

ARBORICULTURAL IMPACT ASSESSMENT

Land North of
Barlestone Road,
Newbold Verdon

June 2026



Barton Hyett Associates
Arboricultural Consultants

In association with

CSA
environmental

Summary table		
Site Name:	Land North of Barlestone Road, Newbold Verdon	
Project reference:	6901	
Site Address:	The Firs, Barlestone Road, Newbold Verdon, Leicester, LE9 9ND	
Central Grid reference:	SK 45084 04046	
Local Planning Authority:	Hinckley and Bosworth Borough Council	
Relevant planning policies:	Local Plan 2006 - 2026 Core Stretegy: Policy 11 - Key rural centres stand alone; Policy 20 - Green infrastructure. Site Allocations and Development Management Policies DPD: DM6 - Enhancement of Biodiversity and Geological Interest; DM10 - Development & design.	
Statutory Controls:	Tree Preservation Order	Conservation Area
	None	No
Soil Type: (Source: BGS online soils map © NERC 2025)	Superficial/Drift	Bedrock
	Deep sam to sandy loam over Glaciofluvial Deposits, Mid Pleistocene - Sand and gravel.	Edwalton Member - Mudstone.
Topographical Survey:	North of Barlestone Road, Newbold Verdon- Topo	
Site Layouts:	Development Framework Plan 7625_106_K General Arrangement plan BRNV-BWB-HML-00-DR-TR-100	
Report author:	Ian Monger <i>BSc (Hons), MSc, MICFor, MArborA</i>	
Date of issue:	01.06.2026	

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SECTION 6:	DESIGN GUIDANCE AND GENERIC ADVICE
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1. INTRODUCTION

- 1.1. I am Ian Monger, an arboriculturist with 18 years of experience and a professional member of the Institute of Chartered Foresters and the Arboricultural Association.
- 1.2. Barton Hyett Associates Ltd has been instructed by CSA Environmental on behalf of Wheeldon Brothers 1867 to survey trees located at Land North of Barlestone Road, Newbold Verdon ('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 a planning application at the site and provide written advice on how they inform feasibility and design options. The instruction also required an assessment of the potential impact (the Arboricultural Impact Assessment) of the proposed development on the site's arboricultural resource to be undertaken.

2. SITE DESCRIPTION

- 2.1. The site is the dwelling and garden of The Firs, an adjoining paddock and an adjoining field of approximately 3.0ha in total area. The site is located to the immediate north of Barlestone Road (B582) in the north of the village of Newbold Verdon, approximately 9.5 miles west of Leicester and 8.5 miles north of Hinckley. The approximate site boundary is shown edged yellow in Figure 1.
- 2.2. The dwelling and adjoining paddock are located in the southwestern corner of the site and are separated from the field by hedgerows. A large brick shed, a Nissen shed and a small derelict building are located to the north of the dwelling.
- 2.3. The only vehicular access to the site is the existing access to The Firs from Barlestone Road. A driveway connects to the buildings, with a gated access into the field. The paddock also has gated access to the field.
- 2.4. Public footpath S13/1 enters the southeastern corner of the field from Barlestone Road via a stile, and follows the eastern site boundary to leave in the northeastern corner into an adjoining field.
- 2.5. To the south of the site, beyond Barlestone Road, is the C20th residential area of Sparkenhoe. Beyond the site to the east are paddocks associated with Newbold Garage and Wrask Farm. Agricultural fields adjoin the site to the north, east and west.
- 2.6. The site is level and at approximately 132m AOD.

3. TREE SURVEY FINDINGS

- 3.1. The survey recorded 16 arboricultural features. These are summarised in terms of quality in accordance with the recommendations of BS 5837 in Table 1 below and shown in more detail on the Tree Survey and Constraints Plan (**Section 2**) and within the Tree Survey Schedule (**Section 3**).

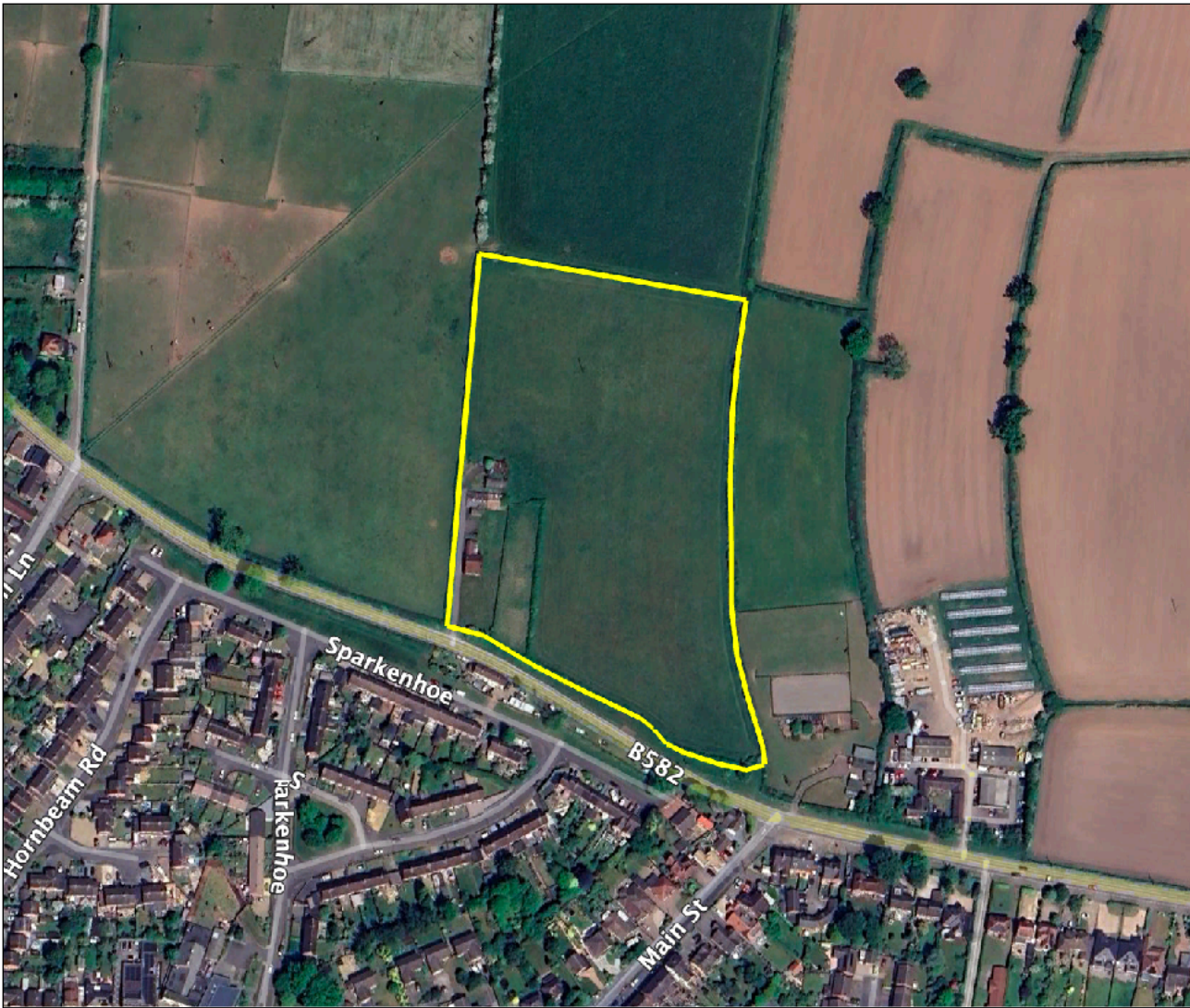


Figure 1: Approximate site boundary edged yellow.

Table 1: arboricultural features by type and quality category.

	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	6	-	3	3	-
Groups	2	-	-	2	-
Hedgerows	8	-	8	-	-
Total	16	0	11	5	0

4. KEY ARBORICULTURAL FEATURES

- 4.1. No ancient or veteran trees were identified in the survey. There is no ancient woodland affecting the site.
- 4.2. No trees of high quality are present at the site. A single cockspur thorn, T2 (B1), grows off-site within the highway verge, near the southeastern corner of the site and where the public footpath enters.
- 4.3. A low-quality ash tree T1 (C1) and a group of elder G1 (C2) have self-set near and within the buildings to the north of the dwelling and are of low quality.
- 4.4. The site's hedgerows are predominantly hawthorn and are maintained by flailing. Hedgerows H4 along the eastern site boundary and H6 (B2) along the southern highway frontage have greater species diversity than the others, including blackthorn, field maple, holly, elder, holly, elm, hazel, oak, ash and sycamore.
- 4.5. Four off-site trees (T3 to T6) and two hedgerows (H7 and H8), along Barlestone Road to the west of the site, were surveyed to assess the potential constraints for a footway connection.

5. CONSTRAINTS AND OPPORTUNITIES

- 5.1. Aside from off-site cockspur thorn T2 and the site's hedgerows, there are no significant constraints to development at the site. A development design which retains T2 and mitigates any hedgerow section loss with new hedgerow and tree planting has the potential to deliver a significant net gain in tree canopy cover at the site.
- 5.2. Please see **Section 5** for further advice and guidance on designing new developments near trees.

6. PROPOSED DEVELOPMENT

- 6.1. The development proposal is an outline planning application for the erection of up to 67 dwellings, drainage, open space, and associated works, with all matters reserved, except for access.
- 6.2. The detailed access is shown on the General Arrangement plan BRNV-BWB-HML-00-DR-TR-100 and the indicative site layout is shown on the Development Framework Plan 7625_106_K.

7. IMPACT ASSESSMENT

- 7.1. The impact assessment considers the effects of any tree loss required to implement the proposed development, 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 nature of the proposed development. Actual and potential impacts can include tree removal to facilitate the development, soil compaction in close proximity to trees, and direct impact damage to the canopy and roots of retained trees from construction activities. A summary of anticipated impacts resulting from the proposed development is provided below.

Trees to be removed

- 7.2. For the main site access from Barlestone Road, an approximately 15m section of frontage hedgerow H6 (B2) would be removed, including to accommodate a new 3m wide shared footway/cycleway to a proposed toucan crossing.
- 7.3. In relation to the Development Framework Plan (the reserved matters), low-quality, semi-mature ash tree T1 and elder group G1 would be removed. These are natural regeneration and cannot be retained through the

demolition of the agricultural buildings. In addition, hawthorn hedgerow H1 (B2) would be removed, and two short sections of hedgerow H2 (B2) removed to provide pedestrian links to the refused outline residential development to the west.

- 7.4. The Development Framework Plan demonstrates the potential for new street tree planting, in accordance with paragraph 136 of the National Planning Policy Framework (NPPF), as well as new naturalistic tree and native hedgerow planting around the residential development edges and within the open spaces.
- 7.5. The new tree and hedgerow planting would integrate the development into the existing landscape and deliver a significant net gain in tree canopy cover, species diversity and connectivity at the site.

Potential impacts on retained trees & hedgerows

- 7.6. A new 2m wide footway will connect the existing public footpath S13/1 to the toucan crossing. Although the footway is tight against the Root Protection Area (RPA) and low crown of cockspur thorn T2, only a minor adjustment would allow these to be avoided entirely.
- 7.7. Detailed design of the site may require short hedgerow section removals for drainage and utility connections, but would have a negligible impact as they can be replanted.

Conclusion

- 7.8. In summary, the Development Framework Plan demonstrates that a sustainable relationship between the proposed development parcels and retained trees and hedgerows can be achieved, and that a net gain in tree canopy cover can be delivered.

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

- 8.1. BS5837:2012 (Figure 1) recommends that the detailed/technical design of tree protection and arboricultural methodologies should be resolved and finalised following the approval of the feasibility of a scheme by the Local Planning Authority.
- 8.2. Annex B and Table B.1 of BS5837:2012, an informative document, advises that Arboricultural Method Statement (AMS) 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 AMS might reasonably be required as a 'reserved matter' or planning condition.
- 8.3. In relation to the site, it is anticipated that arboricultural working methods are likely to be quite straightforward. A brief summary of the principles of tree protection on development sites is included in **Section 7**.
- 8.4. A draft 'Heads of Terms' for an AMS is set out below:
 - Project Arboriculturist – schedule of monitoring and supervision to be agreed upon 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.

- Hedgerow removals and facilitation pruning - as shown on the finalised Tree Retention and Removal Plan (TRR)
- Erection of tree protection barriers and temporary ground protection, as may be required, as per the Tree Protection Plan (TPP)
- Site preparation and ground works - no access for any machinery within the fenced tree protection areas.
- Main construction phase - all tree protection measures shall remain in situ and intact for the duration of the construction phase
- Removal of tree protection barriers - only to occur following approval of site conditions by the project arboriculturist.
- Final landscaping, including tree and hedgerow planting.

9. CONCLUSIONS AND RECOMMENDATIONS

- 9.1. In conclusion, the arboricultural impact of the development proposal on trees at the site is low. Subject to detailed design, including proposed ground level changes and drainage, I consider that the proposed development is capable of complying with the relevant Development Plan policies.
- 9.2. One section of hedgerow is proposed to be removed for the new access. One individual tree, one group of trees, one hedgerow and two hedgerow sections would be removed for the indicative site layout. The Development Framework Plan demonstrates that a sustainable relationship between the proposed development parcels and retained trees and hedgerows can be achieved, and that a net gain in tree canopy cover can be delivered, which would compensate for the tree and hedgerow removals.
- 9.3. The information contained within this report should be used in the preparation of detailed design proposals for the site (the reserved matters), to minimise negative impacts on and maximise the benefits of the arboricultural assets.
- 9.4. The future reserved matters planning application will be accompanied by a detailed Arboricultural Impact Assessment (AIA), which will evaluate the direct and indirect effects of the proposals and demonstrate how retained trees and hedgerows can be protected during the groundwork and construction stages. A finalised Tree Protection Plan and Arboricultural Method Statement will be produced once the detailed design is approved.

Ian Monger

Ian Monger BSc (Hons), MSc, MICFor, MArborA
Senior Arboriculturist



IMAGE 1: The access to The Firs from Barlestone Road.



IMAGE 2: View along the site frontage with Barlestone Road, looking east.



IMAGE 3: The off-site cockspur thorn near the southeastern corner of the site, looking west.



IMAGE 4: View across the site field from the southeastern corner, looking north.



IMAGE 5: View across the site field from the northeastern corner, looking southwest.



IMAGE 6: View from the field across the small paddock towards The Firs, looking southwest.



Tree No	Species	Height (m)	Life Stage	RPA Radius M	RPA Area M2
T1	Common ash	7.0	SM	2.6	22
T2	Cockspur thorn	7.0	M	4.3	59
T3	English oak	14.0	M	13.2	547
T4	Common ash	18.0	LM	14.4	652
T5	Lime spp.	11.0	EM	7.1	157
T6	Common ash	16.0	M	8.4	222
G1	Elder	4-5	M	2.2	-
G2	Lilac, field maple	5.5	M	1.8	-
H1	Hawthorn; elder	2.0	EM	1.7	-
H2	Hawthorn; elder; holly; English oak; lilac; dog rose	3.0	EM	1.5	-
H3	Hawthorn; elder; English oak; dog rose	3.0	M	1.8	-
H4	Blackthorn; elder; hawthorn; holly; English elm; hazel; English oak; common ash; dog rose	3.0	M	1.8	-
H5	Common ash; holly; hawthorn	3.5	EM	2.2	-
H6	Hawthorn; holly; field maple; common ash; English oak; goat willow; elder; sycamore; dog rose	1.5	EM	1.8	-
H7	Hawthorn; blackthorn; holly; field maple; hazel; English oak	1.5	M	1.8	-
H8	Hawthorn; holly; dog rose	1.5	M	1.8	-

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/fruit tree/out of scope (OOS)
- *Tx Estimated tree location where tree is not shown on topographical survey



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
Land north of Barlestone Road, Newbold Verdon

DRAWING TITLE
Tree Survey & Constraints Plan

SCALE
1:850 @ A2

DRAWING NUMBER
BHA_6901_01

DRAWN BY
IM

APPROVED BY
RH

REVISION
A

SHEET
-

DATE
29/01/2026

LAYOUT USED WITHIN DRAWING **XXXXXXXXXX**

CLIENT **CSA Environmental**

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

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Tree No	Species	Height (m)	Life Stage	RPA Radius M	RPA Area M2
T1	Common ash	7.0	SM	2.6	22
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H1	Hawthorn; elder	2.0	EM	1.7	-
H2	Hawthorn; elder; holly; English oak; lilac; dog rose	3.0	EM	1.5	-
H3	Hawthorn; elder; English oak; dog rose	3.0	M	1.8	-
H4	Blackthorn; elder; hawthorn; holly; English elm; hazel; English oak; common ash; dog rose	3.0	M	1.8	-
H5	Common ash; holly; hawthorn; Hawthorn; holly; field maple; common ash; English oak; goat willow; elder; sycamore; dog rose	3.5	EM	2.2	-
H6	Common ash; holly; hawthorn; Hawthorn; holly; field maple; common ash; English oak; goat willow; elder; sycamore; dog rose	1.5	EM	1.8	-
H7	Hawthorn; blackthorn; holly; field maple; hazel; English oak	1.5	M	1.8	-
H8	Hawthorn; holly; dog rose	1.5	M	1.8	-

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
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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/offshoot tree/out of scope (OOS)

*Tx Estimated tree location where tree is not shown on topographical survey

Tree / Hedgerow / Group to be removed

N

GRID NORTH

0

10

20

30

40

50

Meters

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
Land north of Barlestone Road, Newbold Verdon

DRAWING TITLE
Tree Retention & Removal Plan

SCALE
1:850 @ A2

DRAWING NUMBER
BHA_6901_02

DRAWN BY
IM

APPROVED BY
RH

REVISION
B

SHEET
-

DATE
01/06/2026

LAYOUT USED
Development Framework Plan 7625_106_K

CLIENT
CSA Environmental

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

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SECTION 3

CLIENT: WHEELDON BROTHERS 1867

SURVEY DATE: 28/07/2025 & 28/01/2026

INDIVIDUAL TREES

Ref	Species	On/off site	Height (m)	No. of stems	Est diam?	Calc. / actual stem dia. (mm)	Crown radii (m) N-E-S-W	Av. low crown height (m)	1st branch ht (m)	1st branch dir.	Life stage	General observations	Health & vitality	Structural condition	Estimated remaining contribution (Years)	BS 5837 Category	RPA radius (m)	RPA m²
T1	Ash (Common)	On	7.0	1	-	220	2.5-3.5-3.5-3.5	1.0	1.5	E	SM	Natural regeneration growing at base of brick shed building.	Good	Good	20+	C1	2.6	22
T2	Cockspur thorn	Off	7.0	1	-	360	4.5-4.0-4.5-4.0	1.0	2.0	SE	M	Typical twiggy deadwood. One low branch has split and subsided.	Good	Good	40+	B1	4.3	59
T3	English oak	Off	14	1	Yes	1100	5.5-7.0-10.0-7.0	4.0	4.0	E	M	Growing in hedgerow, but lower trunk leans towards verge. Heavy ivy cover. Nearest point of trunk is 1.8m from kerb. Trunk base is 2.5m from kerb. Tree has whole-crown decline, thinng and dieback. Some retrenchment growth of branches, but no strong regrowth response.	Poor	Good	10+	C1	13.2	547
T4	Common ash	Off	18	1	Yes	1200	9.0-12.5-7.0-6.5	4.0	6.5	E	LM	15.6m west of south sign post. Approx 50m from T3. Heavy ivy cover. Old Inonotus hispidus brackets and decayed branch loss wounds. Large low limb fracture stubs to north and west. Branch dieback and deadwood.	Good	Fair	10+	C1	14.4	652
T5	Lime spp.	Off	11	1	-	590	6.5-6.5-6.5-7	1.5	2.0	-	EM	16m west of T6, 3.5m south of hedge line. Planted tree of good form.	Good	Good	40+	B1	7.1	157
T6	Common ash	OFF	16	1	Yes	700	8.5-7.0-7.5-7.0	2.5	4.5	S	M	Heavy ivy cover. Good for.	Good	Good	20+	B1	8.4	222

GROUPS OF TREES

Ref	Species	On/off site	Height range (m)	No. of trees	Est diam?	Max stem diam (mm)	Av. crown radius (m)	Av. low crown height (m)	Life stage	General observations	Health & vitality	Structural condition	Estimated remaining contribution (Years)	BS 5837 Category	RPA radius (m)
G1	Elder	On	4-5	4	Yes	180	2.5	0.0	M	Natural regeneration within and between derelict buildings. Growing within bramble.	Fair	Fair	10+	C2	2.2
G2	Lilac; field maple	On	5.5	3	Yes	150	3.0	0.5	M	Infested with ivy. Outgrown hedgerow trees.	Good	Good	20+	C1	1.8

HEDGEROWS

Ref	Species	On/off site	Average height (m)	Average width (m)	Average stem diameter (mm)	Average low crown height (m)	Life stage	General observations	Health & vitality	Structural condition	Estimated remaining contribution (Years)	BS 5837 Category	RPA radius (m)
H1	Hawthorn; elder	On	2.0	2	140	0.0	EM	Typically maintained at 1.5m height.	Good	Good	40+	B2	1.7
H2	Hawthorn; elder; holly; English oak; lilac; dog rose	On	3.0	2.5	120	0.0	EM	Predominantly hawthorn hedgerow; typically maintained at 1.5m height.	Good	Good	40+	B2	1.5
H3	Hawthorn; elder; English oak; dog rose	On	3.0	3	150	0.0	M	Predominantly hawthorn hedgerow; typically maintained at 2m height.	Good	Good	40+	B2	1.8
H4	Blackthorn; elder; hawthorn; holly; English elm; hazel; English oak; common ash; dog rose	On	3.0	3	150	0.0	M	Predominantly blackthorn; elm; hawthorn and holly hedgerow; typically maintained at 2m height. Three outgrown hollies with low vitality and/or dieback. Shrubs also outgrown at power lines were missed by flail. Elm disease symptoms affecting two short sections plus other occasional outgrown elms.	Good	Good	40+	B2	1.8
H5	Common ash; holly; hawthorn	Off	3.5	4	180	0.0	EM	Predominantly ash and holly hedgerow; typically maintained at 3m height.	Good	Good	40+	B2	2.2
H6	Hawthorn; holly; field maple; common ash; English oak; goat willow; elder; sycamore; dog rose	On	1.5	3.5	150	0.0	EM	Predominantly hawthorn and holly hedgerow; typically maintained at 1.5m height and currently outgrown to 3.5m.	Good	Good	40+	B2	1.8
H7	Hawthorn; blackthorn; holly; field maple; hazel; English oak;	Off	1.5	2.5	150	0.0	M	Maintained hawthorn and holly hedgerow set back from kerb by 1m grass verge. Shallow ditch. Centre of hedgerow is on bank approximately 2.7m from kerb, with original wooden posts.	Good	Good	40+	B2	1.8
H8	Hawthorn; holly; dog rose	Off	1.5	1.5	150	0.0	M	Predominantly hawthorn maintained hedgerow, to south of ditch.	Good	Good	40+	B2	1.8

- The tree survey was carried out with reference to the methodology set out in BS 5837:2012 '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.
- 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.
- OOS: The recorded Out Of Scope trees and features refer to either a dead-standing or failed tree; a stump or minor shrubs; where trees are inaccessible or located off-site and unlikely to be affected by the development or, it is found that the trees are undersized according to BS 5837:2012, which stipulates a minimum recordable diameter of 75mm.

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 root protection area (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. Note: 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, expressed both as the existing height above ground level of the 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, e.g., due to inaccessibility, 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 a 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 on the local landscape and environment. Semi-mature are still capable of being transplanted without preparation, up to 300mm 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 on 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, its 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 epicormic shoot growth).
- Poor: Significant stress or disease noted; larger areas of dieback than above.
- Dead: (or Moribund).

STRUCTURAL CONDITION:

Features affecting the structural stability of the tree include decay, significant deadwood, 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 feature(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

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.

The term '*notable*' carries no weight within the National Planning Policy Framework (NPPF), but is a term that recognises a mature tree which may stand out in the local environment because it is large in comparison with other trees around it.

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 BS 5837:2012; summary definitions as follows (see BS 5837 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 the number 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 150mm diameter.

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

- C1: Unremarkable trees of very limited merit or 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 benefits.

CATEGORY U: VERY LOW QUALITY

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 the 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 2024 (NPPF) (amended 2025) paragraph 193 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 2024 of relevance to this report are:

Paragraph 136: *'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 187: *'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 if 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 Natural England.

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 Planning 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.

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.