Brindle &Green

Arboricultural Impact Assessment

Bank End Primary School, Barnsley

Report Reference: BG25.237

December 2025

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REV1 issued by		

Revision Details

Revision	Approved	Revision Details
REV1		

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Figures

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1 Summary

1.1 Scope of report

1.1.1 Brindle & Green were commissioned by Barker Associates to undertake a BS 5837:2012 Tree Survey and Arboricultural Impact Assessment (AIA) on an area of land at Bank End Primary School, in Barnsley (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 the development of a landscaped play area and garden. Design proposals can be found in Appendix 4. The survey was carried out on the 25th of 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 Barnsley Borough Council's online TPO map confirmed that the site was not located in a Conservation Area, nor were there any TPOs relevant to the site. This information is correct as of the 12th of December 2025.

1.3 Summary of conclusions

1.3.1 T7, T8, G4 and H1 are required for removal to facilitate the proposed landscaping works. 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 CEZ fencing. 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
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

2.3.1 The application site can be found at SE 36168 04500, positioned within Worsbrough Dale on the south-eastern outskirts of Barnsley. The site is located on the grounds of Bank End Primary

School, comprising the currently unoccupied caretaker's house and garden. Boundary fencing surrounds the property, with school parking to the south and a playground to the north. Scattered trees are present on the boundaries of the caretaker's property, in the playground, and in the adjacent car park to the south. Further trees are present north of T12, in the school playground, beyond the original survey scope. The wider surroundings of the site comprise residential development to the south and west, with the school grounds and the grounds of Barnsley Academy continuing further north and east. The site is the subject of a full planning application for the development of a landscaped play area and garden. 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.

3.2.3 Under BS 5837 guidance, RPAs are notionally shown in a uniform, circular shape around a tree's stem; however, where existing site conditions prevent root growth, the shape of the RPA will be modified to reflect likely root distribution using sound arboricultural assessment. As such, the notional RPAs of T1 – T6, T8, T11 and T12 have been skewed to reflect likely root distribution.

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 Barnsley Borough Council's online TPO map confirmed that the site was not located in a Conservation Area, nor were there any TPOs relevant to the site. This information is correct as of the 12th of December 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 One Construction Exclusion Zone (CEZ) is to be established prior to the commencement of any works onsite, protecting T12 in the school playground. Further trees are present north and west of T12, beyond the original survey scope; these trees have not been addressed as part of this report. Due to spatial constraints within the playground, the CEZ fencing will comprise of 2m Heras fencing panels situated on appropriate rubber footings. CEZ fencing will be installed following the removal of the climbing frame in the RPA of T12.

4.3.2 T1 – T6, T9, and G1 – G3 have not been recommended protection via CEZ fencing. The retained trees are located throughout the school car park and are at a suitable distance from the development. T10 and G5, located west of the playground on the school boundary, are also at a suitable distance from the development and not recommended protection via CEZ fencing.

4.3.3 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

4.3.4 There is no requirement for permanent ground protection within this scheme.

Temporary ground protection

4.3.5 Temporary ground protection is not required in this instance as there is no requirement for access into the RPAs of retained trees for works. If proposals change and there is a requirement to work within the RPA of retained trees, suitable temporary ground protection should be installed to protect the soil structure surrounding the tree. The RPA will be left undisturbed and covered by a semi-permeable geotextile membrane, which will be finished with a compression-resistant layer, e.g., 100mm depth of woodchip topped with scaffold boards.

Specialist foundations

4.3.6 There is no requirement for specialist foundations, due to the absence of conflict between the proposed dwelling and the RPAs of retained trees.

Landscaping works within RPAs

4.3.7 The climbing frame within the RPA of T12 is to be removed as a priority, to allow CEZ fencing to be installed. No level changes or grading works are expected to take place within the RPA of T12 and should take place to the east of the retaining feature adjacent to T12, avoiding detrimental impacts to the RPA of the retained tree.

4.3.8 A 1.2m fence is to be installed along the proposed boundary north of T12 alongside a proposed hedge, within the RPA of the retained tree. The fencing is to be installed in a manner that is sensitive to the retained tree and fence posts will be dug by hand. Trial holes will be dug to determine suitable post locations; fence post positions must be sufficiently flexible to allow repositioning if significantly large roots are encountered. Roots under 35mm in diameter should be cleanly severed with a silky saw. If larger structural roots are encountered under 75mm diameter, then a qualified arboriculturist should be consulted to determine the suitability of severance. Further trees are present north and west of T12 that will likely be impacted by the proposed boundary fencing. However, as these trees are beyond the original survey scope they are not addressed as part of this report.

4.4 The working and access space needed for construction

4.4.1 Construction vehicles and personnel will access the site using the existing school entrance.

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.

Table 4: Tree removal required to facilitate development.

Category A Trees	Category B Trees	Category C Trees	Category U Trees
N/A	N/A	T7, T8, T11	N/A
Category A Groups/Hedgerow	**Category B Groups/Hedgerow**	**Category C Groups/Hedgerow**	**Category U Groups/Hedgerow**
N/A	N/A	H1, G4	N/A

4.5.2 Tree, group and hedgerow removal is required to facilitate the proposed landscaping works associated with the play area and garden at the school site. Tree removal predominantly impacts Category C, low-quality trees and will be suitably offset with proposed new planting. Individual details on trees proposed for removal can be found in the survey schedule in Appendix 1.

4.6 New planting

4.6.1 18 trees are proposed for planting at the site, alongside various shrub and hedge planting, as detailed in 'BG25.237 001A Soft Landscape Proposals' produced by Brindle & Green in November 2025. New planting will help to increase the amenity and arboricultural value of the site, alongside offsetting proposed removals.

4.6.2 Replanting should use high quality stock of mix of native and ornamental species to provide ecological, landscape and aesthetic value to the scheme. Stock selection should be discussed with a qualified arboricultural consultant to ensure appropriate trees are selected for the space available; careful consideration must be given to the ultimate height and crown spread, form, fruiting habit and maintenance implications of the chosen species.

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

4.7.1 Shading will have minimal impact on the proposed development. A shading plan for all trees surveyed can be seen in Appendix 2.

4.7.2 Tree size, future growth and light/shading have received due attention and are not considered to be an issue. Overall, the processes of construction are highly unlikely to have a detrimental effect upon the health of the retained trees, assuming recommendations made in this report are

always adhered to by the contractors e.g., the positioning of a stout fence between the retained trees and construction activities prior to the commencement of works.

4.8 Installation of services

4.8.1 New services are not expected as part of the proposed development.

5 Conclusion

5.1.1 T7, T8, T11, G4 and H1 are required for removal due to conflict with the proposed landscaping works. All other trees identified within this report should be retained and protected as outlined via CEZ fencing.

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.

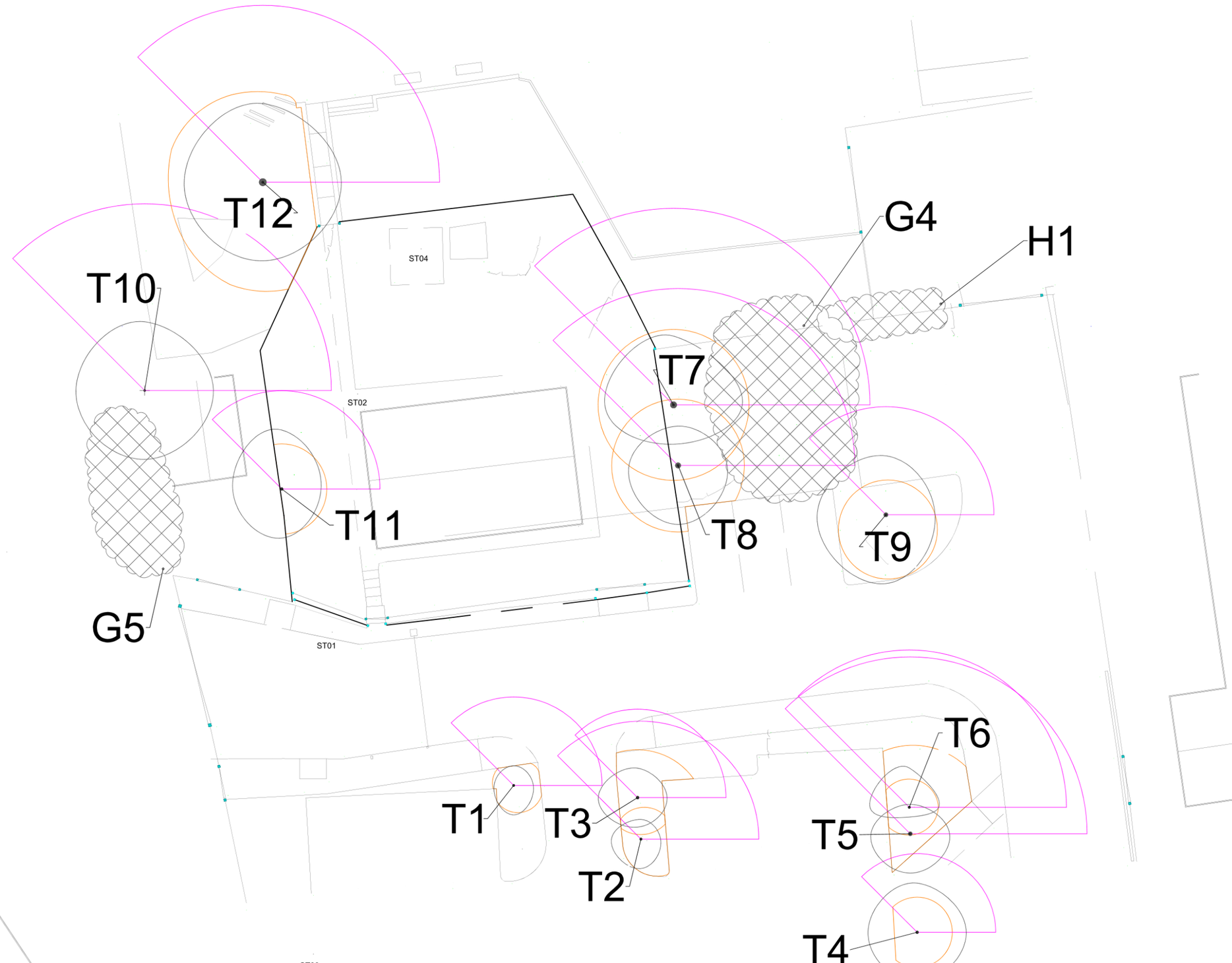
5.1.3 Due to the nature of the development, it is unlikely there will be any major impacts on retained trees if CEZs are implemented and adhered to. Fencing should be placed prior to any construction works and can be removed after the works are completed. Appendix 3 provides details of the fencing requirements 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	Young	4.5	1	105.0	1.3	5.0	1	1	1.5	1	2.5	3	2.5	3	Fair	Fair	Fair	C2	10 to 20 yrs	Fair	Young planted cherry. Restricted rooting area. Planting stake.
T2	Silver Birch	Young	6	2	125.1	1.5	7.1	1	1	1.5	1.5	1.5	1.5	1.5	1.5	Fair	Fair	Fair	C2	10 to 20 yrs	Fair	Restricted RPA. Adjacent to lamppost. Two stemmed at base. Minor pruning lower stems.
T3	Wild Cherry	Young	4.5	1	153.0	1.8	10.6	1.5	1.5	1.5	2	2	2	2	2	Fair	Good	Fair	C2	10 to 20 yrs	Fair	Restricted RPA. Large surface rooting north, mower damage.
T4	Wild Cherry	Young	4	1	135.0	1.6	8.2	2.5	2.5	2.5	2.5	2	2	2	2	Fair	Good	Fair	C2	10 to 20 yrs	Fair	Restricted RPA. Surface rooting south, mower damage. Minor pruning to lower stem. Previous crown reduction works. Relatively sparse.
T5	Silver Birch	Young	9	1	204.0	2.4	18.8	1.5	2	2	2	1.5	1	1.5	1	Good	Good	Fair	C2	10 to 20 yrs	Good	Restricted RPA. Minor pruning south and west for path and parking.
T6	Silver Birch	Young	8	1	116.0	1.4	6.1	2	1.5	0.5	2	1.5	1	1.5	1.5	Fair	Good	Fair	C2	10 to 20 yrs	Fair	Slight kink lower stem. Restricted RPA. Crown skew.
T7#	Sycamore	Young	10	10	316.2	3.8	45.2	3.5	3.5	2	3.5	4	3.5	4	3.5	Fair	Fair	Fair	C2	10 to 20 yrs	Fair	Limited access. Amongst shrubs. Growing in close proximity to chain link fence. Appears to have approx 10 stems at 1.5m. Multi stemmed at base. Minor pruning of lower limbs. Crown skew.
T8#	Sycamore	Young	9	3	271.5	3.3	33.3	2	2.5	3	2.5	4	2	2	1.5	Fair	Fair	Fair	C2	10 to 20 yrs	Fair	Close proximity to chain link fence. Multi stemmed at base. Six stems topped at 0.5-1m. Minor pruning of lower limbs.
T9	Wild Cherry	Young	5.5	1	205.0	2.5	19.0	3	2.5	3.5	3.5	1.5	1.5	1.5	2.5	Fair	Fair	N/A	C2	10 to 20 yrs	Fair	Grassy verge, amongst ornamental shrub. Moderate limb pruned north 1.8m with dysfunctional wood. Minor pruning lower crown and stem. Minor crown reduction works north.
T10#	Wild Cherry	Young	9.5	N/A	N/A	N/A	N/A	3.5	3.5	3.5	3.5	N/A	3.5	3.5	N/A	Good	Good	N/A	C2	10 to 20 yrs	Good	Inaccessible and very limited visibility beyond substation. Unable to determine stem diameter - no RPA shown on tree maps. Crown in good condition.
T11#	Sycamore	Young	5	3	138.6	1.7	8.7	3	2	2.5	2.5	2	1.5	1.5	2.5	Fair	Poor	Poor	C1	10 to 20 yrs	Fair	Fair to poor. Growing at base of hardstanding and wooden fencing. Central stem topped at 1m. 3 stems below 75mm. Metal wire occluded by central stem. Low quality.
T12#	*Salix* sp.	Semi-mature	9	3	364.9	4.4	60.2	4	4	4	4	4	1.5	2	5	Good	Good	Fair	C1,2	10 to 20 yrs	Good	Multi stemmed at 1m. Estimated from distance, in adjacent playground. Good even crown. Minor overhang.

Group ID	Species	BS 5837 Category	Description
G1	Privet	C2	Off site young group behind palisade fencing. Multi stemmed, average below 75mm. Minor overhang. Height 3-4m. Fair. Clearance 2m.
G2	Silver Birch, Common Alder, Sycamore	C2	Low quality group of silver birch, alder and sycamore behind palisade fencing. Poor condition. Height 7m average. Heavy past pruning, including topping of multiple stems. Alder below 75mm. Average stem 100mm. Crown clearance 2m.
G3	Common Hazel, Sycamore, Cherry Laurel	C2	Dense group of young hazel, sycamore and cherry laurel behind palisade fencing. Fair. Limited visibility due to dense laurel. Height 5m average. Average stem approx 75-100mm. Hazel below 75mm.
G4	Rowan, Cotoneaster, Viburnum sp., Ornamental sp.	C2	Young ornamental group, landscape value. Average stem below 75mm. Max approx 110mm. C2. Height 6m max, average 4m. Fair condition. Grassy verge.
G5	Common Elder, Leyland Cypress, *Thuja* sp.	C2	Elder and cypress group along boundary. Managed for substation entrance. Height 5-6m. Fair condition. Limited access. Unable to determine average stem.
H1	Common Elder, Ornamental spp.	C2	Managed hedge on edge of parking/palisade fencing. Height 2.5m. Width 1m.

Appendix 2 – Tree Maps & Tree Protection Plan



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Legend

- Site boundary
- Category C Tree
- Root Protection Area
- Shading Arc
- Category C Group or Hedge

Revision	By	Date	Details

Project Reference / Name:

BG25.237 Bank End Primary School, Barnsley

Client

Barker Associates

Drawing title

TREE CONSTRAINTS PLAN

Purpose of issue		Date of issue	
INITIAL ISSUE			26.11.2025
		Scale @ A1 1:100	Suitability S0
Drawn HR	Checked and approved LE	Issue INITIAL	Revision P01

Drawing reference

BG25.237-BRGR-ZZ-ZZ-DR-ARB-00001

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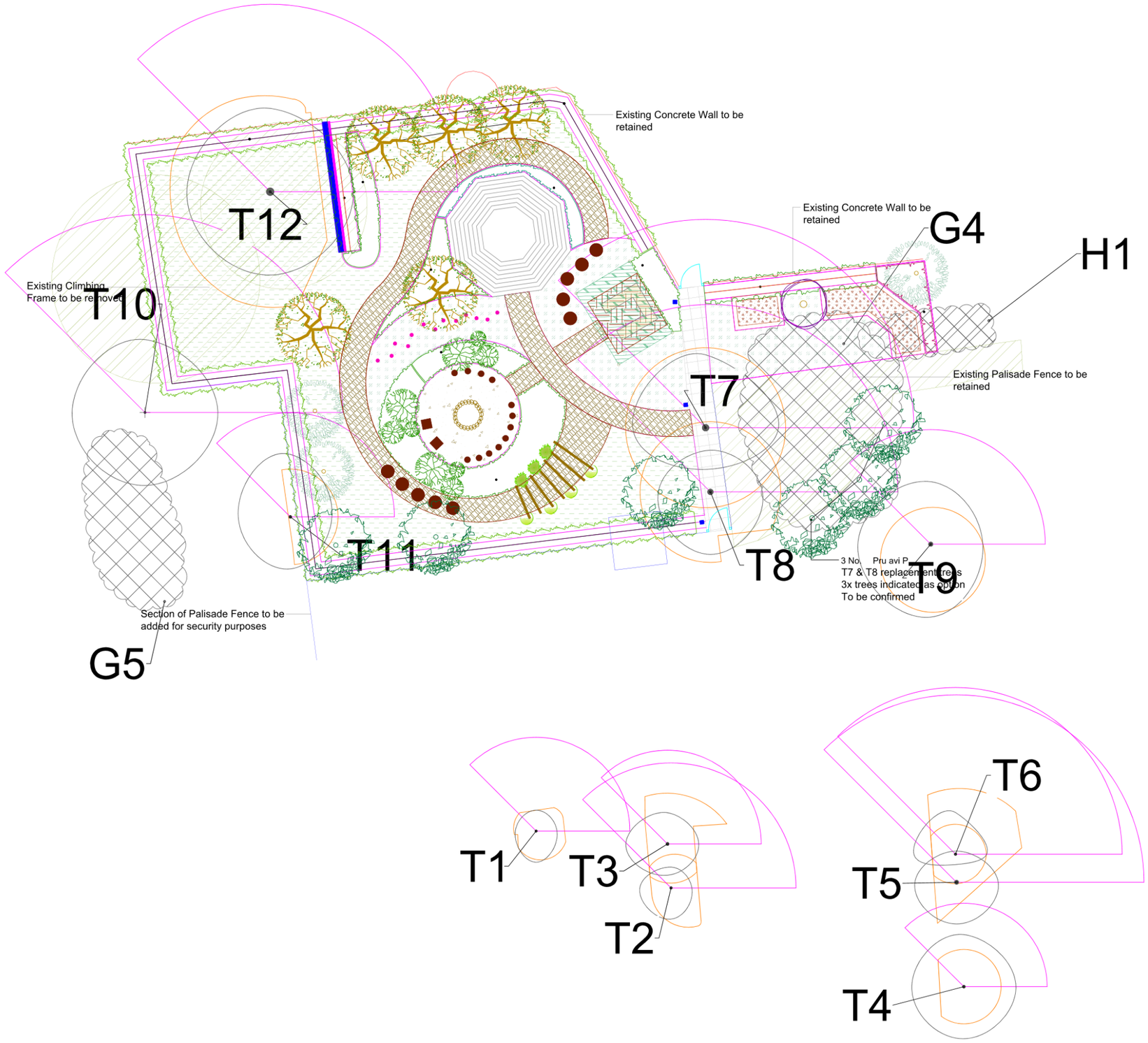

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BG25.237 Bank End Primary School, Barnsley

Client

Barker Associates

Drawing title

ARBORICULTURAL IMPACTS PLAN

Purpose of issue	Date of issue	
INITIAL ISSUE	11.12.2025	
	Scale @ A1: 1:100	Suitability: S0
Drawn: HR	Checked and approved: LE	Issue: INITIAL / Revision: P01

Drawing number: BG25.237-BRGR-ZZ-ZZ-DR-ARB-00002

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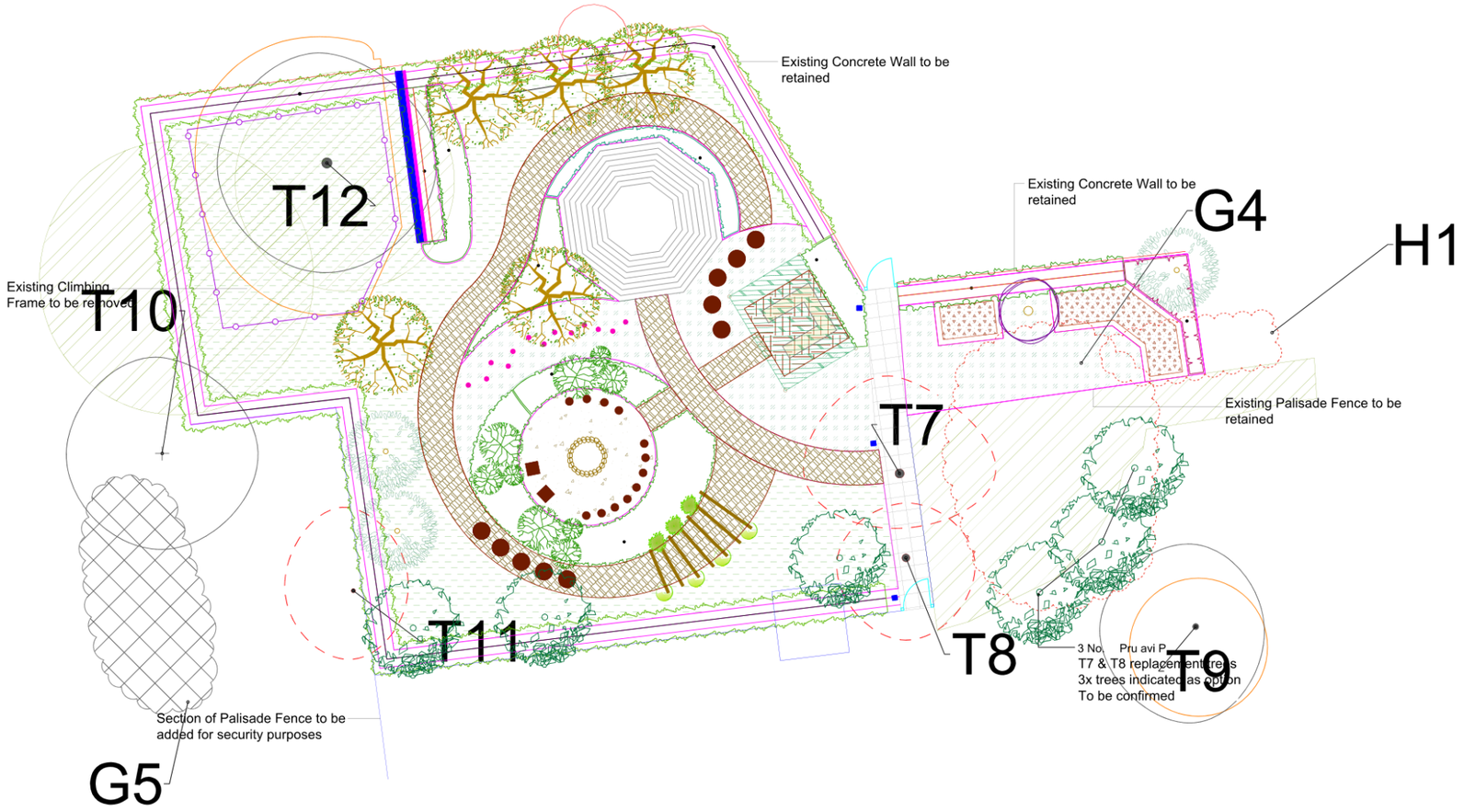

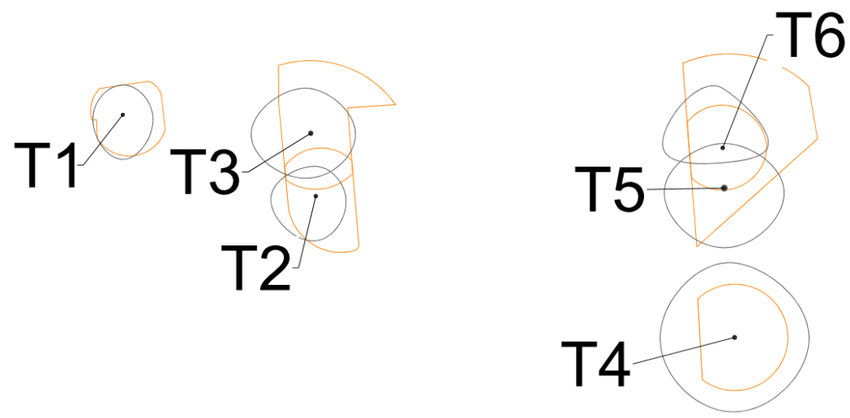

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Legend

- Site boundary
- Category C Tree
- Root Protection Area
- Category C Group or Hedge
- Tree Protection Fencing
- Trees Proposed for Removal

Revision	By	Date	Details

Project Reference / Name:

BG25.237 Bank End Primary School, Barnsley

Client

Barker Associates

Drawing title

TREE PROTECTION PLAN

Purpose of issue	Date of issue	
INITIAL ISSUE	11.12.2025	
	Scale @ A1: 1:100	Suitability: S0
Drawn: HR	Checked and approved: LE	Issue: INITIAL / Revision: P01

Drawing number: BG25.237-BRGR-ZZ-ZZ-DR-ARB-00003

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Appendix 3 – Tree Protection General Guidance

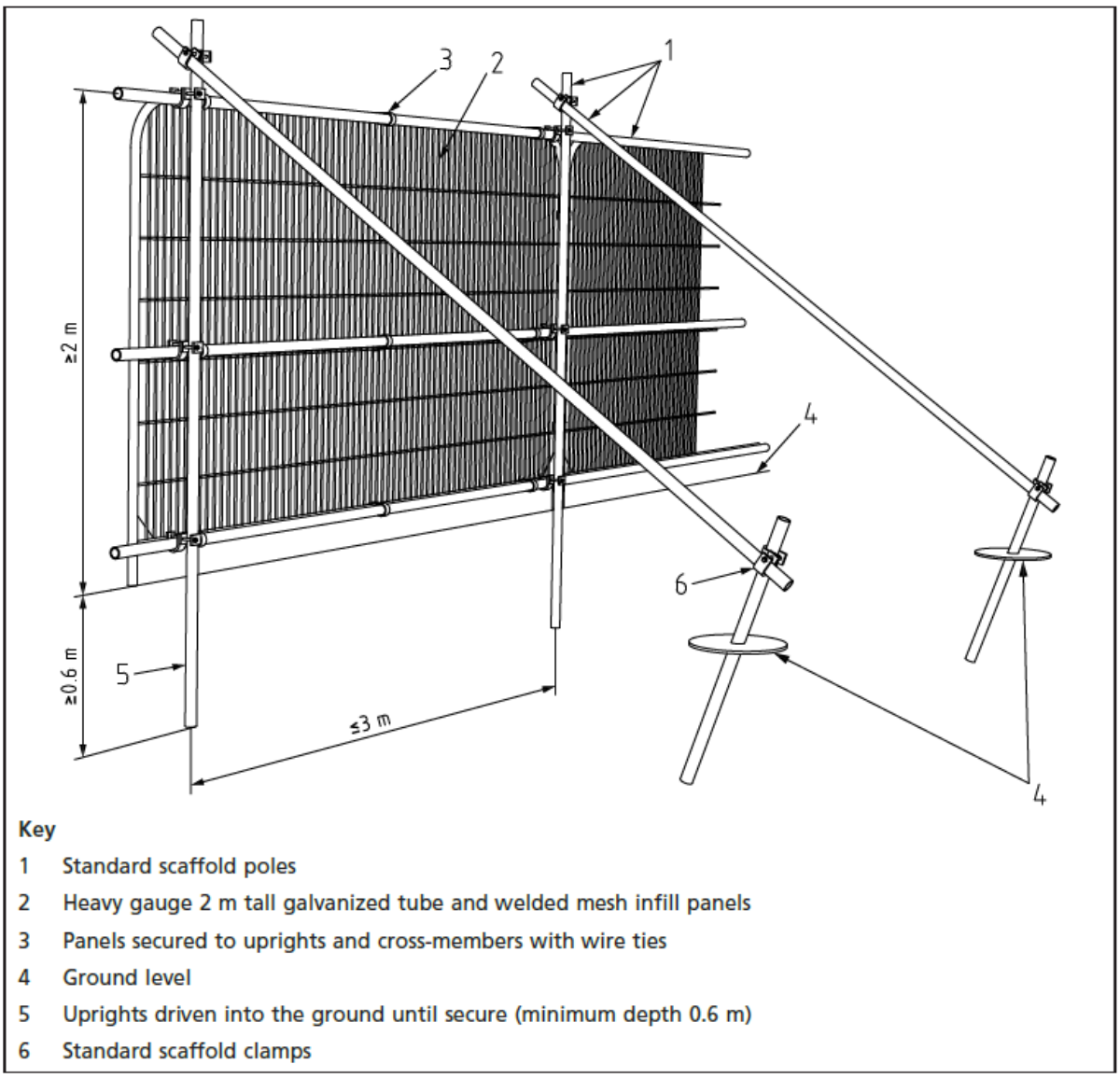
Tree protection specification – protective fencing

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)

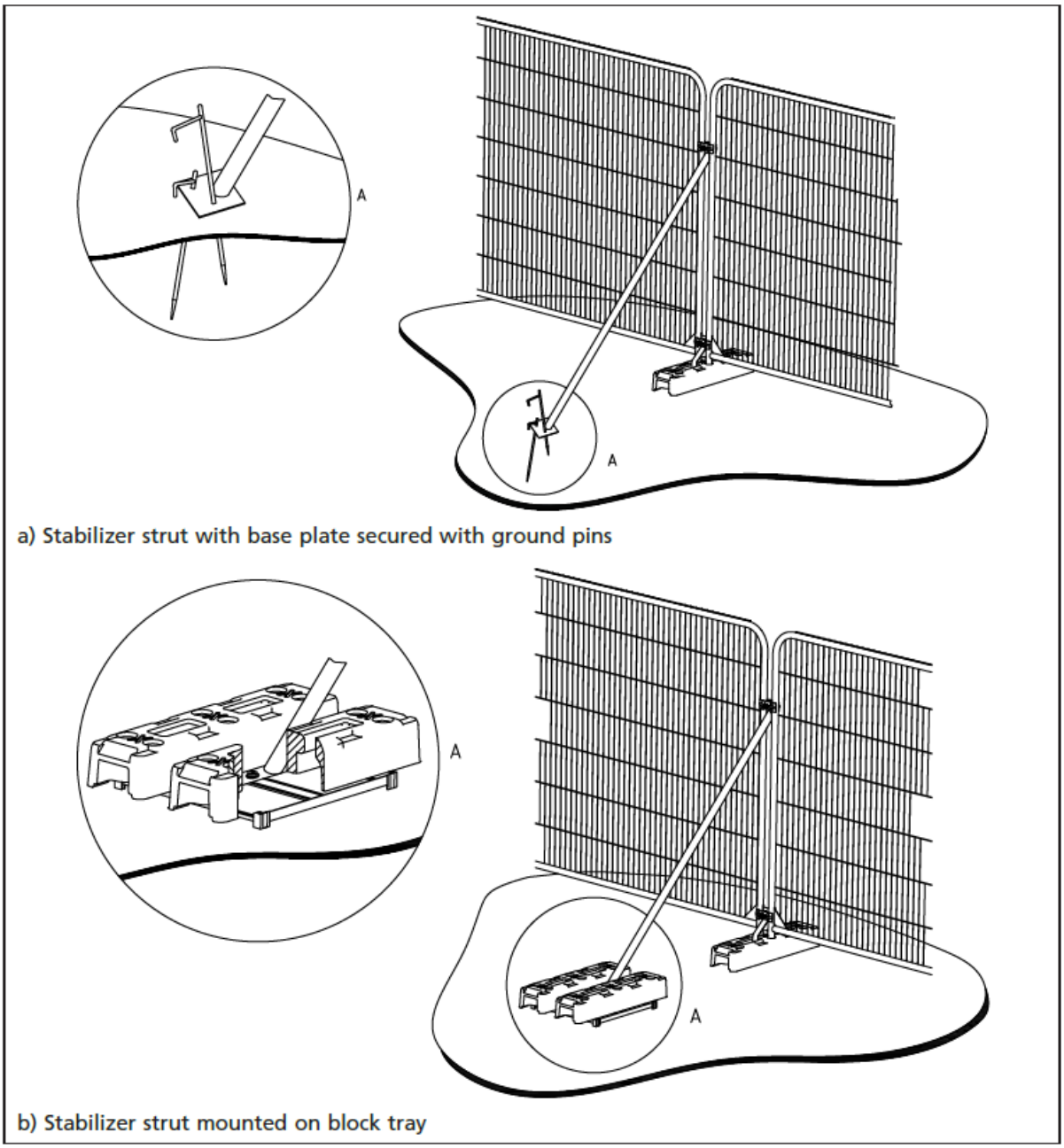


Figure 2: Alternative specification for tree protection fencing (Figure 3 in BS 5837:2012).

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

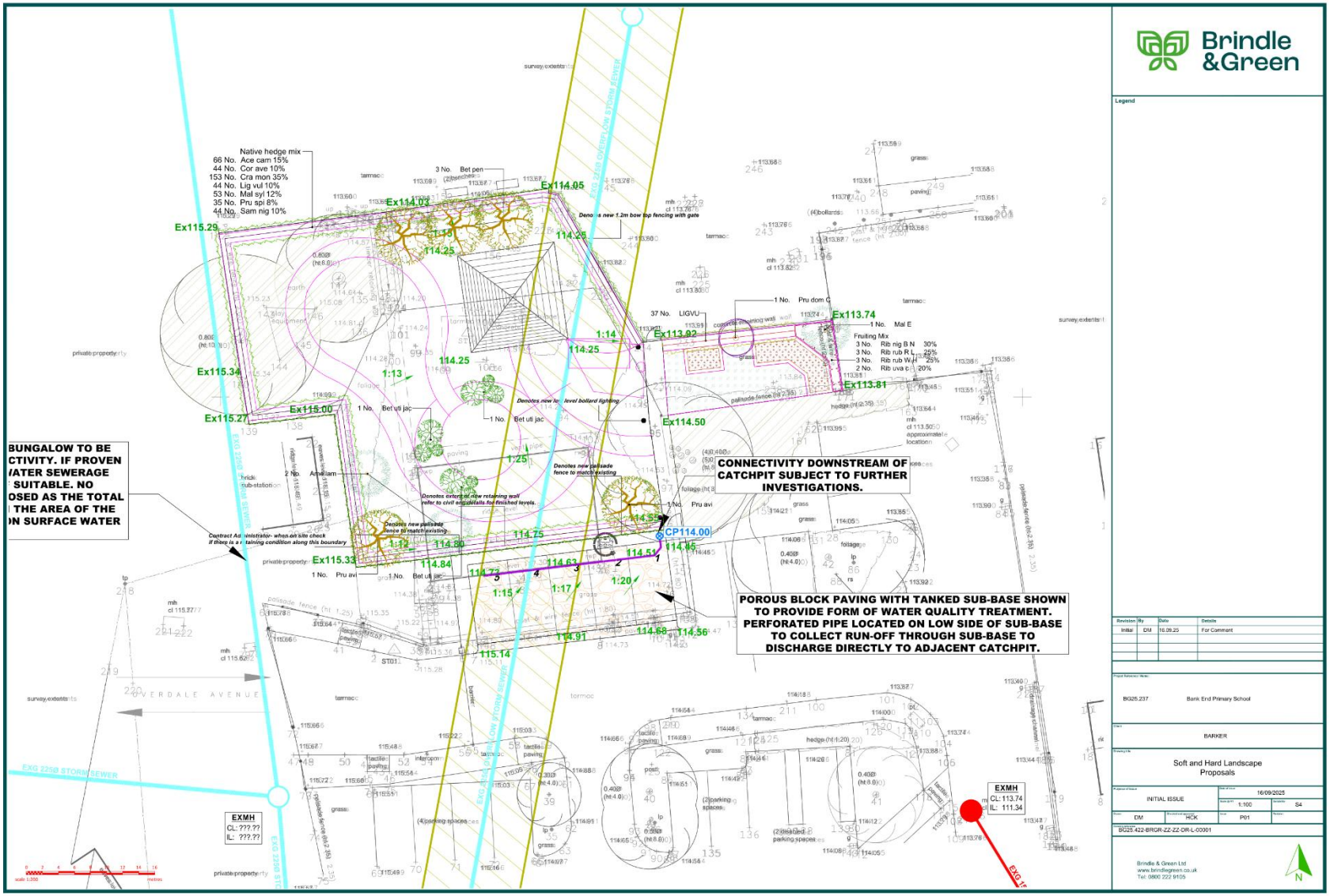
All nesting birds are protected under the Wildlife and Countryside Act 1981, which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. In addition, for species listed on Schedule 1 of the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


Native hedge mix
66 No. Ace cam 15%
44 No. Cor ave 10%
153 No. Cra mon 35%
44 No. Lig vul 10%
53 No. Mal syl 12%
35 No. Pru spi 8%
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CONNECTIVITY DOWNSTREAM OF CATCHPIT SUBJECT TO FURTHER INVESTIGATIONS.
POROUS BLOCK PAVING WITH TANKED SUB-BASE SHOWN TO PROVIDE FORM OF WATER QUALITY TREATMENT. PERFORATED PIPE LOCATED ON LOW SIDE OF SUB-BASE TO COLLECT RUN-OFF THROUGH SUB-BASE TO DISCHARGE DIRECTLY TO ADJACENT CATCHPIT.
CP114.00
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EXMH
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IL: 111.34
VERDALE AVENUE
EXG 225Ø STORM SEWER
Brindle &Green
Legend
BG25.237
Bank End Primary School
BARKER
Soft and Hard Landscape Proposals
INITIAL ISSUE
16/09/2025
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Appendix 5 – Site Photographs

Image	Description
	H1 (right) and G4 (centre).
	T11, on the western boundary line.

Image	Description
	T12, off-site in the school playground, with further off-site trees not surveyed.
	T7 and T8 on the boundary of the caretaker's house.

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.