Brindle &Green

Arboricultural Impact Assessment

Fairhaven, Kirkby in Ashfield, Nottinghamshire

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Revision Details

Revision	Approved	Revision Details
REV1	Laura Emmerson MArborA Senior Arboricultural Consultant	Amended CEZ positioning adjacent to underground attenuation tank.

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1 Summary

1.1 Scope of report

1.1.1 Brindle & Green were commissioned by Lindum Group to undertake a BS 5837:2012 Tree Survey and Arboricultural Impact Assessment (AIA) at the Former Kirklands Care Home, in Kirkby in Ashfield, Nottinghamshire (hereafter referred to as 'the site'). This report summarises any potential arboricultural impacts and outlines a tree protection plan in relation to a full planning application for a residential development comprising approximately 20 dwellings, with associated road infrastructure, parking and soft landscaping. Design proposals can be found in Appendix 4. The survey was carried out on the 11th April 2025.

1.1.2 This report is concerned with trees that have the possibility to be impacted as a result of development proposals at the site. This includes trees within the site, as well as any outside the boundary that may be impacted by the development and any subsequent post development activity.

1.1.3 This report and accompanying tree survey schedule are produced in accordance with the guiding principles of British Standard BS 5837:2012 'Trees in Relation to Design, Demolition and Construction - Recommendations'.

1.1.4 This report and associated tree survey aim to inform tree mitigation and/or removal for potential development at the site; it is not a health and safety survey. Observations on tree form and condition, from which management recommendations are made, are based upon ground-level visual assessments only. It is important to note that trees are dynamic and often unpredictable; even apparently healthy trees may occasionally fail.

1.2 Desk study

1.2.1 Use of the Ashfield District Council online mapping system confirms that the site is not located within a Conservation Area, nor are there any Tree Preservation Orders (TPOs) relevant to the site. This information is correct as of the 19th June 2025.

1.3 Summary of conclusions

1.3.1 T6, T7 and T10-T15 are required for removal to facilitate the development. Partial removal is also required from H1. A tree protection plan, complete with removal recommendations and mitigation measures has been proposed for the development. **The proposed mitigation will be**

the use of Construction Exclusion Zones, temporary ground protection and permanent ground protection. NOTE, the tree protection plan comprises two phases: with preliminary fencing positions (including temporary fencing) and final fencing positions. The tree protection plan can be found in Appendix 2.

Table 1: Arboricultural considerations relevant to the site

Arboricultural Considerations	Recommendations	Timing
Tree removal/site clearance	Removal of trees/groups of trees to facilitate the development, or due to poor condition.	Pre-commencement and undertaken either outside the breeding bird season (March to September) or during the breeding bird season under ecological supervision
Construction Exclusion Zone (CEZ)	CEZs should be installed to protect retained trees (including RPAs), where required.	Pre-construction
Site supervision	Supervision by the project arboriculturist may be required when activities are required within the RPAs of retained trees (i.e. removal of existing hard surfacing.	During construction
Ground protection	Ground protection (temporary and/or permanent) should be installed to protect the RPAs of retained trees, where required.	Pre-construction and/or during construction
Removal of CEZs and/or temporary ground protection	Removal of the installed tree protection measures after completion of construction onsite.	Post-construction after approval of project arboriculturist
Tree planting	Planting with a mix of native and ornamental species.	Post-construction

2 Introduction

2.1 Context

2.1.1 The purpose of this survey was to provide an assessment of trees which may be impacted by development proposals at the site. A tree survey schedule, compliant with the guiding principles of BS 5837:2012, is contained within this report.

2.1.2 Results and recommendations contained within this report have been prepared by an experienced arboriculturist and are therefore the view of Brindle & Green Limited. The survey is based on information provided by our client, the development proposals, and the results of the desk study and our survey of the site. This report pertains to this information only.

2.2 Purpose of the report

2.2.1 This AIA will evaluate the direct and indirect effects of the proposed development on the site's trees. It will consider the requirement for tree removal to facilitate the design and any potentially damaging activities to retained trees (British Standards Institution, 2012).

2.2.2 An AIA will typically address some, or all, of the following:

- The tree survey (including survey schedule and maps)
- Trees selected for retention
- Trees to be removed
- Facilitation pruning requirements
- Evaluation of the impact of proposed tree losses
- Mitigation measures to implement the design
- Tree protection plan

2.3 The site

The red line boundary is approximately 0.53 hectares in extent and comprises the hardstanding footprint of the Former Kirklands Care Home, in addition to scrub, grassland and scattered trees. The site holds a mixture of Category A to Category U trees, with many high-value trees

located to the south-eastern corner of the site. The site is bound by Fairhaven to the south, Central Avenue to the east and residential development to the west and north. The site is located on the south-eastern outskirts of Kirkby in Ashfield, a town in Nottinghamshire. The wider surroundings are predominated by residential development and agricultural land. The site is the subject of a full planning application for a residential development comprising approximately 20 dwellings, with associated road infrastructure, parking and soft landscaping. Design proposals can be found in Appendix 4.

3 Methodology

3.1 Tree survey parameters

3.1.1 The tree survey was undertaken in accordance with the guiding principles of British Standard 5837:2012 'Trees in Relation to Design, Demolition and Construction – Recommendations.'

3.1.2 Individual trees, groups of trees, woodlands and hedgerows are surveyed. A group of trees constitutes a cohesive arboricultural feature, either aerodynamically, visually or culturally. Where groups or woodlands are surveyed, individual trees may still be assessed if they vary significantly in their attributes.

3.1.3 Information recorded in the survey includes:

- **Species** – listed by common name. In the case of groups, all woody species present will be recorded.
- **Tree Height** – estimated in metres. In the case of groups, the average group height is recorded.
- **Crown Height** – height to the lowest branch is estimated in metres for each cardinal direction. In the case of groups, the minimum crown height is recorded.
- **Stem Diameters** – diameters of single-stemmed trees on level ground are measured at 1.5 metres above ground to the nearest 10 millimetres. Other commonly encountered trees (i.e. multi-stemmed or those on sloping ground) are measured in accordance with Figure C.1, BS 5837:2012.
- **Crown Spread** – recorded in metres along each of the cardinal points. In the case of groups, the maximum peripheral spread is recorded.
- **Life Stage** – recorded as young, semi-mature, mature, veteran, ancient or dead and defined in Table 2.

Table 2: Definitions of tree life-stages, as recorded in the survey schedule

Tree life-stage	Definition
Young	A tree within its first third of life expectancy. Established, but with significant growth remaining to reach ultimate size.
Semi-mature	A tree within its second third of life expectancy. Reaching its ultimate potential height, with slowing growth rate but will still increase in stem diameter and crown spread.
Mature	A tree within its final third of life expectancy. Limited potential for any significant further increase in size, even when healthy. Reasonable remaining life expectancy.
Veteran	A tree with features of biological, cultural or aesthetic value that are characteristic of individuals surviving beyond the typical age range for the species concerned.
Ancient	A tree that has passed beyond maturity and is very old in comparison to other trees of the same species.
Dead	The tree is dead; age up till death is of no significance.

- **General Observations** – including physiological condition (good, fair, poor, decline, dead) and any preliminary management recommendations. In the case of groups, the category awarded is that typical of the group.

- **Life Expectancy** – estimated remaining contribution in years (<10, 10+, 20+, 40+).

3.1.4 Trees will then be categorised as per the criteria shown in Table 3, to ascertain the quality and value of the existing tree stock.

3.2 Root Protection Areas (RPAs)

3.2.1 The **Root Protection Areas** are calculated and recorded in the survey schedule. RPAs are expressed in both linear and square metres. The RPA comprises the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability. The RPA is where the protection of the roots and soil structure is treated as a priority; it is at this distance/around this area that the tree protective fencing should be erected around any trees to be retained.

3.2.2 The default position is that structures are located outside the RPAs of trees to be retained. However, development within RPAs might be proposed when technical solutions allow the tree to remain viable. Such specialist guidance is therefore provided herein, where necessary.

3.3 General information and tree survey limitations

3.3.1 Tree surveys will be plotted directly onto a topographical survey whenever possible. If a topographical survey has not been undertaken, a digital OS map of the site will be used.

3.3.2 Surveyed trees are plotted using a Trimble TDC600 handheld device, partnered with a Geode GPS receiver (GNS2 Multi-GNSS 1Hz Receiver). Normal error of up to 0.5m can be experienced using this device, however care is taken to use the most accurate reading possible.

3.3.3 Where offsite trees have the potential to be impacted by the development proposals, they will be included within the tree survey; all measurements for offsite trees will be estimated from the site. Whenever tree measurements are estimated, this is represented with a # in the survey schedule. Note, detailed visual inspections may not be possible for offsite trees, as potential features/defects may not be visible from the site.

3.4 Report lifespan

3.4.1 We expect the results and recommendations of this report to be accurate for 2 years; however, tree condition may change following extreme weather events, damage or other unforeseen circumstances.

Table 3: Cascade chart for tree quality assessment (BS 5837:2012)

Category and definition	**Criteria (including sub-categories where appropriate)**		
Trees unsuitable for retention			
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	– Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning). – Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline. – Trees infected with pathogens of significance to the health and/or safety for the trees nearby, or very low-quality trees suppressing adjacent trees of better quality. – *NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve.*		
Trees to be considered for retention	**1 Mainly arboricultural values**	**2 Mainly landscape values**	**3 Mainly cultural values, including conservation**
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but	Trees with material conservation or other cultural value

Category and definition	Criteria (including sub-categories where appropriate)		
	unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	situated so as to make little visual contribution to the wider locality	
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value

4 Arboricultural Impact Assessment

4.1 Presence of Tree Preservation Orders (TPOs) or Conservation Areas

4.1.1 Use of the Ashfield District Council online mapping system confirms that the site is not located within a Conservation Area, nor are there any Tree Preservation Orders (TPOs) relevant to the site. This information is correct as of the 19th June 2025.

4.2 Potential for tree damage during development

4.2.1 Many development activities have the potential to damage trees, either directly or indirectly. Direct damage could include root severance, accidental damage to the crown or impact damage, whilst indirect damage predominantly involves soil compaction and the subsequent root loss.

4.2.2 Severing just one of a tree's major roots during careless excavation for construction can cause the loss of up to 20 per cent of the root system; this undermines the tree's ability to absorb water and leaves it unstable in high winds. In general, 80-90% of all tree roots are found in the top 600mm of soil, and almost 99% of the tree's total root length occurs within the topmost 1m of soil, with some variations depending on soil porosity. The potential nuisance that fine root systems create for the development of specific sites must be weighed against the importance that they play in soil stabilisation on sloping ground (acting in a similar way to geotextile matting).

4.2.3 The early provision of physical protection against damage and technical solutions are essential, to ensure the site's retained trees remain healthy and viable.

4.3 Potential incompatibilities between the layout and trees proposed for retention

Construction Exclusion Zones (CEZs)

4.3.1 Four Construction Exclusion Zones (CEZs) are to be established prior to the commencement of any works onsite. To accommodate required working space, a minimum clearance of 2m has been provided between CEZs and the proposed plots. To maximise protected RPA areas, a working space of 0.5-1m has been provided between CEZs and areas of new hard surfacing.

- An underground attenuation tank is to be installed prior to the construction phase, adjacent to H5 and T16-T18. Tree protection fencing forming the CEZ around G5 and T16-T18 will

initially include temporary fencing around the perimeter of the tank, set between 0.5-2m from the tank (see tree protection plan preliminary fencing). Temporary fencing may comprise Heras panels on rubber feet. Once works on the tank are complete, permanent tree protection fencing will be installed in the final position, offering greater protection to retained trees (see tree protection plan final fencing).

- Where parts of the RPA of T5 and T8 have been necessarily excluded from CEZs to provide room for works, temporary ground protection will be installed to minimise root damage.

- Around T8, the CEZ will remain in the indicated position for the duration of construction of dwellings onsite; the CEZ is positioned within the footprint of proposed parking spaces. The client has confirmed that new hard surfacing (paths and parking spaces) will be installed after construction of the plots. Following construction of plots, CEZ fencing will be relocated under arboricultural supervision to allow the proposed parking spaces to be built (with no-dig methods, see Section 4.3.3).

- The CEZ proposed around T19 will occur in the footprint of an existing wall. No temporary ground protection is recommended for the excluded RPA.

4.3.2 CEZs are always to be afforded protection and will be protected by fencing. No equipment or machinery will be stored within CEZs, nor will vehicles or personnel enter these areas. Ground levels will not be changed within CEZs and existing vegetation will be left undisturbed. Regular checks of the tree protection fencing should be carried out by a suitably qualified arboricultural consultant. The indicative locations of the CEZs can be seen on the tree protection plan in Appendix 2; the precise fencing location may require minor adjustment onsite due to local site conditions, but is not expected to differ from that shown on the tree protection plan. In some instances, tree removal or facilitative pruning works will be required for fencing installation; tree protection fencing will be installed immediately after these tree works are completed.

Permanent ground protection

4.3.3 Plans show new hard surfacing proposed within the notional RPAs of T5, T8 and T16.

- New footpaths around the footprint of plots 18 and 19 are proposed within the notional RPA of T5, impacting approximately 12% of the RPA. Permanent ground protection and no-dig

construction is recommended for the footpaths beyond the footprint of existing hardsurfacing **only.**

- New parking spaces for plots 9 and 10 are proposed within the notional RPA of T8, impacting approximately 20% of the RPA. This upper-limit RPA incursion necessitates the use of permanent ground protection and no-dig construction for the parking spaces.

- New hard surfacing is proposed within the notional RPA of T16, due to new parking spaces. Permanent ground protection is not recommended for these parking spaces, as root growth from T16 is likely skewed west, resulting from the mature ash T15 growing in the footprint of the proposed parking spaces.

4.3.4 Cellular confinement systems distribute the load associated with pedestrian use laterally across the ground surface, helping to prevent soil compaction. A geocell depth of 100mm is appropriate for the footpaths for plots 18 and 19, and 150mm depth is required for the parking spaces for plots 9 and 10. The ground protection will remain in place permanently to protect the roots. The hardstanding applied must have a permeable finish to allow water to percolate to the roots. Greater detail on the installation of permanent ground protection will be provided in a subsequent Arboricultural Method Statement (AMS). The required locations of permanent ground protection can be seen on the tree protection plan in Appendix 2.

4.3.5 Note, the geocells are installed above the existing ground level and, therefore, normally raise surface levels; levels are typically raised by approximately 150mm for footpaths (relative to existing ground levels) and approximately 300mm for driveways and roads. In certain instances, these differences in ground levels may make this approach to building in the RPA unfeasible. If level changes cannot be accommodated, plans require revisiting and proposed hardstanding relocating from the RPA. Specifications of the permanent ground protection should be produced or approved by a civil engineer.

Temporary ground protection

4.3.6 Where temporary access or construction working space is required within the RPAs of T5, T8 and T16, temporary ground protection will be installed to prevent soil compaction. Temporary ground protection will be installed pre-commencement of construction works, immediately after the installation of CEZ fencing.

4.3.7 As per BS 5837:2012, temporary ground protection must be capable of supporting the additional load within the RPA. For pedestrian movements only, the temporary ground protection will comprise a single thickness of scaffold boards placed onto a 100mm layer of woodchip, laid on a geotextile membrane. For pedestrian operated plant (up to 2 t), the ground protection will consist of interlinked ground-protection boards, laid on top of a compression resistant layer (as above, 100mm woodchip) on a geotextile membrane. Heavier plant (exceeding 2 tonnes) requires an alternative system to accommodate the load, which must be discussed with the project arboriculturist. Greater detail on the installation of temporary ground protection will be provided in a subsequent Arboricultural Method Statement (AMS). The required locations of temporary ground protection can be seen on the tree protection plan in Appendix 2.

Specialist foundations

4.3.8 Plot 18 is proposed within the notional RPA of T5, with expected incursion of approximately 6%. Conventional foundations are considered appropriate for use within the RPA, due to the minimal incursion.

Soft landscaping within RPAs

4.3.9 Species rich grassland seed mix and native scrub are proposed within the RPAs of retained trees. Further details can be found on the Detailed Landscape Design plan (Brindle and Green, June 2025).

4.4 The working and access space needed for construction

4.4.1 A new site entrance will be established on the southern boundary, providing access from Fairhaven. Tree removal is not required to facilitate the access.

4.4.2 Access into exclusion zones is strictly prohibited without prior amendments to the mitigation proposed. Similarly, building materials must also be stored outside of the CEZs to avoid soil compaction or physical damage.

4.5 Trees proposed for removal

4.5.1 Tree, group and hedgerow removal required to facilitate the development are summarised in Table 4, below. Where partial removal is required from a hedgerow, an estimation of the length of the section to be removed is provided within brackets (m).

Category A Trees	Category B Trees	Category C Trees	Category U Trees
N/A	T6, T11	T7, T12, T13, T14	T10, T15
Category A Groups/Hedgerows	**Category B Groups/Hedgerows**	**Category C Groups/Hedgerows**	**Category U Groups/Hedgerows**
N/A	N/A	H1 (22m)	N/A

4.5.2 Tree and hedgerow removal is required due to conflict with proposed dwellings, parking spaces and gardens, or to provide adequate working space for construction. Tree removal predominantly impacts Category C trees, though two Category B trees will also be removed. Individual details on trees proposed for removal can be found in the survey schedule in Appendix 1.

4.6 New planting

4.6.1 Considerable new tree planting is proposed across the site within areas of POS and gardens, including species such as *Carpinus betulus*, *Sorbus* 'Joseph Rock' and *Prunus* 'Hillieri Spire' (Brindle and Green, Detailed Landscape Design Plan). New native hedgerows are also proposed in several locations.

4.7 Proximity of trees to structures – shading, seasonal nuisance and future pressures

4.7.1 Due to the proximity of trees T1-T5 to proposed plot 19, considerable shading can be expected to the dwelling and associated garden. The garden of plot 18 will also experience partial shading. Architectural solutions which maximise the amount of natural light available, such as light tunnels, should be considered for incorporation into the design of dwelling 19. A shading plan for all trees surveyed can be seen in Appendix 2.

4.7.2 Due to the proximity of T1-T5 to plots 18 and 19, it is recommended that gutters and rainwater down pipes be fitted with mesh leaf guards, due to the potential for seasonal leaf litter.

4.8 Installation of services

4.8.1 Utility plans have not yet been provided. Any underground services already existing on site should be utilised where possible to avoid further disturbance of RPAs. If underground services

are to be installed during the establishment of the main access, they are to follow the access into the site (following the roads). If underground services are to be installed this way, then the likelihood of negatively impacting trees is kept to a minimum. Service trenches should be laid at the greatest distance from the trees as possible. Section 7.7 of BS 5837:2012's guidance on services suggests re-routing into an RPA should be avoided when at all possible. If plans were to change and services were to infringe on Root Protection Areas, effort should be taken to lay them using trenchless 'no dig' methods in order to avoid cutting major roots. Modifications to the alignment should also be made to avoid adverse effects on tree growth and soil stability. Services near existing trees and potential new planting should be ducted when possible for future maintenance. Grouping services will also minimise future disturbance where applicable.

4.9 Facilitative pruning works and further management recommendations

4.9.1 A 2m clearance is required around the footprint of dwellings 18 and 19 to allow for installation of scaffolding. To allow this, a 2.5m crown reduction is required to the northern aspect of the crown of T4, and a 3m reduction is required to the western aspect of the crown of T5. Future crown reductions may be required after re-growth.

4.9.2 Reduction in the width of H3 and H5 is required to install tree protection fencing.

4.9.3 Any appointed contractor must carry out tree works according to BS 3998:2010 'Recommendations for Tree Work'.

5 Conclusion

5.1.1 T6, T7 and T10-T15 are required for removal to facilitate the development. Partial removal is also required from H1. All other trees identified within this report should be retained and protected as outlined via CEZs, temporary ground protection and permanent ground protection.

5.1.2 Tree removal will take place outside of the breeding bird season (March-September) to prevent disturbance. Alternatively, this may be completed under ecological supervision/ reasonable avoidance measures.

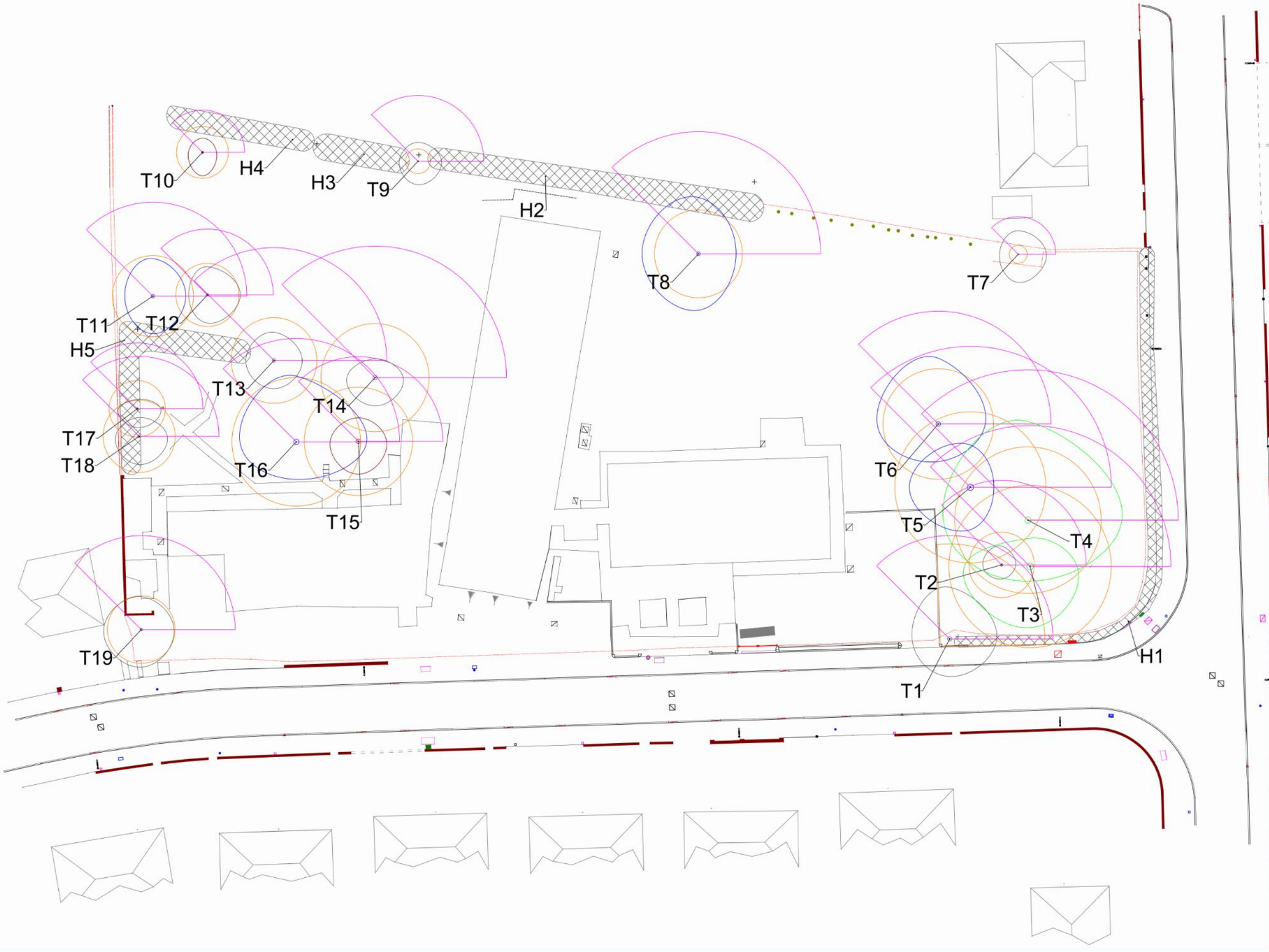
5.1.3 If the protection measures specified in this report are implemented, it is unlikely there will be any major impacts on retained trees. Fencing should be placed prior to any construction works and can be removed after the works are completed. Appendix 3 provides details of the fencing requirements for Construction Exclusion Zones.

Appendix 1 – Tree Survey Schedule

Tree ID	Common Name	Maturity	Height (m)	No. of Stems	Calculated Stem Diameter (mm)	Radius of Nominal Circle (m)	RPA(m2)	Crown Spread (m)				Crown Height (m)				Crown	Stem	Basal Area	BS 5837 Category	Life Expectancy	Phys Condition	Comment
								N	E	S	W	N	E	S	W							
T1#	Wild Cherry	Semi-mature	11	3	470	5.6	99.9	5.5	5	4	4	1	1.5	3.5	4	Fair	Ivy	N/A	C2	10 to 20 yrs	Fair	Multi-stemmed off-site cherry, located behind metal palisade fencing. Heavy ivy obscures stem. In small area adjacent to kerb edging and road.
T2#	Leyland Cypress	Semi-mature	9	1	285	3.4	36.7	2	1.5	1.5	2	2	2	2	2	Poor	Fair	Fair	C1	10 to 20 yrs	Fair	Suppressed by adjacent pine, skewed crown. Diameter measured <1.5m due to stem division at 1.5m. Past pruning to lower stem. Low quality.
T3	Corsican Pine	Mature	15	1	715	8.6	231.3	3	5	6.51	7	8	4	1.5	2.5	Good	Good	Good	A2	20 to 40 yrs	Good	Crown skew due to proximity to plane. Significant landscape value. One of the largest trees in the surroundings. Past pruning to lower stem.
T4	London Plane	Mature	16	1	650	7.8	191.1	10.5	10	6.5	9	1	1	0.5	0.5	Good	Good	Good	A2	>40 yrs	Good	Significant landscape value. Burrs to stem and lower limbs. Stem division at 2.5m, with young rowan growing within union.
T5	Corsican Pine	Mature	15	1	670	8.0	203.1	4.5	2.5	4.5	6.5	6	5	4	1.5	Fair	Good	Good	B2	20 to 40 yrs	Good	Crown skew due to proximity to plane. Significant landscape value. Past pruning to lower stem.
T6	Common Oak	Semi-mature	12	1	490	5.9	108.6	7	5	4	6.5	1	1	1.5	1	Good	Good	Good	B1,2	20 to 40 yrs	Good	Stem division at 2.5m, with pruning to both stems. Some epicormic growth to inner crown. Some crown skew due to adjacent plane and pine trees.
T7#	Common Elder	Young	4	1	75	0.9	2.5	2.5	3	3	2	2	2	2.5	2.5	Fair	Fair	Fair	C1	10 to 20 yrs	Fair	Off-site elder with overhang of approx 1.5m into the site. Unremarkable.
T8	Silver Birch	Semi-mature	13	1	390	4.7	68.8	6	4	6	6	3	1.5	1.5	1.5	Good	Good	Good	B2	20 to 40 yrs	Good	Witches broom throughout crown. Past pruning to stem. Significant landscape value.
T9	Sycamore	Young	7	2	113	1.4	5.8	2	2.5	2.5	2	4	3	2.5	3.5	Fair	Fair	Fair	C1	10 to 20 yrs	Fair	Low quality.
T10#	Malus sp.	Semi-mature	4.5	1	225	2.7	22.9	1.5	1.5	2.5	1.5	3	1.5	4	4	Poor	Poor	Fair	U	<10 yrs	Fair	Topped at approx 1.75m - therefore RPA not accurate. Heavy pruning to lower limbs to stem. Limited crown comprising regrowth. Dead climber. Remove.
T11	Common Pear	Mature	10	1	360	4.3	58.6	4	3.5	4	3	2.5	1.5	1.5	2.5	Good	Good	Fair	B1	20 to 40 yrs	Fair	Mature for species. Heavy bramble around base. Fair physiological condition.
T12	Common Pear	Mature	7	1	280	3.4	35.5	3	3.5	3	2	2.5	1	1.5	3	Fair	Fair	Fair	C1	10 to 20 yrs	Decline	Wounding at base consistent with former mower damage. Showing considerable crown dieback. Physiological decline.
T13	Leyland Cypress	Semi-mature	12	1	375	4.5	63.6	3	3	3	3	1	1	1.5	1.5	Good	Fair	Fair	C2	10 to 20 yrs	Good	Past physical damage to the stem.
T14#	Lawson Cypress	Semi-mature	14	4	477	5.7	102.9	2	3	3	3	0.5	0.5	0.5	0.5	Good	Fair		C2	10 to 20 yrs	Good	Landscape value, dense foliage prevents detailed view of stems or base.
T15#	Common Ash	Semi-mature	9	1	475	5.7	102.1	2.5	3	3.5	3	6	2.5	0.5	0.5	Poor	Fair	Fair	U	<10 yrs	Decline	Fair to poor stem. Progressed ash dieback (ADB) with lesions to large limbs in crown. Upper crown dieback. ADB stage 3, with 50-75% crown dieback. Remove.
T16	Wild Cherry	Mature	11	1	570	6.8	147.0	7	7.5	4	6	1.5	1	5	3	Good	Fair	Fair	B2	20 to 40 yrs	Good	Large surface structural roots, some with damage. Extensive suckering from roots. Some marks consistent with chainsaw to lower limbs. Metal occluded to northern limbs at 2m. Diameter measured below 1.5m due to stem division at 1.5m, some with bark-inclusions. Lots of self-set wild cherry surrounding.
T17	Rowan	Semi-mature	7	1	250	3.0	28.3	1	2.5	2	2	4	3.5	3	3.5	Poor	Poor	Fair	C1	10 to 20 yrs	Poor	Crown in decline with branch dieback. Branch failures with decay to stems. Low quality, remove.
T18	Rowan	Semi-mature	8.5	1	315	3.8	44.9	2	3	3	2.5	2.5	3	2.5	3	Fair	Fair	Fair	C1	10 to 20 yrs	Fair	Fair condition, some areas of decay at former branch attachments to stem and in crown. Unremarkable.
T19#	Crab Apple	Semi-mature	10	1	300	3.6	40.7	3.5	3.5	4	4	2	3	2	2.5	Good	Fair	Fair	C2	10 to 20 yrs	Good	Metal fencing and brick wall close to stem, not directly accessible due to sapling sycamore. Landscape value. Past pruning wounds to the stem.

Group ID	Species	BS 5837 Category	Description
H1	Common Beech, Common Hawthorn	C1	Ownership to be determined by the client. Located outside metal palisade fencing. Predominantly hawthorn, with beech. Grows up to 1-1.5m into site. Adjacent to kerb edging. Height average 2m.
H2	Common Hawthorn, Privet	C1	Hedgerow on northern boundary, dense bramble blocks stems so unable to see if onsite or off-site. Predominantly hawthorn and one privet. Average height 3.5m.
H3	Common Elder, Common Hawthorn	C1	Section of topped hedge, elder and hawthorn. Several trees in decline or dead. Height 2.5m. Low quality and limited screening value.
H4	Common Hawthorn	C1	Low quality disjunct hedge of hawthorn, few trees. Height 5m.
H5	Common Beech, Common Hawthorn	C1	Internal hedgerow, comprising hawthorn and beech. Previously managed at 1.5m with regrowth. Up to 3.5m high.

Appendix 2 – Tree Maps & Tree Protection Plan



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Legend

- Site boundary
- Category A Tree
- Category B Tree
- Category C Tree
- Category U Tree
- Root Protection Area
- Shading Arc
- Category A Woodland, Group or Hedge
- Category B Woodland, Group or Hedge
- Category C Woodland, Group or Hedge
- Category U Woodland, Group or Hedge

Revision	By	Date	Details

Project Reference / Name:

BG25.209 FAIRHAVEN, KIRKBY-IN-ASHFIELD

Client:

LINDUM GROUP

Drawing title:

TREE CONSTRAINTS PLAN
SHEET 1 OF 1

Purpose of issue		Date of issue	
INITIAL ISSUE		22.04.2025	
		Scale @ A1: 1:200	Suitability: S0
Drawn: LE	Checked and approved: HR	Issue: INITIAL	Revision: P01

Drawing reference:

BGXX-XXX-BRGR-ZZ-ZZ-DR-A-00001

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Tel: 0800 222 9105

N

Brindle &Green

Legend

- Site boundary
- Category A Tree
- Category B Tree
- Category C Tree
- Category U Tree
- Root Protection Area
- Shading Arc
- Category A Woodland, Group or Hedge
- Category B Woodland, Group or Hedge
- Category C Woodland, Group or Hedge
- Category U Woodland, Group or Hedge

Revision	By	Date	Details

Project Reference / Name:

BG25.209 FAIRHAVEN, KIRKBY-IN-ASHFIELD

Client

LINDUM GROUP

Drawing title

ARBORICULTURAL IMPACTS PLAN
SHEET 1 OF 1

Purpose of issue		Date of issue	
INITIAL ISSUE		27.06.2025	
		Scale @ A1: 1:200	Suitability: S0
Drawn: LE	Checked and approved: HR	Issue: INITIAL	Revision: P01

Drawing reference

BG25.209-BRGR-ZZ-ZZ-DR-A-00002

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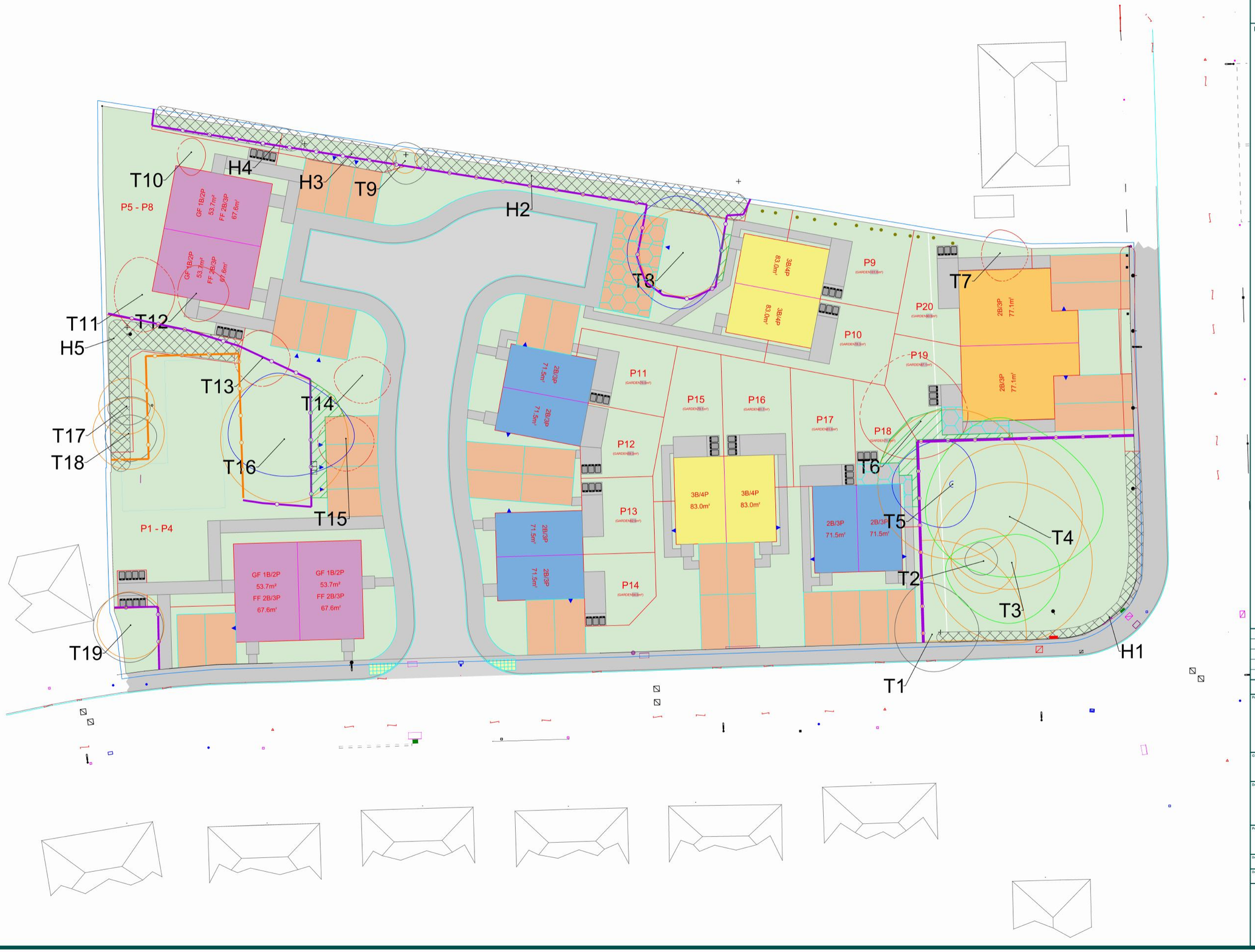

Brindle &Green

Legend

- Site boundary
- Category A Tree
- Category B Tree
- Category C Tree
- Category U Tree
- Root Protection Area
- Category A Woodland, Group or Hedge
- Category B Woodland, Group or Hedge
- Category C Woodland, Group or Hedge
- Category U Woodland, Group or Hedge
- Tree Protection Fencing
- Permanent Ground Protection
- Temporary Ground Protection
- Specialist Foundations
- Trees Proposed for Removal
- Temporary Fencing

Revision	By	Date	Details

Project Reference / Name:

BG25.209 FAIRHAVEN, KIRKBY-IN-ASHFIELD

Client

LINDUM GROUP

Drawing title

TREE PROTECTION PLAN
PRELIMINARY FENCING

Purpose of issue		Date of issue	
INITIAL ISSUE			30.06.2025
		Scale @ A1 1:200	Suitability S0
Drawn LE	Checked and approved HR	Issue INITIAL	Revision P01

Drawing reference

BG25.209-BRGR-ZZ-ZZ-DR-A-00003

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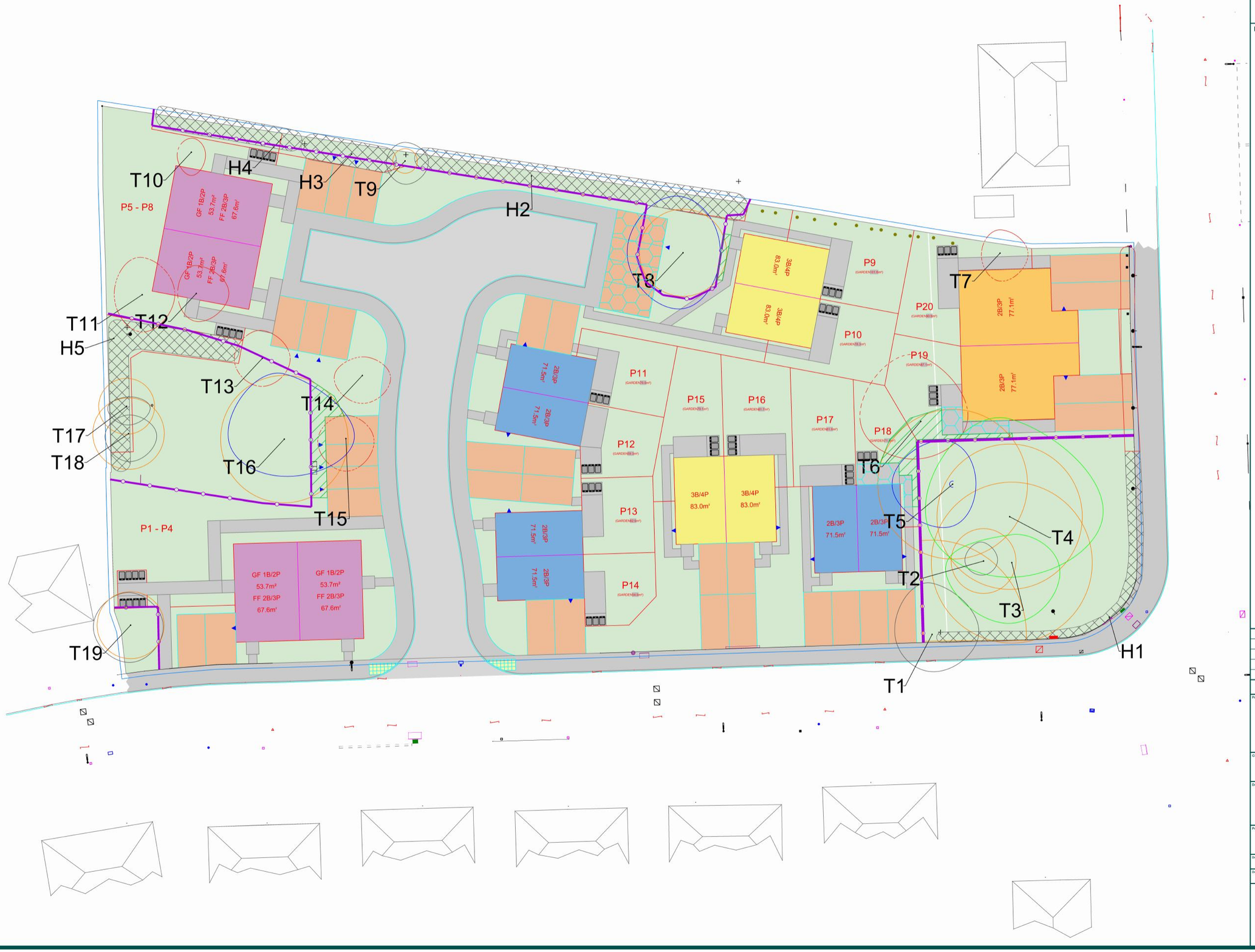

Brindle &Green

Legend

- Site boundary
- Category A Tree
- Category B Tree
- Category C Tree
- Category U Tree
- Root Protection Area
- Category A Woodland, Group or Hedge
- Category B Woodland, Group or Hedge
- Category C Woodland, Group or Hedge
- Category U Woodland, Group or Hedge
- Tree Protection Fencing
- Permanent Ground Protection
- Temporary Ground Protection
- Specialist Foundations
- Trees Proposed for Removal
- Temporary Fencing

Revision	By	Date	Details

Project Reference / Name:

BG25.209 FAIRHAVEN, KIRKBY-IN-ASHFIELD

Client

LINDUM GROUP

Drawing title

TREE PROTECTION PLAN
FINAL FENCING

Purpose of issue		Date of issue	
INITIAL ISSUE			30.06.2025
		Scale @ A1 1:200	Suitability S0
Drawn LE	Checked and approved HR	Issue INITIAL	Revision P01

Drawing reference

BG25.209-BRGR-ZZ-ZZ-DR-A-00003

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Appendix 3 – Tree Protection General Guidance

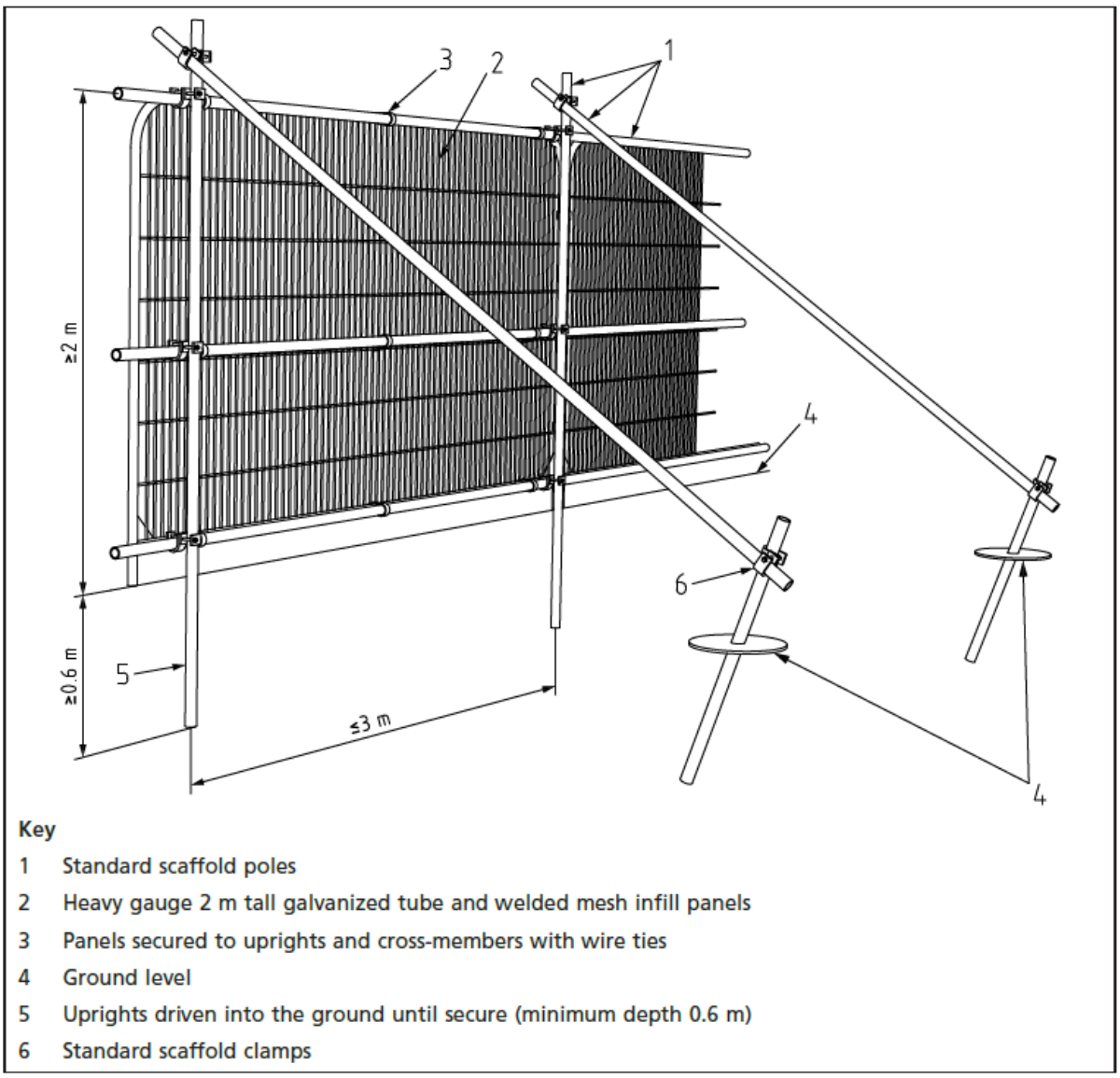
Tree protection specification – protective fencing

The protective fencing used must be fit for the purpose of excluding construction activity.

The default fencing specification should be as per Figure 1 and comprise of a vertical and horizontal scaffold framework. The fencing must be a minimum of 2m tall and well braced to resist impacts. Upright scaffold poles must be driven into the ground by a minimum of 0.6m and spaced at maximum intervals of 3m. Onto this framework, welded mesh infill panels will be secured to the uprights and cross-members with wire ties. The fence should be supported on the inner side by bracing poles. Care must be taken when locating the bracing poles to avoid contact with structural roots.

When the site circumstances prevent the use of driven poles (e.g. due to existing hard surfacing), the fencing specification should be as per Figure 2. This will consist of 2m tall welded mesh panels (e.g. Heras) on rubber or concrete feet, with the mesh panels held together with a minimum of two anti-tamper couplers. Distance between the fence couplers should be at least 1m and uniform across the fencing. Stabiliser structs on the inner side of the fence should be attached to a base plate secured with ground pins (Figure 2a) or mounted onto a block tray (Figure 2b).

Tree protective fencing must have all-weather notices attached at regular intervals, such as those in Figure 3 and Figure 4. The notices must include wording such as 'CONSTRUCTION EXCLUSION ZONE – NO ACCESS' or 'TREE PROTECTION AREA – KEEP OUT'. The tree protective fencing must remain *in situ* and intact until completion of construction; they may be removed after agreement with the project arboriculturist and their removal discharged to the Local Planning Authority.



Key

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

Figure 1: Default specification for tree protection fencing (Figure 2 in BS 5837:2012)

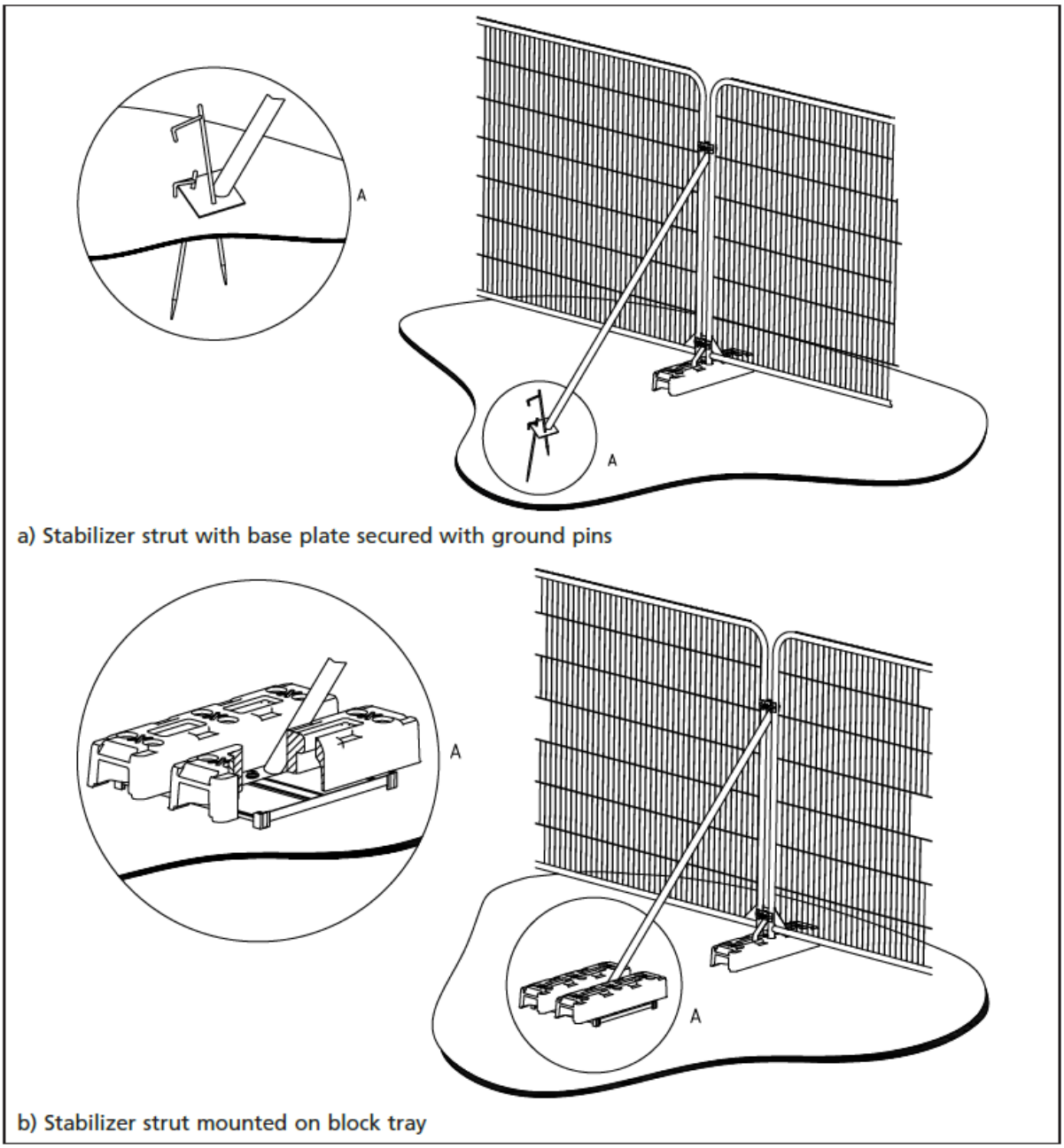


Figure 2: Alternative specification for tree protection fencing (Figure 3 in BS 5837:2012).

Figure 3: Tree protection fencing signage.

Figure 4: Tree protection fencing signage.

Other considerations – statutory controls and wildlife

Statutory controls

Trees may be statutorily protected due to their location within a Conservation Area, or by a Tree Preservation Order (TPO). Brindle & Green Ltd have undertaken TPO and Conservation Area searches to inform this report, using Local Planning Authority online mapping services or by confirming directly with the LPA. The protection status of trees may change between the issuing of reports and the commencement of works onsite; therefore, it is strongly recommended that tree protection status is checked directly with the LPA prior to the commencement of any tree work onsite. Separate works applications to protected trees are not required provided that the works are specified in this report, that this report is submitted to the LPA as part of the planning application and that planning consent is granted.

Bats

Several British bat species will roost in trees. All bats in the United Kingdom and their habitats are fully protected under the Wildlife and Countryside Act 1981 (as amended), and the Conservation of Habitats and Species Regulations 2017 (as amended). It is an offence to damage or destroy any bat roost, intentionally or recklessly obstruct a bat roost, deliberately, intentionally or recklessly disturb a bat or intentionally kill, injure or take any bat.

Breeding birds

All nesting birds are protected under the Wildlife and Countryside Act 1981, which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. In addition, for species listed on Schedule 1 of the Wildlife and Countryside Act 1981 it is an offence to intentionally or recklessly cause disturbance at, on or near an 'active' nest.

Vegetation clearance, including tree and hedgerow removal, during the period March to August can be damaging to active bird nests during the main breeding season. Vegetation clearance on site should ideally take place in the months September to February, outside of the main bird breeding season.

Any vegetation clearance proposed between the months of March and September should be subjected to a search for active birds' nests 24 hours prior to commencement of works. This should confirm whether all or some clearance is achievable. In addition to a pre-works check,

the clearance of vegetation between the months of March and September should be supervised by a suitably experienced ecologist.

Appendix 4 – Site Plans


P5 - P8
P1 - P4
P9
P10
P11
P12
P13
P14
P15
P16
P17
P18
P19
P20
HEDGEROW RETAINED
EXISTING STREETLIGHT TO BE RELOCATED
ON-SITE BNG ENHANCEMENT AREA
LOCATION PLAN
EV CHARGING POINT
LINDUM BMS
Proposed Site Plan
31468 665 02

Appendix 5 – Site Photographs

Image	Description
	Photo of the south-eastern corner of the site.
	Trees T1-T6 at the south-eastern corner.

Image	Description
	T7, a Category C elder.
	T8, a Category B silver birch.

Image	Description
	Poor-quality hedgerow H3, on the northern boundary.
	H4 and T10, at the north-western corner of the site.

Image	Description
	T11 and T12, Category B and Category C pear trees.
	T13 and T14, Category C Lawson and Leyland cypress.

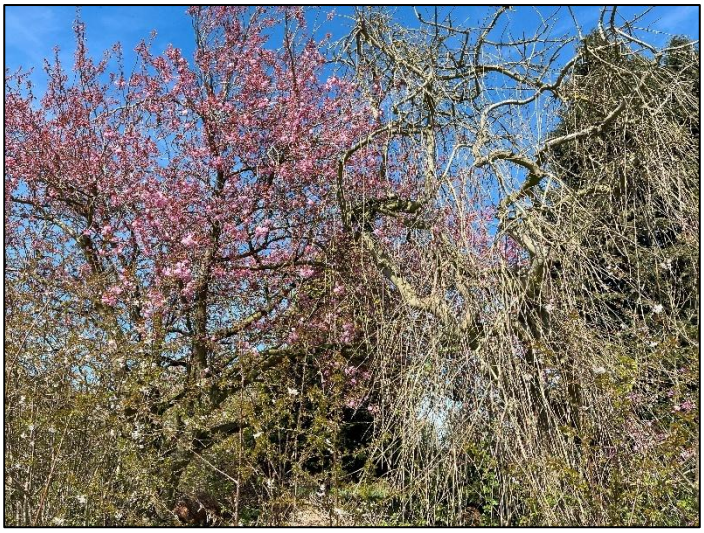
Image	Description
	T15, a Category U weeping ash, and T16, a Category B wild cherry.
	T17 and T18, Category C rowan.

Image	Description
	T19, a Category C apple.

Appendix 6 – General References

British Standards Institution, 1989. *BS 4428:1989 - Code of practice for general landscape operations (excluding hard surfaces).* BSI Standards Limited.

British Standards Institution, 2010. *BS 3998:2010 - Tree work - Recommendations.* BSI Standards Limited.

British Standards Institution, 2012. *BS 5837:2012 - Trees in relation to design, demolition and construction.* BSI Standards Limited.

Mattheck, C., Bethge, K. & Weber, K., 2015. *The Body Language of Trees (Encyclopaedia of Visual Tree Assessment).* Karlsruhe: Karlsruhe Institute of Technology - Campus North, a merger of Forschungszentrum Karlsruhe GmbH.

Roberts, J., Jackson, N. & Smith, M., 2018. *Tree Roots in the Built Environment.* 3 ed. London: The Stationery Office.

Rose, B., 2020. *The Use of Cellular Confinement Systems Near Trees: A Guide to Good Practice,* UK: Arboricultural Association.