Arboricultural Report

Proposed development of

Land at

Arminghall Village Hall

Arminghall Lane

Arminghall

Norfolk

28th September 2021

BH Trees and Woodland

Client & Site

c/o Jessica Alford,
Paul Robinson Partnership
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Arminghall Village Hall, Arminghall

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Summary

- This report provides the results of a tree survey of land at Arminghall Village Hall, Arminghall Lane, Arminghall, Norwich, Norfolk NR14 8SF and an arboricultural constraints assessment of the site, which may be used to inform the planning process.
- The local planning authority is South Norfolk District Council and interrogation of the Councils web-based planning constraints search facility confirms that there are no Tree Preservation Orders in the immediate vicinity and that there is no Conservation Area in this part of Arminghall.
- The tree cover is restricted to the hedgerows and some larger trees growing on the boundaries. The hedgerows are of relatively recent origin but have tended by regular trimming.
- Recommended root protection areas are mapped in this report. No construction activities should take place within root protection areas, except as indicated in the detailed method statement.
- We consider that development can be accommodated with minimal impacts on the retained arboricultural interest of the site.

1. INTRODUCTION

1.1. BH Trees and Woodland Consultancy Ltd has been commissioned to prepare an arboricultural report for land at Arminghall Village Hall, Arminghall Lane, Arminghall, Norwich, Norfolk NR14 8SF.

1.2. The current site access is located at approximate grid reference TG 25248 04236.

1.3. The report includes a survey of those trees that may be affected and an assessment of the potential arboricultural impact of the proposed development on the trees.

2. METHODOLOGY

2.1. The tree survey and arboricultural aspects have been prepared in accordance with recommendations provided in BS 5837:2012, Trees in relation to design, demolition and construction – recommendations.

2.2. The site survey included trees, within the boundaries of the site and those considered to be potentially affected by development proposals, with a stem diameter over 75mm at 1.5m height.

2.3. The tree inspection took place from ground level using visual tree assessment methods, with the use of binoculars and Suunto clinometer. The presence and condition of bark and stem wounds, cavities, decay, fungal fruiting bodies and any structural defects that could increase the risk of structural failure were noted.

2.4. Details for each tree were recorded with management recommendations if deemed necessary for the development requirements, a category grading according to BS 5837:2012, and tree protection distance.

Constraints

2.5. No internal decay devices or other invasive tools to assess tree condition were used.

2.6. No soil excavation or root inspection was carried out.

2.7. The survey has not considered the effect that trees or vegetation may have on the structural integrity of future building through subsidence or heave.

3. DESKTOP REVIEW

3.1 The proposed development site is located in the village of Arminghall. **Arminghall** is a small village in the English county of Norfolk, around 3 miles (4.8 km) southeast of Norwich in the parish of Caistor St Edmund and Bixley, until April 2019 it was in Bixley parish. Most of the houses in the village are located close to the church, which lies just west of the B1332 road from Norwich to Poringland.

3.2 The development proposal is for the demolition of the existing village hall building and its replacement with a new residential dwelling house and associated infrastructure for car parking and services.

3.3 The local planning authority is South Norfolk District Council and interrogation of the Councils web-based planning constraints search facility confirms that there are no Tree Preservation Orders in the immediate vicinity and that there is no Conservation Area in this part of Arminghall.

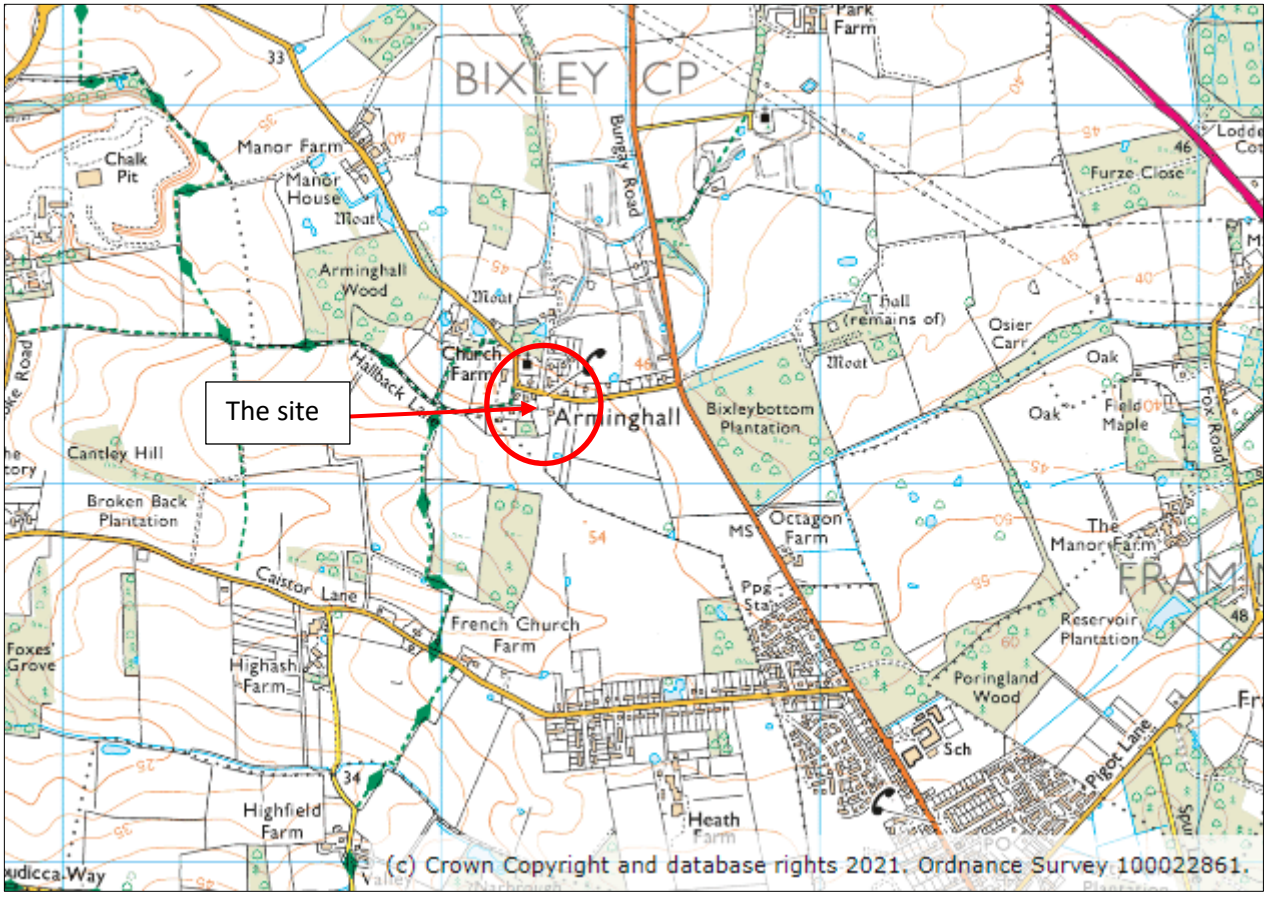

Figure 1. Site location

4. FIELD STUDY

4.1. The site is currently in use as the village hall, with a surrounding skirt of rough grassland being maintained on a low intensity.

4.2. The principle tree interest on the site is derived from the hedgerow and trees along the eastern boundary with the adjacent grassland paddock. There are some holly on the southern boundary and a close trimmed privet hedge on the neighbouring property to the west.

4.3. The actual boundary along the eastern side is difficult to determine. There are hedgerow shrubs on both sides on the drainage ditch.

4.4. There is existing residential development to the south and west, and over the road to the north. To the east of the site is grassland paddocks.

4.5. The soils in this area are naturally slowly permeable, seasonally wet, slightly acid but base-rich loamy and clayey soils, and thus of good fertility and moderately susceptible to compaction. The site stands in The Mid Norfolk National Character Area (NCA 84): "*The broadly flat, rural landscape of the Mid Norfolk National Character Area (NCA) occupies the northern section of the East Anglian Plain, becoming more undulating to the north where it merges with the Central North Norfolk NCA in a curving line across the Wensum Valley, and more rolling towards Norwich to the east. This is ancient countryside with a long-settled agricultural character, where arable land is enclosed by winding lanes and hedgerows,interspersed with woodland and heath and dissected by lush pastoral river valleys. A patchwork of cultivated land, numerous church spires, distant wooded horizons and big skies dominate the landscape.*

This is a tranquil place, with isolated market towns, and scattered villages and farmhouses, their red brick and flint walls and pantile roofs an intrinsic component of Norfolk character. The area is rich in 18th-century estates and medieval churches, and the city of Norwich provides a cultural and economic centre. The many public rights of way (including the Peddars Way and Norfolk Coast Path National Trail and long-distance footpaths), country estates and parklands provide recreational opportunities."

4.6. The site is set within a low density residential area of the village with further residential dwellings on three sides. Sensitive development of appropriate design and scale could be accommodated without any great visual impact.

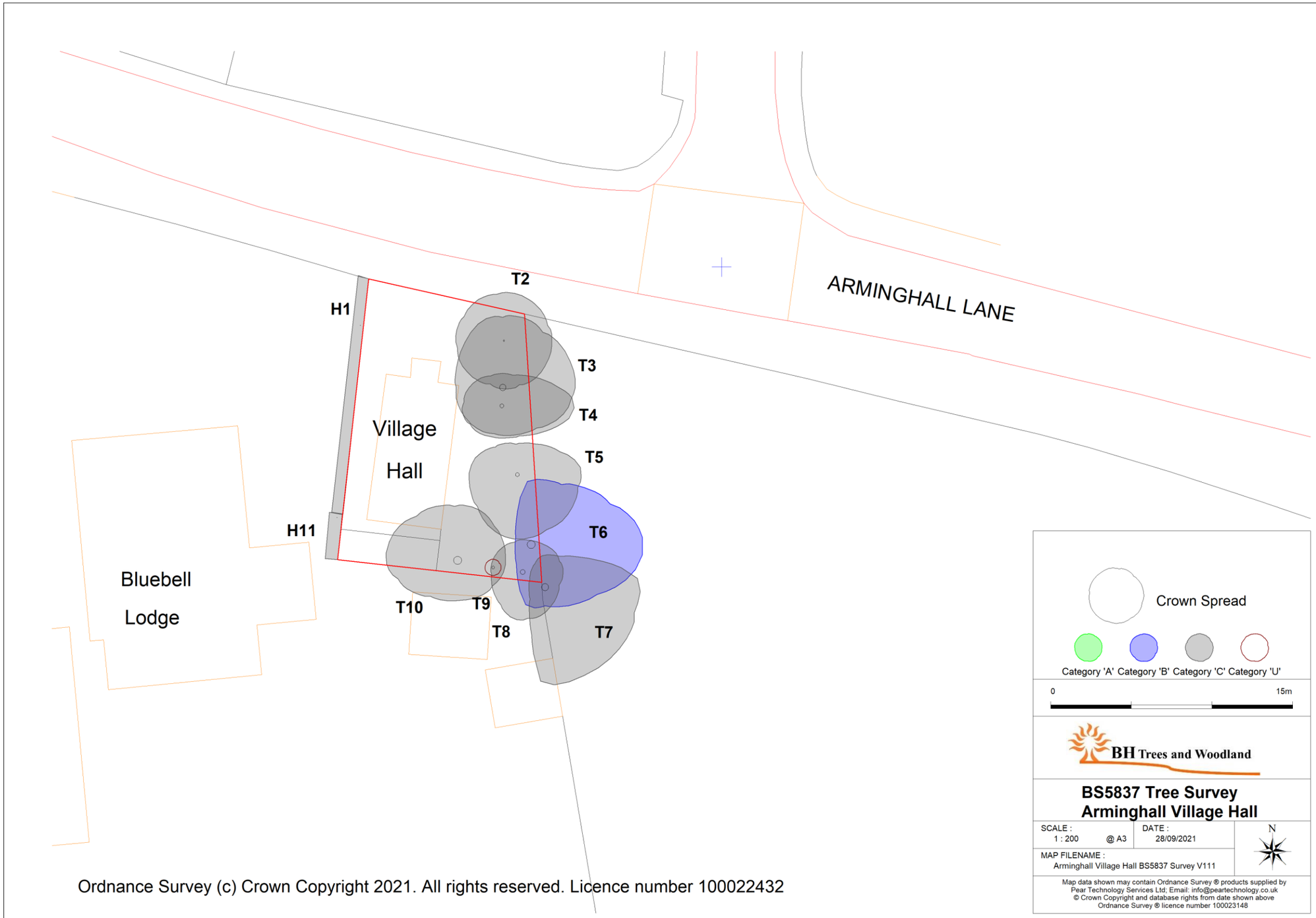

Figure 2: Tree Survey

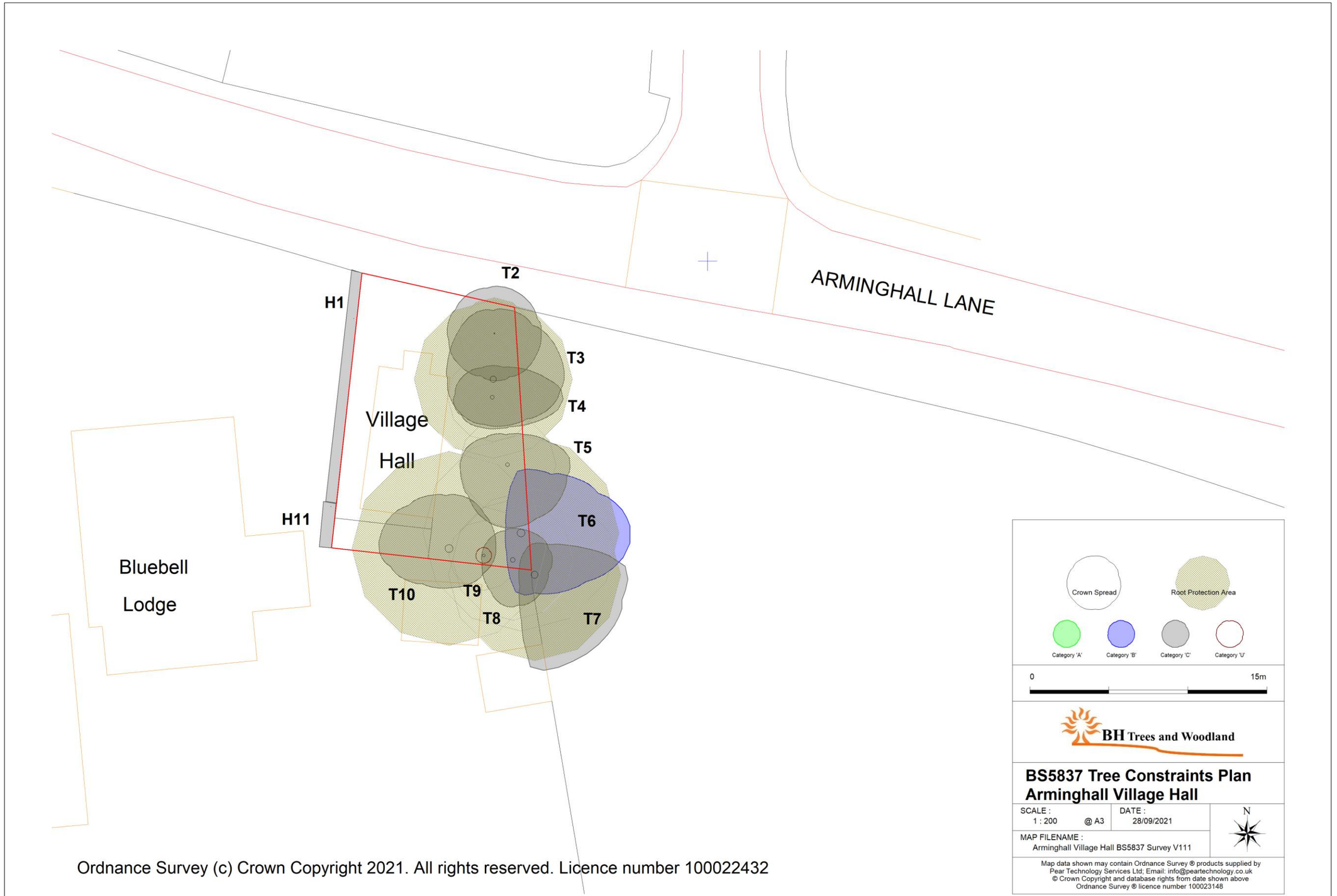

Figure 3: Tree Constraints Plan

5 ASSESSMENT OF ARBORICULTURAL IMPLICATIONS

5.1 The trees likely to be affected on the site are plotted on a plan shown in Figure 2 above and their quality assessment according to the grading categories stipulated in the British Standard. A schedule of the detailed survey data is reproduced in a table at appendix A.

5.2 Whilst the trees do form a feature in the landscape, they are poor quality specimens, the holly having been subjected to harsh lopping in the past and the ash suffering from dieback and consequent reduced future life expectancy and most are downgraded to a "C". The hedgerows are graded "C" as recent plantings and do not have much in the way of ecological value although they do soften the landscape, they can be satisfactorily replaced with new planted if required. The cascade chart for tree quality assessment from BS5837:2012 is reproduced in appendix D.

5.3 No design is proposed as yet, although it is likely that most of the trees would need to be removed to make best use of the plot and minimise conflict from the trees. Ash tree T7 stands in adjacent land ownership and would need to be retained.

5.4 Impacts will be re-assessed once a layout design has been produced.

5.5 Restoration and retention of as much of the eastern hedge as possible would contribute significantly to retaining the important landscape screening function.

5.6 Table 1 –Quality assessment of trees recorded in survey in accordance with BS5837:2012

	Trees	**Groups**	**Hedges**	**TOTALS**	**To be removed (tbc)**
Category U	1	0	0	1	1
Category A	0	0	0	0	0
Category B	1	0	0	1	1(tbc)
Category C	7	0	2	9	6(tbc)
TOTALS	9	0	2	11	8(tbc)

Tree Work

5.7 No tree work was identified as being required at the present time beyond the removal of the category "U" dead stump.

5.8 Any tree work should be undertaken to the standards set out in BS 3998:2010 British Standard Recommendations for Tree Work.

Tree and Root Protection – Constraints on Development

5.9 The Tree Constraints Plan in Figure 3 shows the distance that construction should normally be kept away from retained trees to provide the Root Protection Area (RPA) recommended in BS 5837: 2012. Full protection of the RPAs will be reinforced by creating Construction Exclusion Zones through the erection of protective fencing constructed to at least a minimum standard as prescribed in BS 5837: 2012 and described in the Appendix C. This fencing should carry warning notices to prevent inadvertent encroachment.

5.10 A proposed line for the protective fencing will be illustrated on the tree protection plan in Appendix F and further details provided in the arboricultural method statement can be found in Appendix E once a design has been produced.

6 CONCLUSIONS

6.1 Recommended root protection areas are mapped in this report. No construction activities should take place within root protection areas, except as indicated in the method statement.

6.2 Based on the proposed tree constraints plan and recommended tree protection measures, we consider that development can be accommodated on this site with minimal impacts on the arboricultural interest of the site.

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Appendix A Tree Survey Detail

Tree ID	Common Name	Maturity	Height (m)	Height and direction of first significant branch (m)	Diam (mm) *	RPA radius (m)	RPA Area (m2)	Spread - N (m) ®	Spread - E (m)	Spread - S (m)	Spread - W (m)	Category	Sub category†	Life Expectancy	Phys Condition	Tree work recommendations
H1	Privet	Semi-mature	1.5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	C	1;2	20 to 40 yrs	Fair	No action
T2	Cotoneaster	Semi-mature	5	n/a	75	0.9	3	3				C	1;2	10 to 20 yrs	Fair	No action
T3	Common Holly	Mature	11	2m E	408	4.9	75	4.5	4.5	3	3	C	1;2	>40 yrs	Fair	No action
T4	Common Holly	Semi-mature	9	2m E	230	2.8	24	2	4.5	2	2.5	C	1;2	20 to 40 yrs	Fair	No action
T5	Common Ash	Semi-mature	16	6m E	250	3.0	28	2	4	4	3	C	1;2	20 to 40 yrs	Poor	No action
T6	Common Ash	Mature	16	7m E	506	6.1	116	4	7	4	1	B	1;2	20 to 40 yrs	Poor	No action
T7	Common Ash	Mature	12	1m N	444	5.3	89	2	6	6	1	C	1;2	20 to 40 yrs	Poor	No action
T8	Common Holly	Semi-mature	11	2m	311	3.7	44	2	2.5	3	2	C	1;2	20 to 40 yrs	Poor	No action
T9	Stump	Dead	3	n/a	180	2.2	15	0.5				U	1;2	n/a	Dead	To be removed
T10	Common Holly	Mature	11	3m N	500	6.0	113	3.5	3	2.5	4.5	C	1;2	20 to 40 yrs	Poor	No action
H11	Laurel	Semi-mature	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	C	1;2	20 to 40 yrs	Fair	No action

Key Age class: **Young** (1st qtr of life expectancy) **Semi-mature** (2nd qtr of life expectancy) **Early-mature** (3rd qtr of life expectancy) **Mature** (final qtr of life expectancy)

Over mature (beyond life expectancy and declining naturally)

Veteran (of great age for its species and possibly of conservation value)

*** derived measurement using protocols in BS5837**

† Sub category "1" Arboricultural values, Sub category "2" Landscape values, Sub category "3" Cultural values

® Where only a northerly radial crown spread is given, the crown is assumed to be roughly circular

Appendix B - Photographic record of selected trees

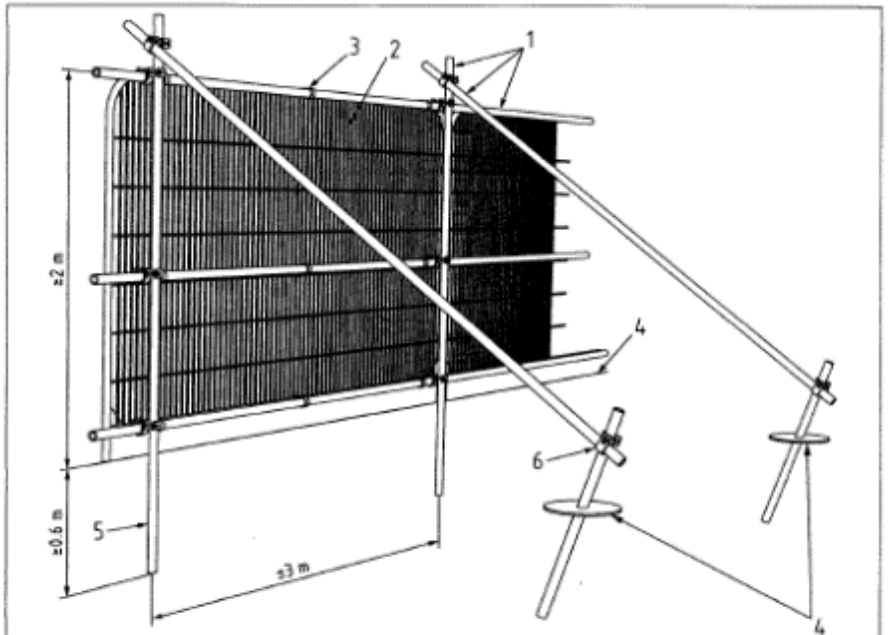
Overview of site from road looking south east

Overview of site from road looking south west

	
Overgrown buddleia and cotoneaster behind signpost	Hollies and robinia regrowth below measurement threshold

Appendix C - British Standard BS 5837:2012 Default specification for protective barrier

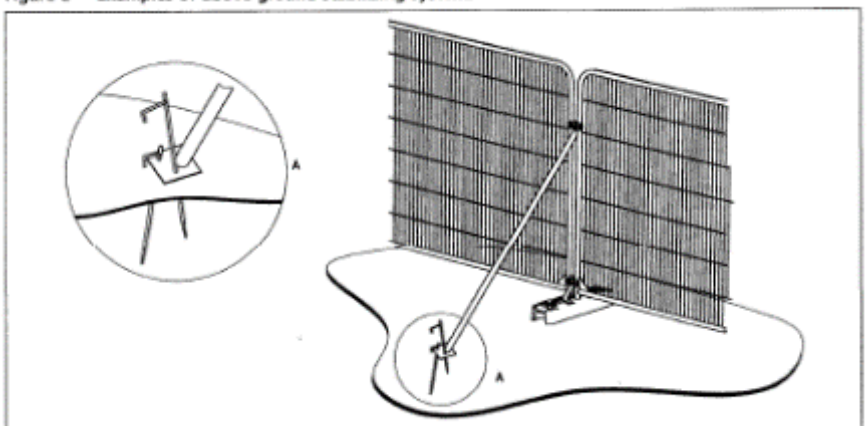
Figure 2 **Default specification for protective barrier**



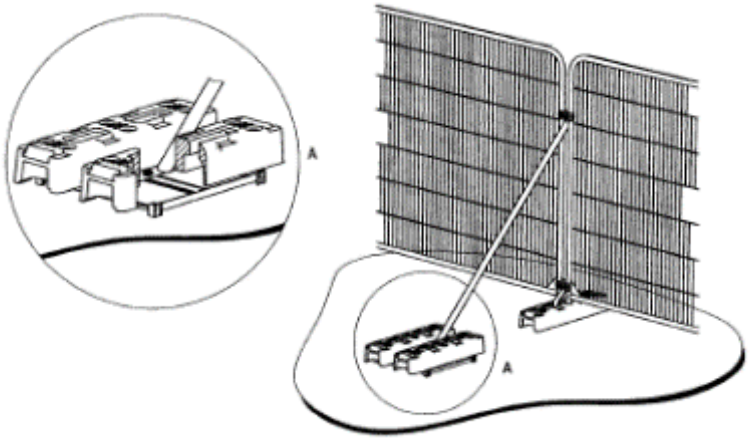
Key

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 3 **Examples of above-ground stabilizing systems**



a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on block tray

Appendix D - BS 5837:2012 Table 1 Cascade chart for tree quality assessment

Table 1 **Cascade chart for tree quality assessment**

Category and definition	Criteria (including subcategories where appropriate)		
Trees unsuitable for retention (see Note)			
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 of other 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; see 4.5.7.*		
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation
Trees to be considered for retention			
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 unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value
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 150 mm	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

Appendix E

ARBORICULTURAL METHOD STATEMENT

Land off Arminghall Village Hall.

Scope of the Works

1. The document provides a methodology for the protection of trees during the proposed development at the above site and should be read in conjunction with the Tree Protection Plan (TPP) in Appendix F and Timetable for Protection Works below.
2. The main features in the protection of the retained trees on site are as follows:
    - Provision of temporary protective barriers
    - Protective measures must be in place prior to any ground or construction works take place.

Timing of Works

3. Tree protection works will be completed according to the timetable below.
4. The exact commencement date is yet to be decided, however, the timetable provides the order in which the works need to be implemented to ensure the trees are suitably protected and states when specific arboricultural input will be required.

Item	Operation	Before starting Works	During Construction Works	On Completion
1.	Carry out a pre-commencement site meeting to discuss any tree protection matters arising	X		
2.	Erect temporary protective fencing (thick pink line) on edge of the CEZ as specified in the AMS and TPP	X		
3.	Erect warning signs on fencing around each CEZ stating “Construction Exclusion Zone - Keep Out”.	X		
4.	Maintain Protective fences and signs in good condition.		X	
5.	Remove protective fencing			X
6.	Check condition of the protected trees and consider if remedial works are necessary.			X

Tree Protection Barriers

5. Retained trees will be protected by forming Construction Exclusion Zones (CEZ) as shown on the Tree Protection Plan.
6. Temporary barriers will be erected as shown by the thick pink lines on the TPP to form the Construction Exclusion Zone (CEZ). The barriers will consist of 2m tall welded mesh panels (Heras) supported on rubber or concrete feet. The fence panels should be joined together using a minimum of two anti-tamper couplers installed so they can be removed from the inside of the fence. The distance between couplers should be at least 1m and be uniform throughout the fence. Panels should be supported on the inner side by stabilizer struts which should normally be attached to a base plate and secured with ground pins. Where the fence will be erected on hard surfacing or it is otherwise unfeasible to use ground pins the struts should be mounted on a block tray.

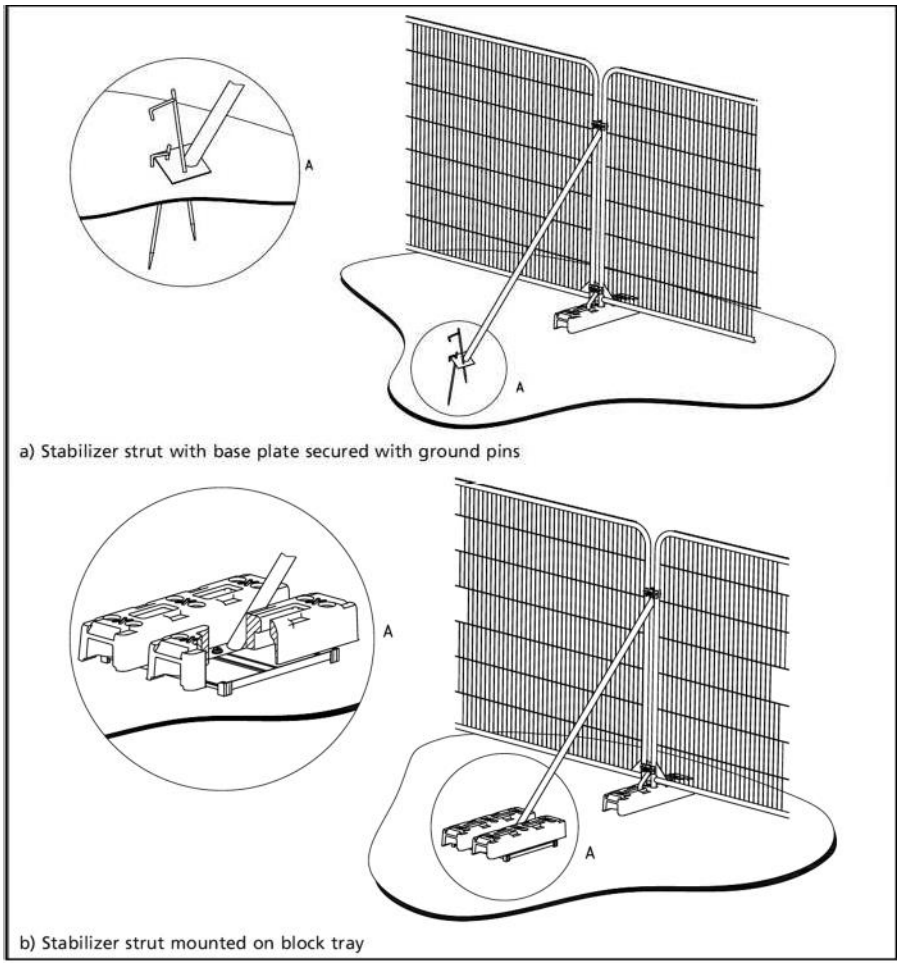


Fig 1: Temporary protective fencing as recommended by the British Standards (2012).

7. Notices should be erected on the barriers forming each CEZ stating “Construction Exclusion Zone – No Access “. These should face outwards towards the work area. Signs must be maintained in good condition and remain in place until completion of the works.
8. Barriers will be maintained throughout the duration of the works, ensuring that access is denied to the CEZ throughout the process.

Storage Shipping Containers, Site Huts and Temporary Buildings

9. All storage containers, site huts and temporary buildings will be sited outside the CEZ.

Additional Precautions

10. The movement of plant in proximity to retained trees should be conducted under the supervision of a banksman to ensure adequate clearance from the branches of the trees. Hydraulic cranes, forklifts, excavators or piling rigs (other than small rigs used for mini piling) must be avoided in the immediate vicinity the crown of the trees.
11. Cement, oil, bitumen or any other products which spillage would be likely to be detrimental to tree growth should be stored well away from the outer edge of the RPA of retained trees. Precautions should include ensuring all toxic liquids are stored in fully bunded containers. Spill kits including absorbent materials must be available on site to deal with any accidental spillages that may occur.
12. Lighting of fires on site should be avoided. Where they are unavoidable they must be at such a distance from retained trees that there is no risk of the heat causing fire damage to the trunk or branches. Full account must be taken of wind direction. Fires must be attended at all times until they are completely extinguished.

Service Trenches

13. No details of new service runs have been provided at this stage. They should be routed to avoid the RPAs of trees. If this is not possible, special techniques must be employed to place the services within the RPA of the trees. The British Standard suggests a range of trenchless methods suitable for various applications including micro-tunnelling, surface launched directional drilling, pipe ramming and impact moleing/thrust boring. It is important common ducts should be used where it is not possible to avoid the RPA. Further guidance on installing underground services adjacent to trees can be found in the NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees (Volume 4 Issue 2).

This document outlines a number of techniques that may be used for trenching near trees, including trenchless techniques, discontinuous trenching and hand digging.

14. It will be necessary to prepare detailed plans for these services that should be produced in conjunction with an arboriculturist, and include allowance for the space needed for access for the installations, and the levels across the proposed area.
15. Any overground services including CCTV must also be positioned to avoid the need for any regular or detrimental pruning to the trees.

Appendix F – Tree Protection Plan