash	18	M	13.2	547
G39	Ash	12	M	6	113
G40	Oak, hawthorn	5-15	M	13.2	547
G41	Horse chestnut, elder	9	M	10.8	366
G42	Ash, oak, elm, hawthorn, blackthorn, laurel	3-16	M	9.6	290
G44	Beech, hawthorn, elder, cypress, laurel	5-10	SM	4.8	72
W1	Ash; Oak; Hawthorn; Elder; Spruce; Elm; Cypress	2-20	M	9.6	-
W2	Scots pine; Holm oak; Oak; Holly; Sycamore; Ash; Hawthorn	4-19	M	9.6	-
H1	Hawthorn; Dogwood; Elder	2.5	EM	1.3	-
H2	Hawthorn; Blackthorn	2.5	M	1.8	-
H3	Hawthorn; Blackthorn; Elder	2.5	M	1.8	-
H4	Blackthorn; Hawthorn	2.5	M	1.8	-
H5	Elder; Hawthorn; Rose; Blackthorn	2.5	M	1.8	-
H6	Blackthorn; Hawthorn; Pear	5.5	M	3	-
H7	Hawthorn; Blackthorn	6	M	3	-
H8	Blackthorn; Hawthorn; Ash	5	M	3	-
H9	Blackthorn; Elder; Hawthorn	2.5	EM	1.3	-
H10	Blackthorn; Elder	2.5	EM	1.3	-
H11	Elder; Hawthorn; Blackthorn; Elm; Field maple; Ash	2.5	EM	1.3	-
H12	Hawthorn	2.5	M	1.3	-
H13	Hawthorn; Blackthorn; Elder	3	M	1.3	-
H14	Hawthorn; Blackthorn	2.5	M	1.3	-
H15	Blackthorn; Hawthorn; Ash	2.5	M	1.3	-
H16	Blackthorn; Hawthorn	2	M	1.3	-
H17	Hawthorn; Blackthorn	2.5	M	1.3	-
H18	Blackthorn; Hawthorn	2	M	1.3	-
H19	Hawthorn; Blackthorn	3	M	1.3	-
H20	Elm; Blackthorn; Hawthorn; Elder	2	M	1.3	-
H21	Hawthorn; ash; Blackthorn	2.5	M	1.3	-
H22	Hawthorn	3	M	1	-
H23	Dogwood; Hawthorn; Blackthorn	2.5	M	1.3	-
H24	Ash, Hawthorn; Blackthorn; oak; Dogwood	3	EM	1.3	-
H25	Hawthorn; Blackthorn; Elder; Ash	2.5	M	1.3	-
H26	Hawthorn; Elm; Rose; Elder; Ash	2.5	M	1.3	-
H27	Blackthorn; Elm; Hawthorn	3	M	1.5	-
H28	Hawthorn; Elm; Elder	25	M	1.8	-
H29	Hawthorn	2.5	M	1.8	-
H30	Blackthorn; Hawthorn; Ash	2.5	M	1.3	-
H31	Hawthorn; Blackthorn; Elder; Ash; Elm	3.5	M	1.3	-
H32	Privet; Hawthorn; Elm; Blackthorn	4.5	M	1.8	-
H33	Elm; Willow; Hawthorn	5	M	1.8	-
H34	Ash; Elm; Hawthorn; Blackthorn; cherry; Gorse	3	M	1.3	-
H35	Elm; Hawthorn; Blackthorn	2.5	M	1.3	-
H36	Hawthorn	2.5	M	1.3	-
H37	Hawthorn; Rose; Elder	2.5	M	1.5	-
H38	Hawthorn; Elder	2.5	M	1.5	-
H39	Hawthorn	5.5	M	2.4	-
H40	Hawthorn; Elder	2.5	M	1.3	-
H41	Hawthorn; Elm	2.5	M	1.8	-
H42	Hawthorn	2.5	M	1.3	-
H43	Hawthorn	2.5	M	1.1	-
H44	Blackthorn	3	M	1	-
H45	Hawthorn; elder	2.5	M	1.1	-
H46	Hawthorn; elder; blackthorn	2.5	M	1.1	-
H47	Hawthorn; elder; blackthorn	2.5	M	0.8	-
H48	Hawthorn; elder	2.5	M	1.1	-
H49	Hawthorn; elder	2.5	M	1.1	-
H50	Hawthorn; ash	5.5	M	1.3	-
H51	Hawthorn; blackthorn	5.5	M	1.1	-
H52	Ash; field maple; hawthorn; blackthorn	9	EM	3.6	-
H53	Hawthorn; blackthorn; elder; holly	5	M	1.1	-
H54	Hawthorn	5	M	1.3	-
H55	Hawthorn; elder	2.5	M	0.8	-
H56	Hawthorn	2.5	M	0.8	-
H57	Hawthorn; blackthorn	2.5	M	0.8	-
H58	Hawthorn; blackthorn; elder; elm	5	M	1.3	-
H59	Hawthorn; blackthorn	5	M	1.3	-
H60	Hawthorn; blackthorn; field maple	5	M	1.3	-
H61	Hawthorn; elder	5	M	1.1	-
H62	Hawthorn; Blackthorn	5	M	2.4	-
H63	Hawthorn	2.5	M	1.3	-
H64	Hawthorn; elder; ash	2.5	M	0.8	-



Note: The original of this drawing was produced in colour – a monochrome copy should not be relied upon. This drawing should be interpreted with reference to the accompanying tree schedule and written advice

PROJECT TITLE
Banbury Logistics Plan

DRAWING TITLE
Tree Retention & Removal Plan

SCALE	DRAWING NUMBER
1:2000 @ A1	BHA_4742_03

DRAWN BY	APPROVED BY	REVISION	SHEET	DATE
DV	DH	A	-	18/05/2022

LAYOUT USED WITHIN DRAWING **5166-CA-00-00-DR-A-05001-Proposed Site-P8**

CLIENT **Greystoke Land**

COORDINATE SYSTEM / DATUM **British National Grid / Newlyn Datum (AOD)**

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BS5837:2012 TREE SURVEY SCHEDULE

BANBURY LOGISTICS PARK

PROJECT NO: 4742

SURVEYOR: DH/AC

CLIENT: GREYSTOKE CB

SURVEY DATE: 25-26-29/11/2021

Barton Hyett
Arboricultural Consultants

INDIVIDUAL TREES

Ref	Species	On/off site	Top Height (m)	No. of Stems	Est diam?	Calc. / Actual Stem Dia. (mm)	Crown radii (m) N-E-S-W	Avg. low crown height (m)	1st branch ht (m)	1st branch dir.	Life Stage	Special importance	General Observations	Health & vitality	Structural condition	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	RPA m^2	Veteran/ Ancient Tree or ANSW buffer radius (m)
T1	Ash (Common)	On	9	1	-	560	3-3-3-3	3.0	2.5	N	M	None	Hedgerow tree, extensive decay at base and to stem, poaching at base, stem sitting up on buttresses, dieback to canopy, hung up limb within canopy.	Poor	Poor	<10	U	6.7	142	-
T2	Oak (English)	On	17	1	Yes	900	5-6-7-7	4.0	3.0	W	M	None	Mature tree located within hedgerow, ivy clad, typical form, established farm track within 2m of stem. Ditch to south of stem.	Good	Good	40+	A2	10.8	366	-
T3	Ash (Common)	On	5	1	Yes	600	2-4-1-1	3.0	2.5	E	M	None	Hedgerow tree, top split out in past leaving short unbalanced form. Ivy clad.	Fair	Fair	10+	C2	7.2	163	-
T4	Oak (English)	On	19	1	-	920	5-6-7-6	4.0	2.5	SW	M	None	Mature hedgerow tree, typical form. Access road within 2m of stem, ditch to south of stem.	Good	Good	40+	A2	11.0	383	-
T5	Oak (English)	On	5	1	Yes	220	3-3-3-3	2.5	2.5	S	EM	None	Self-set hedgerow tree. Good form.	Good	Good	40+	B2	2.6	22	-
T6	Oak (English)	On	18	1	-	1070	7-8-5-8	3.0	2.0	E	M	Emerging Veteran	Hedgerow tree. Retrenchment to southern edge of canopy. Significant tree. Co-dominant stem at 2m.	Fair	Fair	20+	B1	12.8	518	16.05

BS5837:2012 TREE SURVEY SCHEDULE

BANBURY LOGISTICS PARK

PROJECT NO: 4742

SURVEYOR: DH/AC

CLIENT: GREYSTOKE CB

SURVEY DATE: 25-26-29/11/2021

Barton Hyett
Arboricultural Consultants

Ref	Species	On/off site	Top Height (m)	No. of Stems	Est diam?	Calc. / Actual Stem Dia. (mm)	Crown radii (m) N-E-S-W	Avg. low crown height (m)	1st branch ht (m)	1st branch dir.	Life Stage	Special importance	General Observations	Health & vitality	Structural condition	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	RPA m²	Veteran/ Ancient Tree or ANSW buffer radius (m)
T7	Ash (Common)	On	9	4	Yes	460	4-4-4-4	3.0	2.0	S	EM	None	Hedgerow tree, some dieback within canopy.	Fair	Good	10+	C2	5.5	96	-
T8	Ash (Common)	On	15	1	Yes	800	9-8-8-9	4.0	4.0	S	M	None	Mature tree located within boundary hedgerow. Significant but in decline with large sections of canopy dieback. Ivy obscuring stem.	Fair	Fair	20+	B3	9.6	290	-
T9	Ash (Common)	On	18	1	-	900	11-8-9-9	3.0	3.0	N	M	None	Hedgerow tree, typical form, some canopy dieback, ivy to stem. Significant.	Good	Good	20+	B1	10.8	366	-
T10	Ash (Common)	On	18	1	-	700	7-6-8-7	4.0	2.5	NW	M	None	Hedgerow tree, spreading form. Limb failure to mid-stem. Prominent.	Good	Fair	20+	B2	8.4	222	-
T11	Ash (Common)	On	18	1	-	890	9-8-9-8	3.0	5.0	S	M	None	Tree not on topo. Located within field interior. Open canopy, some dieback. Good form.	Fair	Good	20+	B1	10.7	358	-
T12	Oak (English)	On	14	1	-	1200	6-9-9-9	2.5	3.0	W	M	Veteran	Large hedgerow tree, evidence of Co-dominant stem failure in past, limited access. Canopy weighted to south. Prominent tree.	Good	Fair	40+	A2	14.4	651	18.0

BS5837:2012 TREE SURVEY SCHEDULE

BANBURY LOGISTICS PARK

PROJECT NO: 4742

SURVEYOR: DH/AC

CLIENT: GREYSTOKE CB

SURVEY DATE: 25-26-29/11/2021

Barton Hyett Arboricultural Consultants

Ref	Species	On/off site	Top Height (m)	No. of Stems	Est diam?	Calc. / Actual Stem Dia. (mm)	Crown radii (m) N-E-S-W	Avg. low crown height (m)	1st branch ht (m)	1st branch dir.	Life Stage	Special importance	General Observations	Health & vitality	Structural condition	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	RPA m²	Veteran/ Ancient Tree or ANSW buffer radius (m)
T13	Oak (English)	On	14	1	Yes	950	5-8-8-7	4.0	3.0	S	M	None	Tree located within hedgerow, signs of major decline, canopy dieback, loose bark to stem. Pollard if retained.	Poor	Poor	<10	U	11.4	408	-
T14	Oak (English)	On	14	1	Yes	750	6-5-6-6	4.0	3.0	N	M	None	Hedgerow tree, limited access to base. Some retrenchment, ivy to stem.	Fair	Good	20+	B1	9.0	254	-
T15	Oak (English)	On	14	1	-	850	7-5-6-6	4.0	4.0	SE	M	None	Hedgerow tree, overrun with ivy, unbalanced canopy, ditch directly to south of stem.	Fair	Good	40+	B1	10.2	327	-
T16	Oak (English)	On	8	1	Yes	300	5-4-4-3	3.0	2.0	N	EM	None	Hedgerow tree, limited access to base, good form although modest.	Good	Good	40+	B2	3.6	41	-
T17	Oak (English)	On	17	1	Yes	1200	7-8-7-6	2.0	2.0	W	M	Veteran	Notable tree, large stem diameter, ivy obscuring stem/lower canopy, typical form. Ditch directly to south of stem	Good	Good	40+	A2	14.4	651	18.0
T18	Oak (English)	On	16	1	-	650	6-7-7-7	3.0	4.0	E	M	None	Hedgerow tree, good specimen and form.	Good	Good	40+	A2	7.8	191	-
T19	Oak (English)	On	15	1	Yes	900	6-7-8-8	4.0	4.0	NW	M	Veteran	Large hedgerow tree, obvious retrenchment within upper canopy, some moderate sized deadwood. Large stem.	Fair	Fair	20+	B1	10.8	366	13.5

BS5837:2012 TREE SURVEY SCHEDULE

BANBURY LOGISTICS PARK

PROJECT NO: 4742

SURVEYOR: DH/AC

CLIENT: GREYSTOKE CB

SURVEY DATE: 25-26-29/11/2021

Barton Hyett Arboricultural Consultants

Ref	Species	On/off site	Top Height (m)	No. of Stems	Est diam?	Calc. / Actual Stem Dia. (mm)	Crown radii (m) N-E-S-W	Avg. low crown height (m)	1st branch ht (m)	1st branch dir.	Life Stage	Special importance	General Observations	Health & vitality	Structural condition	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	RPA m²	Veteran/ Ancient Tree or ANSW buffer radius (m)
T20	Oak (English)	On	18.0	1	Yes	1200.0	11-10-9-6	3.5	3.0	E	M	Veteran	Large mature hedgerow tree, obviously larger than other adjacent trees. Some retrenchment within canopy, some ivy to stem, typical form.	Fair	Fair	40+	A2	14.4	651.0	18.0
T21	Sycamore	On	13.0	1	Yes	450.0	4-4-3-3	3.0	3.0	E	EM	None	Hedgerow tree, epicormic growth to stem, stunted form.	Fair	Good	20+	B2	5.4	92.0	-
T22	Oak (English)	On	15.0	1	-	700.0	8-7-8-6	2.5	4.0	W	M	None	Hedgerowctree, drainage ditch to south of stem, typical form.	Good	Good	40+	A2	8.4	222.0	-
T23	Oak (English)	On	9.0	1	Yes	1000.0	6-5-6-5	3.0	2.0	E	M	None	Large stemmed stunted tree, ivy obscuring stem/ canopy, some stag horns present within canopy.	Fair	Good	20+	B1	12.0	452.0	-
T24	Oak (English)	On	19.0	1	-	1100.0	8-6-8-6	4.0	3.0	W	M	Veteran	Large hedgerow tree. Substantial in size, prominent, mature ivy to stem, some retrenchment. Typical form.	Fair	Good	40+	A2	13.2	547.0	16.5
T25	Ash (Common)	On	16.0	1	Yes	750.0	8-8-10-7	3.0	4.0	S	M	None	Hedgerow tree, ypical form, ditch to east of stem, cavity formation at branch wounds, evidence of past limb failure.	Good	Good	20+	B1	9.0	254.0	-

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Ref	Species	On/off site	Top Height (m)	No. of Stems	Est diam?	Calc. / Actual Stem Dia. (mm)	Crown radii (m) N-E-S-W	Avg. low crown height (m)	1st branch ht (m)	1st branch dir.	Life Stage	Special importance	General Observations	Health & vitality	Structural condition	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	RPA m²	Veteran/ Ancient Tree or ANSW buffer radius (m)
T26	Ash (Common)	On	11.5	1	-	1200.0	6-4-4-5	2.0	1.5	N	LM	Veteran	Large stemmed tree located within hedgerow. Large cavity at base/stem, limb failures, decay, pollarded in past. Bulging at base. Veteran characteristics.	Fair	Poor	10+	B3	14.4	651.0	18.0
T27	Ash (Common)	On	13.0	1	-	650.0	6-5-7-6	3.0	3.0	W	EM	None	Hedgerow tree, typical form.	Good	Good	10+	B2	7.8	191.0	-
T28	Oak (English)	On	18.0	1	Yes	850.0	7-6-7-6	3.0	5.0	SE	M	None	Good specimen tree located within hedgerow, ivy to stem, good form.	Good	Good	40+	A2	10.2	327.0	-
T29	Oak (English)	On	8.0	1	-	600.0	5-6-5-6	2.5	3.0	W	EM	None	Hedgerow tree, typical form. No access to stem.	Good	Good	40+	B1	7.2	163.0	-
T30	Ash (Common)	On	8.0	1	Yes	580.0	4-4-4-4	3.0	3.0	W	M	None	Hedgerow tree, stunted form, ditch to southern edge of stem, some dieback.	Fair	Fair	10+	B2	7.0	152.0	-
T31	Oak (English)	On	17.0	1	Yes	800.0	2-3-3-4	5.0	4.0	W	M	None	Dead standing tree, limited access to base. Remove if land use changes.	Poor	Poor	None	U	9.6	290.0	-

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Ref	Species	On/off site	Top Height (m)	No. of Stems	Est diam?	Calc. / Actual Stem Dia. (mm)	Crown radii (m) N-E-S-W	Avg. low crown height (m)	1st branch ht (m)	1st branch dir.	Life Stage	Special importance	General Observations	Health & vitality	Structural condition	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	RPA m²	Veteran/ Ancient Tree or ANSW buffer radius (m)
T32	Ash (Common)	On	13.0	1	-	1000.0	8-8-8-8	1.5	1.0	N	M	Emerging Veteran	Individual tree located within field interior, historic pollard with significant regrowth. Large burr to stem, historic limb failures, deadwood. Exudate to stem from cavity formation.	Fair	Fair	20+	B3	12.0	452.0	15.0
T33	Ash (Common)	On	7.0	1	-	350.0	4-3-4-4	2.0	2.0	N	EM	None	Individual tree located close to pond area, typical form. Cavity to lower stem.	Fair	Good	10+	B2	4.2	55.0	-
T34	Ash (Common)	On	12.5	1	-	900.0	4-5-5-6	2.0	2.5	N	M	None	Tree located on edge of group around pond area, evidence of past pollarding - now with significant regrowth. Some dieback within canopy.	Fair	Good	20+	B1	10.8	366.0	-
T35	Oak (English)	On	13.5	1	-	1100.0	10-7-7-6	2.5	3.5	E	M	Veteran	Hedgerow tree, good form, evidence of past limb failure, some retrenchment.	Fair	Good	40+	A2	13.2	547.0	16.5
T36	Ash (Common)	On	10.0	2	Yes	420.0	5-3-4-4	3.0	2.5	E	EM	None	Twin-stemmed tree located within boundary hedgerow, typical form, some dieback within canopy.	Fair	Good	10+	B2	5.0	80.0	-

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Ref	Species	On/off site	Top Height (m)	No. of Stems	Est diam?	Calc. / Actual Stem Dia. (mm)	Crown radii (m) N-E-S-W	Avg. low crown height (m)	1st branch ht (m)	1st branch dir.	Life Stage	Special importance	General Observations	Health & vitality	Structural condition	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	RPA m²	Veteran/ Ancient Tree or ANSW buffer radius (m)
T37	Ash (Common)	On	13.5	2	Yes	570.0	6-7-7-6	2.0	2.0	S	EM	None	Twin-stemmed hedgerow tree, some deadwood within canopy. Typical form.	Fair	Good	10+	B2	6.8	147.0	-
T38	Ash (Common)	On	19.0	1	Yes	700.0	7-7-7-7	3.0	4.0	N	M	None	Good specimen tree located within hedgerow, ditch directly locate£ to the east of stem. Some deadwood within canopy.	Good	Good	40+	A2	8.4	222.0	-
T39	Oak (English)	On	7.5	1	Yes	900.0	4-3-3-4	3.0	3.0	N	M	None	Mature tree failed at 3m in past with some regrowth, cavity forming to stem, dead bark to stem.	Fair	Fair	10+	B3	10.8	366.0	-
T40	Elder	On	3.5	3		200.0	1-1-1-1	2.0	1.5	S	M	None	Self set tree. Low value.	Fair	Fair	<10	C1	2.4	18.0	-
T41	Ash (Common)	On	14.0	1	Yes	600.0	6-7-6-5	2.5	2.0	NW	LM	None	Mature hedgerow tree, typical form. Limited access to stem.	Good	Good	20+	B2	7.2	163.0	-
T42	Oak (English)	On	16.5	1	Yes	1000.0	7-7-7-7	2.5	2.0	S	M	Veteran	Obviously larger hedgerow tree. Drainage ditch located to the west of stem, ivy obscuring stem/canopy. Good form.	Good	Good	40+	A2	12.0	452.0	15.0
T43	Oak (English)	On	19.0	1	Yes	1200.0	7-7-8-7	3.5	4.0	S	M	Veteran	Larger hedgerow tree. Ivy obscuring stem. Good form. Limited access to stem.	Good	Good	40+	A2	14.4	651.0	18.0

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Ref	Species	On/off site	Top Height (m)	No. of Stems	Est diam?	Calc. / Actual Stem Dia. (mm)	Crown radii (m) N-E-S-W	Avg. low crown height (m)	1st branch ht (m)	1st branch dir.	Life Stage	Special importance	General Observations	Health & vitality	Structural condition	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	RPA m^2	Veteran/ Ancient Tree or ANSW buffer radius (m)
T44	Ash (Common)	On	11.5	1	-	600.0	5-4-4-5	2.5	2.5	S	M	None	Mature hedgerow tree, lean to the north, inonotus brackets to stem, obvious dieback within canopy.	Poor	Fair	10+	C1	7.2	163.0	-
T45	Ash (Common)	On	17.0	1	Yes	1000.0	7-6-7-6	4.0	5.0	SE	M	None	Mature tree located within hedgerow. Typical form, deadwood within canopy, cavities to stem. Good ecological value.	Fair	Fair	10+	B3	12.0	452.0	-
T46	Ash (Common)	On	12.0	2	-	530.0	5-5-5-5	4.0	4.0	N	M	None	Tree located within hedgerow, typical form, Co-dominate stem. Some canopy dieback.	Fair	Good	10+	B2	6.4	127.0	-
T47	Cypress (Leyland)	On	7.0	1	-	300.0	2-2-2-2	2.0	1.5	N	EM	None	Hedgerow tree. Good form.	Good	Good	20+	C1	3.6	41.0	-
T48	Oak (English)	On	13.0	1	-	800.0	6-6-5-5	3.0	3.0	W	M	None	Hedgerow tree, good form.	Good	Good	40+	A2	9.6	290.0	-
T49	Ash (Common)	On	12.0	3	-	580.0	5-7-5-5	3.0	3.0	NE	M	None	Hedgerow tree, poor form, pollarded in past.some canopy dieback.	Fair	Fair	10+	B2	7.0	152.0	-
T50	Oak (English)	On	15.5	1	-	1260.0	8-9-10-9	2.5	2.5	S	M	Veteran	Large tree located on field boundary, hung up limbs, deadwood, cavities at base. Typical form.	Good	Fair	40+	A2	15.0	707.0	18.9
T51	Ash (Common)	On	6.5	1	Yes	280.0	3-3-3-3	3.0	1.0	W	EM	None	Hedgerow tree. Typical form.	Good	Good	10+	B2	3.3	35.0	-

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Barton Hyett
Arboricultural Consultants

Ref	Species	On/off site	Top Height (m)	No. of Stems	Est diam?	Calc. / Actual Stem Dia. (mm)	Crown radii (m) N-E-S-W	Avg. low crown height (m)	1st branch ht (m)	1st branch dir.	Life Stage	Special importance	General Observations	Health & vitality	Structural condition	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	RPA m²	Veteran/ Ancient Tree or ANSW buffer radius (m)
T52	Oak (English)	On	12.0	1	-	1050.0	8-8-8-8	2.0	2.0	W	M	None	Tree located within copse. Stunted form. Typical.	Good	Fair	40+	A2	12.6	499.0	-
T53	Ash (Common)	On	12.0	1	-	600.0	8-6-6-6	2.5	3.0	S	M	None	Tree located on bank, lean to the north. Some dieback within canopy.	Fair	Fair	10+	B2	7.2	163.0	-
T54	Oak (English)	On	4.0	1	-	480.0	7-4-4-4	2.5	2.0	W	EM	None	Fallen tree, resting on ground. Layered.	Fair	Fair	<10	C1	5.8	104.0	-
T55	Oak (English)	On	14.0	1	Yes	800.0	4-4-7-8	2.5	5.0	W	M	None	Off-site tree located adjac3nt to site boundary, evidence of past limb failure. Split to main stem. Suppressed form.	Good	Poor	10+	C1	9.6	290.0	-
T56	Oak (English)	On	15.0	1	-	760.0	7-7-5-6	2.0	2.5	W	M	None	Within gorse thicket, good stem taper, historic storm damage to 2x lateral limbs	Good	Fair	40+	A1	9.1	261.0	-
T57	Ash (Common)	On	14.0	1	Yes	550.0	7-5-6-5	2.5	4.0	SW	EM	None	Hedgerow tree, main stem heavily swathed in ivy	Good	Fair	20+	B2	6.6	137.0	-
T58	Ash (Common)	On	16.0	1	Yes	850.0	7-10-6-8	2.5	4.5	N	M	None	Hedgerow tree, woodpecker activity visible in upper crown	Good	Good	20+	B2	10.2	327.0	-
T59	Oak (English)	On	15.0	1	Yes	1300.0	10-9-8-9	2.5	3.5	S	M	Ancient	Hedgerow tree, good form	Good	Good	40+	A2	15.0	707.0	19.5
T60	Oak (English)	On	15.0	1	-	900.0	7-6-7-8	2.0	3.0	N	M	None	Hedgerow tree, good stem taper	Good	Good	40+	A1	10.8	366.0	-

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T61	Sycamore	On	11.0	1	-	450.0	7-7-6-5	2.5	3.0	S	EM	None	Hedgerow tree, sub-dominant limb to east, historic storm damage to main leader @8m with associated decay	Fair	Poor	10+	C1	5.4	92.0	-
T63	Ash (Common)	On	17.0	1	-	800.0	6-7-8-5	2.5	3.0	N	M	None	Hedgerow tree, Inonotus hispidus noted in upper crown, stunted extension growth, historic storm damage	Good	Fair	20+	B1	9.6	290.0	-
T64	Oak (English)	On	16.0	1	-	1000.0	7-7-8-6	2.0	2.0	W	M	None	Inonotus dryadeus & Gannoderma breakers to south of root collar, moderate historic storm damage	Good	Fair	20+	B1	12.0	452.0	-
T65	Oak (English)	On	13.0	1	-	750.0	2-6-6-6	2.0	2.0	SW	M	None	Suppressed by adjacent oak	Good	Fair	20+	B1	9.0	254.0	-
T66	Ash (Common)	On	15.0	1	-	650.0	7-7-6-6	2.5	4.5	W	EM	None	Hedgerow tree	Good	Fair	20+	B1	7.8	191.0	-
T67	Ash (Common)	On	16.0	1	-	700.0	5-5-7-6	0.5	0.25	SE	M	None	Hedgerow tree, historic storm damage, pockets of decay to main stem with visible woodpecker activity	Fair	Poor	10+	C1	8.4	222.0	-

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T68	Ash (Common)	On	16.0	1	-	900.0	7-6-8-7	2.0	6.0	S	M	None	Stems forks into 2 @2.5m, basal cavity to south of main stem, good stem taper, minor storm damage in upper crown	Good	Fair	20+	B1	10.8	366.0	-
T69	Ash (Common)	On	5.0	1	-	800.0	3-3-3-2	1.0	0.0	-	M	None	Mature ash hedgerow tree, main stem failed @ 3m with debris on ground, vigorous regrowth	Fair	Fair	20+	C1	9.6	290.0	-
T70	Ash (Common)	On	18.0	2	-	1410.0	8-10-9-9	3.0	5.0	NW	M	None	Stems forks into 2 @0.5m with included union, recent cracking to union observed to south of union with new bark growth evident	Good	Fair	20+	B1	15.0	707.0	-
T71	Oak (English)	On	15.0	1	-	900.0	7-8-9-7	2.5	2.5	SW	M	None	Growing on sloping section of site, good stem taper	Good	Fair	40+	A1	10.8	366.0	-
T72	Oak (English)	On	18.0	1	Yes	1200.0	8-10-9-8	3.0	4.0	N	M	Veteran	Field boundary tree, hedge around tree is derelict, good form & stem taper	Good	Good	40+	A2	14.4	651.0	18.0
T73	Oak (English)	On	15.0	1	-	900.0	7-8-9-7	2.0	3.0	S	M	None	Grossing on sloping section of site, good stem taper	Good	Fair	40+	A1	10.8	366.0	-
T74	Ash (Common)	On	12.0	1	-	500.0	6-6-6-7	0.5	1.5	N	M	None	Stunted extension growth throughout crown	Fair	Fair	10+	C1	6.0	113.0	-

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T74	Ash (Common)	On	14.0	4	-	1550.0	6-6-8-7	2.5	0.0	-	M	None	Multi stemmed hedgerow tree, pockets of decay to stems	Fair	Poor	10+	C1	15.0	707.0	-
T75	Ash (Common)	On	18.0	1	-	950.0	7-8-9-10	2.5	4.0	S	M	None	Stems forks into 2 @2.5m, historic storm damage throughout crown	Good	Fair	20+	B1	11.4	408.0	-
T76	Ash (Common)	On	18.0	1	-	950.0	8-8-10-9	1.5	3.0	N	M	None	Pocket of decay @3.5m north east, historic storm damage @4m south east with decayed branch peg, long scaffold limb to south	Good	Fair	20+	B1	11.4	408.0	-
T77	Oak (English)	On	17.0	1	-	1150.0	8-8-9-10	1.5	2.5	SE	M	Veteran	Growing on sloping section of site, good stem taper	Good	Fair	40+	A2	13.8	598.0	17.25
T78	Ash (Common)	On	15.0	3	-	1280.0	7-6-7-8	2.5	0.0	-	M	None	Multi stemmed hedgerow tree, minor storm damage to east of crown	Good	Fair	20+	B1	15.0	707.0	-
T79	Ash (Common)	On	15.0	1	-	600.0	7-7-7-8	2.5	4.0	W	M	None	Hedgerow tree, typical for species	Good	Fair	20+	B1	7.2	163.0	-

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GROUPS OF TREES

Ref	Species	On /Off site	Height range (m)	No. of trees	Est diam?	Max stem diam (mm)	Av. Crown radius (m)	Avg. Canopy Height (m)	Life Stage	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	Ancient/ Veteran Tree Buffer (m)
G1	Hawthorn	On	2.5	2	Yes	80	1.5	0.3	EM	Small group adjacent to access road. Insignificant.	Good	Good	10+	C2	1.0	-
G2	Ash, Cypress, Blackthorn, spruce, Holly	On	3-9	30	Yes	300	3	2.0	EM	Small copse of trees. Better when considered collectively.	Good	Good	20+	B2	3.6	-
G3	Ash (common)	On	15	2	Yes	500	7.5	3.0	M	Two similar sized hedgerow trees, some dieback within canopies. Better collectively.	Fair	Good	10+	B2	6.0	-
G4	Ash (common)	On	15	2	Yes	500	7	4.0	M	Two similar sized hedgerow trees, one tree clad in ivy, some canopy dieback, cohesive canopies, better collectively.	Fair	Good	10+	B2	6.0	-
G5	Willow, Ash, Hawthorn	On	2-17	50	Yes	1000	8	2.0	M	Linear boundary group grown up from hedgerow. Some standard trees within. Willow trees subsided with split stems.	Fair	Fair	20+	B2	12.0	-
G6	Ash, Blackthorn, Hawthorn	On	4-15	50	Yes	500	3	2.0	EM	Thicket located off-site. Some larger Ash trees contained within. Limited access.	Good	Good	20+	C2	6.0	-
G7	Oak, Ash	On	15-19	2	Yes	1000	9	3.0	M	Two large hedgerow trees, significant and prominent. Cohesive canopies.	Good	Good	40+	A2	12.0	-
G8	Cypress, Blackthorn, Ash, Elder	On	2-11	50	Yes	400	3	1.0	M	Thicket like within farmhouse garden. Limited access, cypress in decline. Low value.	Fair	Fair	10+	C2	4.8	-
G9	Pear, purple plum	On	8-9	2		400	4	3.0	M	Two old trees located adjacent to gable end of farmhouse. Typical form. Limited useful life expectancy.	Good	Fair	10+	B2	4.8	-
G10	Ash (common)	On	15-17	2		650	6	3.0	M	Two similar hedgerow trees. Drainage ditch to south of stems, some canopy dieback - similar condition. Better collectively.	Fair	Good	10+	B2	7.8	-
G11	Oak	On	17-18	2	Yes	850	6	3.0	M	Two similar sized trees located on field boundary, drainage ditch to south of stems, ivy obscuring one tree, cohesive canopies. Enter collectively.	Good	Good	40+	A2	10.2	-
G12	Ash, Oak	On	17	2	Yes	800	7	3.0	M	Two hedgerow trees, similar size, limited access to stems, ivy obscuring stems, ditch directly to the south of stems. Some dieback to ash. Better collectively	Fair	Good	40+	A2	9.6	-

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BANBURY LOGISTICS PARK

PROJECT NO: 4742

SURVEYOR: DH/AC

CLIENT: GREYSTOKE CB

SURVEY DATE: 25-26-29/11/2021

Barton Hyett Arboricultural Consultants

Ref	Species	On /Off site	Height range (m)	No. of trees	Est diam?	Max stem diam (mm)	Av. Crown radius (m)	Avg. Canopy Height (m)	Life Stage	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	Ancient/ Veteran Tree Buffer (m)
G13	Willow, Ash	On	5-14	5	Yes	500	4	2.0	M	Small group of trees adjacent to pond area, mostly willow species. Ash with dieback.	Fair	Fair	10+	C2	6.0	-
G14	Oak, Ash, Field maple, Hawthorn, Spindle, Blackthorn, Dogwood	On	2-12	100	Yes	350	4	2.0	EM	Planted shelter belt adjacent to highway. Situated on embankment down to site. Planted hedgerow adjacent field edge now combined with larger group. Better collectively.	Good	Good	20+	B2	4.2	-
G15	Plum	On	7	2	Yes	400	4	2.0	M	Two trees located within field interior. Dieback, cavity formation.	Fair	Fair	10+	B3	4.8	9.0
G16	Hawthorn, Willow	On	2-14	25		500	4	2.5	M	Group of mostly Willow located around pond area, some trees subsiding and resting on ground. Better collectively but limited useful life expectancy due to species type.	Good	Fair	10+	C2	6.0	-
G17	Hawthorn	On	5-6	5		540	4	2.0	M	Group of older trees, poaching at base from grazing livestock., cavity formation to stems. Good collectively.	Good	Fair	20+	B2	6.5	-
G18	Ash (common)	On	12	2	Yes	1000	5	3.0	M	Two similar sized trees located within hedgerow. Evidence of past pollarding with significant regrowth. Cavity formation, deadwood.	Fair	Fair	10+	B3	12.0	-
G19	Ash (common)	On	11-12	3	Yes	900	5.0	2.5	M	Three similar sized hedgerow trees, limited access. Ivy clad stems. Old pollards with regrowth. Obvious cavities to stems. Better collectively. Ecological value.	Fair	Fair	10+	B3	10.8	-
G20	Ash (common)	On	10	2	Yes	1000	5.0	3.0	M	Two similar sized Ash pollards, cavities present, evidence of past limb failures, some dieback within canopies.	Fair	Fair	10+	B3	12.0	-
G21	Ash (common)	On	14-16	2	Yes	1000	8.0	3.0	M	Two trees, one pollard with significant regrowth, cohesive canopies. Cavities.	Fair	Good	10+	B2	12.0	-
G22	Ash (common)	On	14	2		800	5.0	3.0	M	Two similar sized pollarded trees, obvious branch failures/cavities. Significant regrowth from previous pollard, some canopy dieback. Better collectively.	Fair	Fair	10+	B3	9.6	-

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G23	Oak (English)	On	18-19	2	Yes	1100	6.0	4.0	M	Two large hedgerow trees, limited access to base of trees, ditch to west of stems, ivy obscuring stems. Good collectively. Prominent trees.	Good	Fair	40+	A2	13.2	11.0
G24	Oak	On	12-14	2	Yes	750	6.5	2.5	M	Two similar sized trees located within hedgerow. Good form, ivy to stem of one tree.	Good	Good	40+	B2	9.0	-
G25	Hawthorn	On	6-7	2		270	3.0	2.0	M	Two trees located within field interior. Cohesive canopies.	Good	Good	20+	B2	3.2	-
G26	Elm, Hawthorn	On	6-8	20		225	3.0	2.0	EM	Small group of trees located adjacent farm access. Mostly Elm.	Fair	Good	10+	C2	2.7	-
G27	Ash, Field maple	On	6	6		200	3.0	2.0	EM	Small group of off-site trees. Better collectively.	Good	Good	20+	B2	2.4	-
G28	Oak, Hawthorn	On	17-19	20		750	7.0	3.0	M	Area within copse with larger trees, mostly oak species, suppressed and drawn up in form. Better collectively. Contains standing dead tree - remove if land use changes.	Good	Fair	40+	A2	9.0	-
G29	Hawthorn	On	4-9	20		250	4.0	2.0	M	Small area within larger copse of smaller trees. Suppressed and drawn up in form. Better when considered together.	Fair	Good	20+	B2	3.0	-
G30	Hawthorn	On	5-6	7		300	3.0	2.0	M	Small group on slope. Typical form, bare earth beneath canopies due to grazing. Better collectively.	Fair	Fair	10+	C2	3.6	-
G31	Hawthorn, Cherry, Ash	On	4-8	15		250	3.0	2.0	EM	Group of trees located beneath canopies of larger trees. Better collectively.	Fair	Fair	10+	C2	3.0	-
G32	Oak, Ash, Hawthorn, Cherry	On	4-19	30		1000	8.0	6.0	M	Substantial wooded group located on slope. All trees suppressed but dominated by Oak. Good feature.	Good	Fair	40+	A2	12.0	-
G33	Ash, Oak, cherry, Field maple, Hawthorn	Off	3-9	30		300	4.0	2.0	EM	Off-site planted screen located adjacent to boundary hedgerow.	Good	Good	20+	B2	3.6	-
G34	Field maple, Cherry, Hawthorn, Ash, Oak	Off	4-8	50	Yes	300	3.0	2.0	EM	Planted off-site screen, limited access. Good collectively.	Good	Good	20+	B2	3.6	-

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G35	Ash	On	14	2	Yes	700	6.0	2.0	M	2x ash hedgerow trees forming cohesive crown, stunted extension growth, staining to main stems indicates Inonotus hispidus brackets, woodpecker activity visible in upper crown of northern most tree, stem damage to east of southern most tree &2.5m	Fair	Fair	10+	C2	8.4	-
G36	Oak, ash, sycamore, sweet chestnut, hawthorn, cypress, box, laurel	On	3-17	70	Yes	1000	7.0	2.0	M	Copse at field edge, newly established laurel & box understory, failed ash stem to lowest southern point, chestnut appears to have been struck by lightning	Good	Fair	20	B2	12.0	-
G37	Oak, ash, larch	Off	5-15	8	Yes	800	6.5	2.5	M	Trees on adjacent boundary	Good	Fair	40+	A2	9.6	-
G38	Ash	On	18	2	Yes	1100	7.5	2.0	M	2x open grown trees on sloping part of site, tree to north dominates group	Good	Good	20+	A2	13.2	-
G39	Ash	On	12	2	Yes	500	5.5	2.0	M	2x ash hedgerow trees forming cohesive crown	Good	Fair	20+	B2	6.0	-
G40	Oak, hawthorn	On	5-15	12		1100	7.5	3.5	M	9x mature oak on boundary with 3x hawthorn, thorn is derelict sections of hedge, ivy cover to 5x oak, historic storm damage to central tree, good feature	Good	Fair	40+	A2	13.2	12.5
G41	Horse chestnut, elder	Off	9	6	Yes	900	6.0	2.0	M	2x horse chestnut with extensive decay throughout main stems, failed scaffold limbs, surrounding ground littered with debris, elder occurs as understory	Fair	Poor	<10	C2	10.8	-
G42	Ash, oak, elm, hawthorn, blackthorn, laurel	On	3-16	30	Yes	800	7.0	2.0	M	Copse at field edge, newly established laurel understory	Good	Fair	20	B2	9.6	-
G43	Ash, hawthorn, elder	On	14	11	Yes	800	7.0	2.5	M	4x ash hedgerow trees forming cohesive crown with derelict hedge beneath, stunted extension growth, staining to main stems indicates Inonotus hispidus brackets, historic storm damage	Fair	Fair	10+	C2	9.6	-
G44	Beech, hawthorn, elder, cypress, laurel	Off	5-10	50		400	4.0	1.5	SM	Copse on adjacent boundary, stock damage to root collar of several beech	Good	Fair	20+	B2	4.8	-

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HEDGEROWS

Ref	Species	On/Off site	Av. Height (m)	Av. width (m)	Av. Stem diam (mm)	Avg. Canopy Height (m)	Life Stage	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)
H1	Hawthorn; Dogwood; Elder	On	3	2.5	100	0.2	EM	Managed boundary hedgerow locate£ adjacent to highway. Recently failed.	Good	Good	20+	B2	1.3
H2	Hawthorn; Blackthorn	On	3	2.5	150	0.3	M	Managed hedgerow; historic laying evident; gaps in places towards north.	Fair	Good	20+	B2	1.8
H3	Hawthorn; Blackthorn; Elder	On	3	2.5	150	0.2	M	Managed hedgerow along field boundary. Historic laying evident in places; some gaps but mostly continuous.	Good	Good	20+	B2	1.8
H4	Blackthorn; Hawthorn	On	3	3	150	0.3	M	Managed boundary hedgerow adjacent to access road; ditch to south. Laid in past. Recently flailed to current dimensions. Continuous form. Some standard trees to 5m contained within.	Good	Good	20+	B2	1.8
H5	Elder; Hawthorn; Rose; Blackthorn	On	2.5	3.0	150	0.2	M	Managed boundary hedgerow; good continuous form. Recently flailed with minimal regrowth.	Good	Good	20+	B2	1.8
H6	Blackthorn; Hawthorn; Pear	On	5.5	5.0	250	0.5	M	Off-site boundary hedgerow. Unmanaged condition forming individual trees. Ditch to south. Good collectively.	Good	Good	20+	B2	3.0
H7	Hawthorn; Blackthorn	On	6.0	5.0	250	0.5	M	Boundary off-site hedgerow; good collectively. Becoming sparse towards east.	Good	Good	20+	B2	3.0
H8	Blackthorn; Hawthorn; Ash	On	5.0	5.0	250	0.5	M	Off-site boundary hedgerow; gaps in places; some standard trees to 12m. Better collectively.	Good	Good	20+	B2	3.0
H9	Blackthorn; Elder; Hawthorn	On	2.5	3.0	100	0.2	EM	Managed boundary hedgerow. Predominantly Blackthorn.	Good	Good	20+	C2	1.3
H10	Blackthorn; Elder	On	2.5	2.5	100	0.5	EM	Managed boundary hedgerow; flailed to current dimensions.	Good	Good	20+	C2	1.3
H11	Elder; Hawthorn; Blackthorn; Elm; Field maple; Ash	On	2.5	2.0	100	0.3	EM	Managed boundary hedgerow; ditch to north; recently flailed.	Good	Good	20+	B2	1.3
H12	Hawthorn	On	2.5	3.0	100	0.3	M	Managed hedgerow; ditch to south.	Good	Good	20+	B2	1.3

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Ref	Species	On/Off site	Av. Height (m)	Av. width (m)	Av. Stem diam (mm)	Avg. Canopy Height (m)	Life Stage	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)
H13	Hawthorn; Blackthorn; Elder	On	3.0	3.0	100	0.3	M	Managed boundary hedgerow. Continuous form.	Good	Good	20+	B2	1.3
H14	Hawthorn; Blackthorn	On	2.5	3.0	100	0.3	M	Managed boundary hedgerow; ditch to south.	Good	Good	20+	B2	1.3
H15	Blackthorn; Hawthorn; Ash	On	2.5	2.5	100	0.2	M	Managed boundary hedgerow; recently flailed with minimal regrowth.	Good	Good	20+	B2	1.3
H16	Blackthorn; Hawthorn	On	2.0	2.0	100	0.1	M	Managed boundary hedgerow. Recently flailed.	Good	Good	10+	C2	1.3
H17	Hawthorn; Blackthorn	On	2.5	3.0	100	0.2	M	Wide hedgerow located adjacent to drainage ditch. Recent flailing with minor regrowth.	Good	Good	20+	B2	1.3
H18	Blackthorn; Hawthorn	On	2.0	3.0	100	0.2	M	Managed boundary hedgerow; recently flailed with minor regrowth. Located adjacent to drainage ditch.	Good	Fair	20+	B2	1.3
H19	Hawthorn; Blackthorn	On	3.0	3.0	100	0.1	M	Managed boundary hedgerow; becoming thicket like in places; straddling drainage ditch. Continuous form.	Good	Good	20+	B2	1.3
H20	Elm; Blackthorn; Hawthorn; Elder	On	2.0	2.0	100	0.1	M	Managed hedgerow; flailed with minor regrowth. Continuous except for existing farm gates. Distinguish ditch to south.	Good	Good	20+	B2	1.3
H21	Hawthorn; ash; Blackthorn	On	2.5	2.0	100	0.3	M	Managed hedgerow; ditch to east; continuous form.	Good	Good	20+	B2	1.3
H22	Hawthorn	On	3.0	3.0	80	0.2	M	Small section of managed hedgerow. Some trees grown up to 4m.	Fair	Good	20+	C2	1.0
H23	Dogwood; Hawthorn; Blackthorn	On	2.5	2.0	100	0.2	M	Managed hedgerow located adjacent to highway. Dense with continuous form.	Good	Good	20+	B2	1.3
H24	Ash; Hawthorn; Blackthorn; oak; Dogwood	On	3.0	4.0	100	0.2	EM	Boundary hedgerow; becoming wider in places adjacent highway. Better collectively.	Good	Good	20+	B2	1.3
H25	Hawthorn; Blackthorn; Elder; Ash	On	2.5	2.0	100	0.1	M	Managed hedgerow; recently flailed with minimal regrowth. Some trees grown up to 6m.	Good	Good	20+	B2	1.3

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H26	Hawthorn; Elm; Rose; Elder; Ash	On	2.5	2.5	100	0.2	M	Managed boundary hedgerow; ditch adjacent; flailed with minimal regrowth. Continuous form. Some hedgerow trees grown up to 5m	Good	Good	20+	B2	1.3
H27	Blackthorn; Elm; Hawthorn	On	3.0	2.5	125	0.3	M	Managed boundary hedgerow adjacent to ditch. Flailed with minimal regrowth. Some trees grown up to 5m within. Gaps in places towards the north.	Good	Good	20+	B2	1.5
H28	Hawthorn; Elm; Elder	On	25.0	2.0	150	0.3	M	Section of hedgerow; gaps in places. Recently flailed with minimal regrowth.	Good	Good	20+	B2	1.8
H29	Hawthorn	On	2.5	3.0	150	0.3	M	Old hedger but only section. Grazed at base revealing stems.	Fair	Good	20+	B2	1.8
H30	Blackthorn; Hawthorn; Ash	On	2.5	3.0	100	0.2	M	Managed boundary hedgerow; located adjacent to ditch. Recently flailed with minimal regrowth. Mostly continuous form.	Good	Good	20+	B2	1.3
H31	Hawthorn; Blackthorn; Elder; Ash; Elm	On	3.5	4.0	100	0.2	M	Managed boundary hedgerow; flailed in past. Continuous form. Straddling drainage ditch.	Good	Good	20+	B2	1.3
H32	Privet; Hawthorn; Elm; Blackthorn	On	4.5	4.0	150	0.1	M	Partially managed hedgerow. Some trees grown up to 6m. Some standing dead Elm trees. Overrun with bramble in places.	Good	Good	20+	B1	1.8
H33	Elm; Willow; Hawthorn	On	5.0	3.0	150	0.1	M	Partially managed hedgerow; unmanaged towards southern end. Straddles ditch. Continuous form.	Good	Good	20+	B2	1.8
H34	Ash; Elm; Hawthorn; Blackthorn; cherry; Gorse	On	3.0	3.0	100	0.3	M	Managed boundary hedgerow with some standard trees to 7m. Continuous form. Straddling ditches in places.	Good	Good	20+	B2	1.3
H35	Elm; Hawthorn; Blackthorn	On	2.5	2.5	100	0.2	M	Managed boundary hedgerow; recently flailed with minor regrowth. Continuous form.	Good	Good	20+	B2	1.3
H36	Hawthorn	On	2.5	2.5	100	0.3	M	Managed boundary hedgerow. Recently flailing with minor regrowth. Early-mature standard trees located within to 6m.	Good	Good	20+	B2	1.3
H37	Hawthorn; Rose; Elder	On	2.5	2.5	120	0.3	M	Managed boundary hedgerow. Dense and continuous.	Good	Good	20+	B2	1.5
H38	Hawthorn; Elder	On	2.5	2.5	120	0.3	M	Continuous hedgerow on field boundary; flailed in past with minimal regrowth.	Good	Good	None	B2	1.5

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H39	Hawthorn	On	5.5	5.0	200	0.4	M	Unmanaged hedgerow. Good collectively and dense.	Good	Good	20	**B2**	2.4
H40	Hawthorn; Elder	On	2.5	3.0	100	0.3	M	Managed boundary hedgerow; flailed with minor regrowth.	Good	Good	20+	**B2**	1.3
H41	Hawthorn; Elm	On	2.5	3.0	150	0.3	M	Managed field edge boundary hedgerow; gaps in places but mostly dense.	Good	Good	20+	B2	1.8
H42	Hawthorn	On	2.5	2.0	100	0.2	M	Boundary hedgerow. Managed. Suppressed by adjacent trees. Some sections grown up to 4m.	Good	Good	20+	**B2**	1.3
H43	Hawthorn	On	2.5	2.5	90	0.0	M	Continuous hedgerow on field boundary; flailed in past	Good	Good	40+	**B2**	1.1
H44	Blackthorn	On	3.0	2.5	80	0.0	M	Outgrown hedge	Good	Fair	20+	**B2**	1.0
H45	Hawthorn; elder	On	2.5	2.5	90	0.0	M	Continuous hedgerow on field boundary; flailed in past	Good	Good	40+	**B2**	1.1
H46	Hawthorn; elder; blackthorn	On	2.5	2.5	90	0.0	M	Continuous hedgerow on field boundary; flailed in past	Good	Good	40+	**B2**	1.1
H47	Hawthorn; elder; blackthorn	On	2.5	2.5	70	0.0	M	Sporadically gappy hedgerow on field boundary; flailed in past	Good	Good	20+	**B2**	0.8
H48	Hawthorn; elder	On	2.5	2.5	90	0.0	M	Continuous hedgerow on field boundary; flailed in past	Good	Good	40+	**B2**	1.1
H49	Hawthorn; elder	On	2.5	2.5	90	0.0	M	Continuous hedgerow on field boundary; flailed in past	Good	Good	40+	**B2**	1.1
H50	Hawthorn; ash	On	5.5	3.0	110	0.0	M	Neglected hedge	Good	Fair	20+	**B2**	1.3
H51	Hawthorn; blackthorn	On	5.5	3.0	90	0.0	M	Neglected hedge	Good	Fair	20+	**B2**	1.1
H52	Ash; field maple; hawthorn; blackthorn	On	9.0	5.0	300	0.0	EM	Small thicket; 3x ash; 1x field maple; 3x hawthorn with blackthorn occurring as understory	Good	Fair	20+	**B2**	3.6
H53	Hawthorn; blackthorn; elder; holly	On	5.0	3.0	90	0.0	M	Neglected hedge	Good	Fair	20+	**B2**	1.1
H54	Hawthorn	On	5.0	2.5	100	0.0	M	Sporadically gappy mature hedgerow on field boundary; sides flailed in past	Good	Fair	20+	**B2**	1.3

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H55	Hawthorn; elder	On	2.5	2.5	70	0.0	M	Hedgerow on field boundary; flailed in past	Good	Good	40+	**B2**	0.8
H56	Hawthorn	On	2.5	2.5	70	0.0	M	Hedgerow on field boundary; flailed in past	Good	Good	40+	**B2**	0.8
H57	Hawthorn; blackthorn	On	2.5	2.5	70	0.0	M	Hedgerow on field boundary; flailed in past	Good	Good	40+	**B2**	0.8
H58	Hawthorn; blackthorn; elder; elm	On	5.0	2.5	100	0.0	M	Sporadically gappy mature hedgerow on field boundary; sides flailed in past	Good	Fair	20+	**B2**	1.3
H59	Hawthorn; blackthorn	On	5.0	2.5	100	0.0	M	Mature hedgerow on field boundary; sides flailed in past	Good	Fair	20+	**B2**	1.3
H60	Hawthorn; blackthorn; field maple	On	5.0	2.5	100	0.0	M	Mature hedgerow on field boundary; sides flailed in past; predominately thorn	Good	Fair	20+	**B2**	1.3
H61	Hawthorn; elder	On	5.0	2.5	90	0.0	M	Mature hedgerow on field boundary; sides flailed in past	Good	Fair	20+	**B2**	1.1
H62	Hawthorn; Blackthorn	On	5.0	5.0	200	1.0	M	Boundary off-site hedgerow. Ditch to south of stems.	Good	Good	20+	B2	2.4
H63	Hawthorn	On	2.5	2.0	100	0.3	M	Managed boundary hedgerow. Continuous form.	Good	Good	20+	**B2**	1.3
H64	Hawthorn; elder; ash	On	2.5	2.5	70	0.0	M	Hedgerow on field boundary; flailed in past	Good	Good	40+	**B2**	0.8

BS5837:2012 TREE SURVEY SCHEDULE

BANBURY LOGISTICS PARK

PROJECT NO: 4742

SURVEYOR: DH/AC

CLIENT: GREYSTOKE CB

SURVEY DATE: 25-26-29/11/2021

Barton Hyett Arboricultural Consultants

WOODLAND

Ref	Species	On / Off site	Height range (m)	No. of trees	Est diam?	Max stem diam (mm)	Av. Crown radius (m)	Avg. Canopy Height (m)	Life Stage	General Observations	Health & vitality	Struct. cond.	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)
W1	Ash; Oak; Hawthorn; Elder; Spruce; Elm; Cypress	Off	2-20	100	Yes	800.0	7	3.0	M	Area of off-site woodland. Limited access. Prominent and elevated position. Good collectively. Some good specimen trees contained within.	Good	Good	40	A2	9.6
W2	Scots pine; Holm oak; Oak; Holly; Sycamore; Ash; Hawthorn	Off	4-19	100	Yes	800	7.0	3.0	M	Linear off-site wooded group. No access. Substantial Arboricultural feature.	Good	Good	40	A2	9.6

IMAGE 1: A view looking east along H10.

IMAGE 2: A view looking south-west at T31.

IMAGE 3: A view looking south-east along H36.

IMAGE 4: A view looking west at T56.

IMAGE 5: A view looking west along G33.

IMAGE 6: A view looking west along G38.

- The tree survey was carried out with reference to the methodology set out in BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'.
- Trees were surveyed individually or as groups where it was considered that they had grown together to form cohesive arboricultural features either aerodynamically (trees that provide companion shelter), visually (e.g. avenues or screens) or culturally (including for biodiversity). However, where it was considered that there was an arboricultural need to differentiate between attributes trees within groups and / or woodlands were also surveyed as individuals.
- The full tree survey findings are recorded in the following tree survey schedule.
- Within the tree survey schedule, each surveyed TREE (T), GROUP (G), HEDGEROW (H), WOODLAND (W) or SHRUB MASS on or adjacent to the site is given a reference number which refers to its position on the tree survey and constraints plan.
- TREE SPECIES are listed by common name.

The **DIMENSIONS** taken are:

- STEM-No. Indicates the number of main stems (i.e. whether the trunk divides at or below 1.5m; (Used in the calculation of RPA.) "m-s" = Multi-stemmed.
- STEM DIAMETER (measured in millimetres), obtained from the girth measured at approx. 1.5m. For trees with 2 to 5 sub-stems a notional figure is derived from the sum of their cross-sectional areas. For multi-stemmed trees, the notional diameter may be estimated on the basis of the average stem size x the number of stems. (A notional diameter may be estimated where measurement is not possible.)
- HEIGHT (measured in metres), recorded to the nearest half metre for dimensions up to 10m and to the nearest whole metre for dimensions over 10m.
- The CROWN SPREAD, taken at the four cardinal points to derive an accurate representation of the tree crown, recorded up to the nearest half metre for dimensions up to 10m and to up the nearest whole metre for dimensions over 10m.
- CROWN CLEARANCES are expressed both as existing height above ground level of first significant branch along with its direction of growth (e.g. 2.5m-N), and also in terms of the overall crown e.g. the average height of the crown above ground level. Measurements are recorded to the nearest half metre for dimensions up to 10m and to the nearest whole metre for dimensions over 10m.
- ESTIMATES. Where any measurement has had to be estimated, due to inaccessibility for example, this is indicated by a "#" suffix to the measurement as shown in the tree survey schedule.

LIFE STAGE is defined as follows:

Y Young: Normally stake dependent, establishing trees. Should be growing fast, usually primarily increasing in height more than spread but as yet making limited impact upon the landscape.

SM Semi-mature: Established young trees, normally of good vigour and still increasing in height but beginning to spread laterally. Beginning to make an impact upon the local landscape and environment. Semi-Mature (still capable of being transplanted without preparation, up to 30cm girth and not yet sexually mature).

EM Early-mature: Not yet having reached 75% of expected mature size. Established young trees, normally of good vigour and still increasing in height but beginning to spread laterally. Beginning to make an impact upon the local landscape and environment.

M Mature: Well-established trees, still growing with some vigour but tending to fill out and increase spread. Bark may be beginning to crack and fissure. In the middle half of their safe, useful life expectancies.

LM Late-Mature: In full maturity but possibly beyond mature and in a state of natural decline). Still retaining some vigour but any growth is slowing.

A Ancient: A tree that has passed beyond maturity and is old/aged compared with other trees of the same species. Typically having a very wide trunk and a small canopy.

PHYSIOLOGICAL CONDITION (HEALTH & VITALITY):

Essentially a snapshot of the general health of the tree based upon its general appearance, it's apparent vigour and the presence or absence of symptoms associated with poor health, physiological stress etc. (Fungal infections may be recorded here but decay giving rise to structural weakness would be recorded under 'Structural Condition' – see next parameter):

Good: No significant health issues.
Fair: Indications of slight stress or minor disease (e.g. the presence of minor dieback/deadwood or of epicormic shoot growth).
Poor: Significant stress or disease noted; larger areas of dieback than above.
Dead: (or Moribund).

STRUCTURAL CONDITION:

Defects affecting the structural stability of the tree including decay, significant dead wood, root-plate instability or significant damage to structural roots, weak forks (e.g. those where bark is included between the members) etc. Classified as:

Good: No obvious structural defects: basically sound.
Fair: Minor, potential or incipient defects.
Poor: Significant defect(s) likely to lead to actual failure in the medium to long-term.
Dead: (or Moribund).

ESTIMATED REMAINING CONTRIBUTION:

An estimate of the length of time in years that a tree might be expected to continue to make a useful contribution to the locality at an acceptable level of risk (based on an assumption of continued routine maintenance):

- Less than 10 years
- 10+ years
- 20+ years
- 40+ years

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SPECIAL IMPORTANCE:

Trees that are particularly notable as high value trees such as ancient trees/woodland or veteran trees. Such trees may be regarded as the principal arboricultural features of a site and pose a significant constraint to potential development.

An *ancient* tree is one that has passed beyond maturity and is very old compared with other trees of the same species. Very few trees reach the ancient life-stage.

Veteran trees are often very old but not necessarily so; they may be regarded as 'survivors' that have developed some of the characteristic features of an ancient tree but have not necessarily lived as long. All ancient trees are veterans but not all veteran trees are ancient.

An ancient woodland is an area that has been wooded continuously since at least 1600 AD. It includes ancient semi-natural woodland (ASNW), plantations on ancient woodland sites (PAWS) and ancient replanted woodland (ARW)

QUALITY CATEGORY:

Trees are classed as category U, A, B or C, based on criteria given in BS5837:2012; summary definitions as follows (see BS5837 for further details). Categories A, B and C are further characterised by the use of sub-categories, which attempt to identify what aspect of the tree is the main source of its perceived value, These are:

(1) arboricultural qualities
(2) landscape qualities, and
(3) cultural, historic or ecological/conservation qualities.

Examples of these qualities for each of the three categories are given below, although these are indicative only.

Note: This is NOT a health and safety classification; the classification does not take into account any requirement for remedial tree care or ongoing maintenance apart from that which may affect the trees' general suitability for retention.

CATEGORY A: HIGH QUALITY:

Trees or groups whose retention should be given a particularly high priority within the design process. Normally with an expected useful life expectancy of at least 40 years.

A1: Notably fine specimens; rare or unusual specimens; essential component trees within groups, semi-formal or formal plantings (e.g. dominant trees within an avenue etc.).
A2: Trees, groups or woodlands of particular visual importance as landscape features.
A3: Trees, groups or woodlands of particular significance by virtue of their conservation, historical, commemorative or other value (e.g. veteran trees or wood pasture.)

CATEGORY B: MODERATE QUALITY:

Trees or groups of some importance with a likely useful life expectancy in excess of 20 years. Their retention would be desirable; selective removal of certain individuals may be acceptable but only after full consideration of all alternative courses of action.

B1: Fair quality but not exceptional; good specimens showing some impairment (e.g. remediable defects, minor storm damage or poor past management.)
B2: Acceptable trees situated such as to have little visual impact within the wider locality. Also numbers of trees, perhaps in groups or woodlands, whose value as landscape features is greater collectively than would warrant as individuals (such that the selective removal of an individual would not impact greatly upon the trees' overall, collective value).
B3: Trees, groups or woodlands with clearly identifiable conservation or other cultural benefits.

CATEGORY C: LOW QUALITY:

Trees or groups of rather low quality, although potentially capable of retention for at least approx. 10 years. Also small trees with stems below 15cm diameter.

Potentially retainable, but not of sufficient value to be regarded as a significant planning constraint.

C1: Unremarkable trees of very limited merit or of significantly impaired condition.
C2: Trees offering only low or short-term landscape benefits; also secondary specimens within groups or woodlands whose loss would not significantly diminish their landscape value.
C3: Trees with extremely limited conservation or other cultural benefit.

CATEGORY U:

Trees likely to prove to be unsuitable for retention for longer than 10 years should any significant increase in site usage arise as a result of development.

E.g. dead or moribund trees; those at risk of collapse or in terminal decline; trees that will be left unstable by other essential works such as the removal of nearby category U trees; trees infected by pathogens that could materially affect other trees; low quality trees that are suppressing better specimens.

(Category U trees may have conservation values that it might be desirable to preserve. This category may also include trees that should be removed irrespective of any development proposals.)

ROOT PROTECTION AREA (RPA):

These are normally represented as a circle centred on the base of each tree stem with a radius of 12 times stem diameter, measured at 1.5m above ground level. The shape of the RPA may be altered where site conditions dictate that there are sound reasons to do so.

VETERAN OR ANCIENT TREE BUFFER (VTB/ATB)

In line with the Standing Advice produced by the Forestry Commission and Natural England this is a buffer zone (in metres) around an ancient or veteran tree that should be at least 15 times larger than the diameter of the tree. The buffer zone should be 5m from the edge of the tree's canopy if that area is larger than 15 times the tree's stem diameter.

ANCIENT WOODLAND BUFFER (FOR ASNW, PAWS OR ARW)

In line with the Standing Advice produced by the Forestry Commission and Natural England this is a buffer zone of at least 15 metres to avoid root damage. Where assessment shows other impacts are likely to extend beyond this distance, a larger buffer zone may be required.

THE IMPORTANCE OF TREES

Wider benefits:

There is a growing body of evidence that trees bring a wide range of benefits to the places people live.

Some *Economic* benefits of trees include:

- Trees can increase property values
- As trees grow larger, the lift they give to property values grows proportionately
- They can improve the environmental performance of buildings by reducing heating and cooling costs, thereby cutting bills
- Mature landscapes with trees can be worth more as development sites
- Trees create a positive perception of a place for potential property buyers
- Urban trees improve the health of local populations, reducing healthcare costs

Some *Social* benefits of trees include:

- Trees help create a sense of place and local identity
- They benefit communities by increasing pride in the local area
- They can create focal points and landmarks
- They have a positive impact on people's physical and mental health
- They can have a positive impact on crime reduction

Some *Environmental* benefits of trees include:

- Urban trees reduce the 'urban heat island effect' of localised temperature extremes
- They provide shade, making streets and buildings cooler in summer
- They help remove dust and particulates from the air
- They help to reduce traffic noise by absorbing and deflecting sound
- They help to reduce wind speeds
- By providing food and shelter for wildlife they help increase biodiversity
- They can reduce the effects of flash flooding by slowing the rate at which rainfall reaches the ground
- They can help remediate contaminated soil

On new development sites:

Trees bring many benefits to new development. Where retained successfully they can form important and sustainable elements of green infrastructure, contribute to urban cooling and reduce energy demands in buildings. Their importance is acknowledged in relation to adaptation to the effects of climate change. Other benefits brought by trees include:

- increasing property values;
- visual amenity
- softening, complementing and adding maturity to built form
- displaying seasonal change
- increasing wildlife opportunities in built-up areas
- contributing to screening and shade
- reducing wind speed and turbulence

NATIONAL PLANNING POLICY

The National Planning Policy Framework 2021 (NPPF paragraph 180) states that, when determining planning applications, local planning authorities should apply the following principle:

c) '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.'

In this respect the following definitions apply:

'Ancient woodland: An area that has been wooded continuously since at least 1600 AD. It includes ancient semi-natural woodland and plantations on ancient woodland sites (PAWS)', and

'Ancient or veteran tree: A tree which, because of its age, size and condition, is of exceptional biodiversity, cultural or heritage value. All ancient trees are veteran trees. Not all veteran trees are old enough to be ancient, but are old relative to other trees of the same species. Very few trees of any species reach the ancient life-stage.'

Note: Further information from the National Planning Policy Guidance Suite and Standing Advice is provided in the design guidance section.

Other paragraphs of the NPPF 2021 of relevance to this report are:

Paragraph 131: *'Trees make an important contribution to the character and quality of urban environments, and can also help mitigate and adapt to climate change. Planning policies and decisions should ensure that new streets are tree-lined, that opportunities are taken to incorporate trees elsewhere in developments (such as parks and community orchards), that appropriate measures are in place to secure the long-term maintenance of newly-planted trees, and that existing trees are retained wherever possible. Applicants and local planning authorities should work with highways officers and tree officers to ensure that the right trees are planted in the right places, and solutions are found that are compatible with highways standards and the needs of different users.'*

Paragraph 174: *'Planning policies and decisions should contribute to and enhance the natural and local environment by:*
b) 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.'

STATUTORY CONTROLS

Statutory tree protection

Works to trees which are covered by Tree Preservation Orders (TPOs) or are within a Conservation Area (CA) require permission or consent from the Local Planning Authority. Where information is available on any Statutory designations such as this they are identified within the summary table in Section 1 and on the Tree Survey and Constraints Plan at Section 2.

Notwithstanding specific exceptions and in general terms, a TPO prevents the cutting down, uprooting, topping, lopping, wilful damage or wilful destruction of protected trees or woodlands without the prior written consent of the LPA.

Penalties for contravention of a TPO tend to reflect the extent of damage caused but can, in the event of a tree being destroyed, result in a fine of up to £20,000 if convicted in a Magistrates' Court, or an unlimited fine is the matter is determined by the Crown Court.

Similarly, and again notwithstanding specific exceptions, it is an offence to carry out any works to a tree in a Conservation Area with a trunk diameter greater than 75mm diameter at 1.5 height without having first provided the LPA with 6 weeks written notification of intent to carry out the works.

On many non-residential sites (excluding specific exemptions) there is also a statutory restriction relating to tree felling that relates to quantities of timber that can be removed within set time periods. In basic terms, it is an offence to remove more than 5 cubic metres of timber in any one calendar quarter without having first obtained a felling licence from the Forestry Commission.

Any proposed tree works that are planned to be carried out on site must be carried out in accordance with the statutory controls outlined. Therefore, we recommend that a further check is made with the LPA before any tree works are carried out.

Statutory Wildlife Protection

Although preliminary visual checks from ground level of likely wildlife habitats are made at the time of surveying, detailed ecological assessments of wildlife habitats are not made by the arboriculturist and fall outside of the scope for this report.

Trees which contain holes, splits, cracks and cavities could potentially provide a habitat for protected species such as bats in addition to birds and small mammals. It is advised that in some instances specialist ecological advice may be required. This may result in tree works being carried out following a detailed climbing inspection to the tree to ensure that protected species or their nests/roosts are not disturbed. If any are found, the site manager, site owner or consulting arboriculturist should be informed and appropriate action taken as recommended by the appointed Ecologist or the relevant Statutory Nature Conservation Organisation (SNCO): Natural England, Scottish Natural Heritage or Natural Resources Wales.

It is advised that tree/hedgerow works are carried out with the understanding that birds will generally nest in trees, hedges and shrubs between March and August. This time period only provides an indication of likely nesting times and as such diligence is required when undertaking tree works at all times.

Irrespective of the time of year and other than any actions approved under General Licence, it is an offence to intentionally kill, injure or take any wild bird or to intentionally take, damage or destroy the nest or eggs of any wild bird. Ideally, tree operations should be avoided during the likely bird nesting period. However, any tree works should always only be carried out following a preliminary visual check of the vegetation.

For information, the Wildlife and Countryside Act 1981 (as amended), The Countryside and Rights of Way Act 2000 (as amended) and the Conservation of Habitat and Species Regulations 2010, form the basis of the statutory legislation for flora and fauna in England and Wales. A different legislative framework applies in Scotland and Northern Ireland.

Any proposed tree works that are planned to be carried out on site must be carried out in accordance with any relevant statutory controls, outlined above.

DESIGN GUIDANCE

Approach

The approach adopts the guidelines set out in the British Standard BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations. The process is broken down to coordinate with the key elements within both the RIBA Plan of Work (2013) and British Standard 5837:2012 as set out in the table below:

Information Stage	RIBA Stage	BS5837:2012
Stage A – Tree Survey	2: Concept	4: Feasibility
Stage B – Arboricultural Impact Assessment	3: Developed design	5: Proposals
Stage C – Arboricultural Method Statement	4: Technical design	6: Technical Design
Stage D – Arboricultural Site Supervision	5: Construction	7: Demolition and construction

A hierarchical approach is adopted in order to achieve optimum use of the site and location of built structures. This is set out below:

Avoid

The starting point of Site layout design should be to avoid the RPA of retained trees and provide suitable clearance from above ground constraints [tree canopies]. Where possible building lines should be at least 2m outside the RPA to provide working space for construction. However, protection measures can be taken if such clearance is not achievable.

Mitigate

Where intrusion within the RPA is unavoidable then its impact on the tree can be mitigated by specialist measures:

Foundations that avoid trenching e.g. screw piles, suspended floor slabs or casting at ground level for lightweight structures such as bin and cycle stores.

Limited use may be made for parking, drives or hard surfaces within the root protection areas, subject to advice from a qualified arboriculturist. Cellular confinement systems that enable hard surfaces to be built above existing soil levels are acceptable methods subject to site-specific soil conditions.

Service runs that cannot be routed outside the RPA(s) can be installed by, for example, thrust boring, directional drilling, air excavation or hand digging. These operations often require supervision by the project arboriculturist.

Compensate

Replacement planting can ensure the continuity of tree cover where tree removal is unavoidable or desirable. Off-site provision may be considered in some circumstances but this will require negotiation with the local planning authority.

Considerations:

For proposed residential developments, consideration must be given to numerous factors future tree growth and orientation.

Tree constraints

Root Protection Areas:

With reference to BS5837:2012, a root protection area (RPA) is defined as "a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure should be treated as a priority". "**The default position [when considering design layout in relation to RPAs] should be that structures are located outside the RPAs of trees to be retained**".

BS5837:2012 states (4.6.2) that, "where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically, a polygon of equivalent area should be produced." The BS goes on to state that, "modifications to the shape of the RPA should reflect a soundly based arboricultural assessment of likely root distribution," and that any deviation from the original circular plot should take into account:

- Morphology and disposition of roots;
- topography and drainage;

- soil type and structure;
- the likely tolerance of the tree to root damage/disturbance.

Additional buffer zones beyond the RPA:
The following text is taken from the Standing Advice produced by the Forestry Commission and Natural England as included in the National Planing Policy Guidance:

'A buffer zone's purpose is to protect ancient woodland and individual ancient or veteran trees. The size and type of buffer zone should vary depending on the scale, type and impact of the development'.

Ancient woodland buffer:
'For ancient woodlands, you should have a buffer zone of at least 15 metres to avoid root damage. Where assessment shows other impacts are likely to extend beyond this distance, you're likely to need a larger buffer zone. For example, the effect of air pollution from development that results in a significant increase in traffic'.

Ancient and veteran tree buffer:
'A buffer zone around an ancient or veteran tree should be at least 15 times larger than the diameter of the tree. The buffer zone should be 5m from the edge of the tree's canopy if that area is larger than 15 times the tree's diameter'.

Above ground:
Above ground constraints posed by trees describe the capacity for trees to have an overbearing or dominating effect on new developments; usually post occupancy. Typical above ground constraints include a number or combination of inconveniences including shading, branch spread, movement of trees during strong winds and so on. If not adequately considered, above ground constraints can lead to repeated requests to fell or heavily prune retained and protected trees.

Shade:
Adverse shading and blocked views from windows raise concerns for incoming residents, which may lead to pressure to fell or remove trees in the future. Wherever possible it is advisable to arrange fenestration away from tree canopies to lessen the conflict, or increase window size to accommodate ambient light.
Conversely, appropriate designed development can use existing or new trees to create necessary and welcome shade and screening.
As part of the adopted approach the above considerations and constraints are assessed cumulatively in order to provide clear and site-specific advice on the areas of a site most suitable for the location of development.

Dependent on the site and nature of the proposed development, the Tree Survey and Constraints Plans may show the following:

Recommended Developable area - an advisory area defined in order to minimise arboricultural impacts using standard approaches to construction. Restricting proposed development to this area will limit the risk of harm to retained trees and of the Local Planning Authority objecting to the proposed development. It may be possible to propose development outside of this area but specific 'low impact' construction techniques may be needed recommended.

Recommended Buffer to development - similar to the Recommend Developable Area but defined as a line marking a suitable buffer to retained trees. More commonly used on large sites or sites where the presence of trees is localised.

Tree Opportunities

Depending on the scale of developments existing trees can often provide opportunities to enhance the existing arboricultural resource of a site by bringing it into good management or by putting in place remedial measures e.g. soil amelioration.

Appropriately designed new tree planting is extremely important in maintaining healthy and sustainable tree populations. For the reasons highlighted, new trees can bring many benefits to new developments. It is critical to the establishment of new tree planting that the locations, species and specification of new trees is appropriate. Subsequently the sourcing of high-quality stock, suitable planting and the provision of post planting maintenance are essential to allow new trees to establish and to allow them to mature.

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HOW TREE DAMAGE CAN OCCUR

Above the ground

Damage can occur as a result of knocks and scuffs, breakages of branches and/or tree trunks. This is often but not always associated with machine operations, groundworks excavations, tele handlers, high sided vehicles and crane use. Other forms of above ground damage include fixings to trunk and unauthorised cutting back of branches. Wounds will harm a tree's health and shorten its life by letting in disease-causing organisms.

Below the ground

It is often not appreciated that the majority of most tree roots are generally located within the top 600mm of the ground. On this basis it needs to be understood that damage to roots can occur in three ways:

- Root severance can occur as a result of, for example, soil stripping during site clearance or excavations.
- Root dieback and death can result from compaction of the soil. Compaction can occur as a result of vehicle weight, weight of stored materials or increased pedestrian access. Compaction crushes out soil pore space and prevents tree respiration from occurring (respiration requires gas exchange between the ground and the atmosphere). Compacted soil is denser and therefore inhibits/prevents any further new root growth.
- Pollution of the soil with chemicals such as oil or cement washings can destroy the soil environment, making it inhospitable for the tree cause causing it stress.

The effects of these impacts can be disfiguring to a tree's appearance and also weaken a tree making it more liable to attack by pest and diseases. In addition, root damage or death results in corresponding decline above the ground with dieback occurring within the tree crown.

The effects of damage to trees generally take some time to become fully apparent. In many cases, damaged trees decline slowly after the completion of a new development, until they eventually need to be removed due to ill health.

Tree protection barriers and load distributing 'no-dig' paths are specified in order to prevent soil compaction from taking place.

GENERAL SITE RULES FOR TREE PROTECTION

Do not independently carry out any activity that is at odds with the site scheme of tree protection. This is contained within an approved Arboricultural Method Statement (AMS) and accompanying Tree Protection Plan.

In simple terms: do not carry out any work within any Construction Exclusion Zone (CEZ) without prior liaison with the Project Arboriculturist and written authorisation from the Local Planning Authority.

Within the CEZ:

- No mixing of cement
- No soil/turf stripping, raising/lowering of ground levels (unless advised), deposit or excavation of soil or rubble
- No excavations for services or installation of services
- No storage of materials, machinery fuel, chemicals or other materials of any other description
- No parking/use of tracked or wheeled machinery
- No siting of temporary structures including hard standing areas, portaloos, site huts
- No lighting of fires or disposal of liquids
- Fires on site should be avoided if possible. Where they are unavoidable, they must not be lit in a position where heat could damage foliage or branches. Fires must be a minimum of 20m from the trunk of any retained tree or the centre line of any hedgerow to be retained
- No signs, cables, fixtures or fittings of any other description shall be attached to any part of a retained tree