

Arbortrack Systems Ltd
The Granary Studio
Crewe Lane
Kenilworth
Warwickshire
CV8 2LA



Arboricultural Impact Assessment

& Method Statement:

22 Vermont Drive
East Preston
Littlehampton
BN16 1LA

REPORT PREPARED FOR:

Tristan & Louise Byars
22 Vermont Drive
East Preston
Littlehampton
BN16 1LA

REPORT PREPARED BY

James Bell
MSc. (Env). Arbor. A. Tech. Cert.

Ref: jwmb/rpt1/22vermontdrive/AIAAMS

Date: 9th July 2021

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1.0 Introduction

1.1 Purpose & Use of the Method Statement

- 1.1.1 This arboricultural impact assessment & method statement report has been prepared for submission to Arun District Council (ADC) to accompany a planning application for the removal of a single story projection on the existing dwelling and removal of the swimming pool at 22 Vermont Drive, East Preston, Littlehampton, BN16 1LA and for the construction of a new dwelling and an associated driveway and garage to the rear (south) of the current dwelling. This statement is intended to demonstrate the feasibility of construction without harm to the retained tree resource on and adjoining the site. See material accompanying this report for full scheme details.
- 1.1.2 This document lays down the methodology for any proposed works that may have an effect upon the trees on and adjacent to the site. It is essential within the scope of any contracts related to the development proposals that this method statement is observed and adhered to. It is recommended that this document form part of the work schedule and specification issued to the building contractors and can be used to form part of the contract.
- 1.1.3 Copies of this document should be available for inspection on site. The developer will inform the local planning authority within twenty-four hours if the designated arboriculturist is replaced.

1.2 Terms of Reference

- 1.2.1 I am instructed by Tristan & Louise Byars to prepare an arboricultural impact assessment & method statement report to accompany a planning application for a proposed new residential development at 22 Vermont Drive, East Preston, Littlehampton, BN16 1LA with reference to British Standards publication: Trees in relation to design, demolition & construction - Recommendations (BS5837:2012).
- 1.2.2 The tree protection plan at Appendix A is based on topographical survey drawing reference 1220-FA5-T200A1 from ADA Solutions Ltd and proposals drawing reference 22 Vermont Drive – Planning_0.Site Layout from David Fuller Associates.

1.3 Development Proposals & Impact Assessment

- 1.3.1 See section 1.1.1, Appendix A & accompanying material for full details of the development proposals.
- 1.3.2 Low quality trees G4 and G11-27 will be removed to allow or facilitate development. The loss of these low-quality trees is a low and acceptable impact and will have minimal amenity impact on the surrounding area. New planting proposals will return a green screen to the southern boundary of the site and reinstate boundary screening beside the new driveway. See Appendix E for details.
- 1.3.3 The great majority of site works will take place beyond the root protection area (RPA) of retained trees and canopies. Retained trees will be protected throughout the course of development by fencing to the specification recommended by BS5837:2012 - see Appendix C for details of fencing and section 2.2.1 for information on ground protection.

1.4 Sequence of Works

1.4.1 The sequence of works should be as follows:

- tree works required to allow or facilitate development
- removal of single story projection of existing dwelling, swimming pool and associated features to allow construction of driveway
- erection of tree protection barrier (TPB) on advised line(s) and laying of ground protection as indicated
- laying of service runs
- driveway construction followed by main construction of new dwelling and garage
- removal of TPB & ground protection
- soft landscaping – see Appendix E for details

1.5 Site Supervision

1.5.1 An individual, e.g. the Site Agent, must be nominated to be responsible for all arboricultural matters on site. This person must:

- be present on-site for the majority of the time
- be aware of the arboricultural responsibilities
- have the authority to stop any work that is causing, or has the potential to cause, harm to any retained tree
- be responsible for ensuring that all site operatives are aware of their responsibilities toward trees on site and the consequences of the failure to observe these responsibilities
- make immediate contact with the local authority and/or the designated arboriculturist in the event of any tree-related problems occurring, whether actual or potential

1.6 Site Monitoring

1.6.1 The site agent will be responsible for monitoring all arboricultural works, inspecting protective fencing and monitoring any works within exclusion zones. The designated arboriculturist will be available for site visits on a basis to be agreed upon between the client and planning authority when/if appropriate or required, i.e. if required by condition. It is recommended that a record of site visits is maintained for inspection on-site and copies forwarded to the developer/agent and to the local planning authority. A certificate of practical completion can be produced for sites deemed by all parties to merit this.

1.6.2 It is the responsibility of the client to advise Arbortrack when the project begins and to forward on the approval notice when published on the planning portal, should supervision requirements be stipulated.

1.6.3 Principal contact information: 1/. James Bell. Arbortrack Systems Ltd. Arboricultural Consultant 07986 122074. 2/. Mr Mark Warwick. ADC Arboricultural Officer. 01983 737500 or email mark.warwick@arun.gov.uk. 3/. Mr Tim Rodway. Rodway Planning Consultancy. 07818061220. 4/. Site agent details to be advised.

1.7 Statement Adoption

- 1.7.1 It is recommended that, in due course, acceptance of the recommendations in this report is demonstrated by, for example, the architect specifying in writing to the building contractor that tree care conditions apply in execution of the contract and by an estimate or written undertaking from the contractor to the architect demonstrating that the practical aspects of observation of such recommendations have been priced in.
- 1.7.2 If conflicts between any part of a tree and the building arise during the course of development, these can often be resolved quickly and at little cost, if a qualified arboriculturist is consulted promptly. Lack of such care is often apparent quickly, and decline and death of such trees can spoil design aims and can, of course, affect saleability, as well as reflecting poorly on the construction and design personnel involved. Trees that have been the recipients of careful handling during construction add considerably to the appeal and value of the finished development.

2.0 Pre-Development Site Preparation

2.1 Arboricultural Works

- 2.1.1 See Appendix B for full details of tree works required to allow or facilitate development.

2.2 Preparation of Surfaces

- 2.2.1 Areas within RPAs potentially requiring ground protection are shown in Appendix A, i.e. ground within the RPA of tree 7. Ground protection should be fit for purpose as per the guidance in BS5837:2012 section 6.2.3.3. The preferred specification is provided by products such as Dura-base (<https://terrafirma-roadways.com/>), which is widely available and approved by many local authorities. Alternatively, treatments provided by InfraGreen Solutions are available: see www.infragreen-solutions.com.

2.3 Installation of Tree Protective Barrier

- 2.3.1 The TPB must be comprised of a vertical and horizontal scaffold framework, braced to resist impacts, with vertical tubes spaced at a maximum level of 3m. On to this, weldmesh panels should be securely fixed with wire scaffold clamps: see section 6.2.2 and Figure 2 of BS5837:2012 (Appendix C). Hardboard or marine ply sheets can be used as an alternative to weldmesh panels, but these must be fixed firmly to the framework. The location of the TPB is shown in Appendix A.
- 2.3.2 This TPB is to be erected before any construction work commences on site, is to remain 'in situ' and undamaged for the duration of all work or each phase, and is only to be removed once all work is completed. If any work other than preparatory tree work is deemed necessary prior to the erection of fencing, the designated arboriculturist should be informed to enable his/her presence to oversee the work being carried out.
- 2.3.3 The only other exception is the completion of soft landscaping, but if any excavations, however minor, are to be carried out as part of soft landscaping within RPAs, an arboricultural assessment must be carried out beforehand and any arboricultural protection measures incorporated. The TPB should carry waterproof warning notices denying access within RPAs.
- 2.3.4 The Tree Protection Plan in Appendix A illustrates where the protective fencing should be located to form the boundary of the Tree Protection Zone (TPZ). The TPZ is an exclusion zone and suitable steps should be taken to prevent access by pedestrians and vehicles and the storage of any works materials and equipment should be located outside of the TPZ.

2.4 Pre-Development Site Inspection

- 2.4.1 At the instigation of the client/site agent or ADC, upon the erection of the fencing, the designated arboriculturist will meet the relevant local authority member on-site to check the standard of the work(s). If there are any amendments required to the protective fencing, these will be agreed upon at this meeting, confirmed in writing, and undertaken thereafter.

3.0 Development Phase

3.1 General Precautions

- 3.1.1 No fires shall be made on any part of the site or within 10m of the furthest extent of the canopy of any tree or group tree to be retained on-site or on land adjoining.
- 3.1.2 No spilling or pouring of fuels, oils, solvents, or tar shall be made on any part of the site.
- 3.1.3 No materials that are likely to have an adverse effect on tree health, such as oil, bitumen or cement, will be stored or discharged within 10 metres of the trunk of a tree that is to be retained.
- 3.1.4 No spillage or discharge of wet mortar or concrete shall be made on any part of the site.
- 3.1.5 No storage of materials shall be made within the protective fences.
- 3.1.6 No breaching or moving of the protective fences shall occur without the approval of the designated arboriculturist.
- 3.1.7 Alterations in levels within the tree protection fence areas shall be avoided.

3.2 Root Protection Areas

- 3.2.1 The RPA is a desirable zone of protection around the trees' rooting system and these have been marked on the plan in Appendix A. The RPAs will lie within the TPZ and therefore be fully fenced off (see Appendix A) unless where appropriate ground protection is offered.

3.3 Site Access, Accommodation & Storage

- 3.3.1 Many site activities are potentially damaging to trees, e.g. material storage, parking, soil compaction and the use of plant machinery. In this latter example, particular care is required to ensure that the operational arcs of excavation and lifting machinery, including their loads, do not physically damage trees when in use or while accessing the site.

3.4 Routing & Installation of Services

- 3.4.1 It is assumed that service runs will be brought in down the line of the new driveway. Service runs should avoid RPAs of retained trees where possible. If required, any trenches within the RPAs of site trees should be hand-dug and kept as narrow as possible. They should not extend to within 1m from the base of any retained tree trunk. Exposed roots larger than 25mm in diameter should be retained with their bark intact and, when exposed, wrapped in dry hessian sacking. A mechanical mole should ideally be used for the section beneath a tree. The mechanical device is sent through the protected area at a depth of no less than 0.6m. Machinery should be selected which can be externally lubricated by water rather than oil etc. The designated arboriculturist should be informed in advance of such operations so that monitoring arrangements can be undertaken.
- 3.4.2 Where crown interference with mature trees is a possibility, over-ground services will be routed in an alternative direction. In relation to this, any landscaping taking place should accommodate the presence of over-ground services and take mature tree size into account.

3.5 Demolition Measures

- 3.5.1 If required, access facilitation pruning should be undertaken to prevent injurious contact between demolition plant and the tree(s). Any such pruning should be undertaken in accordance with British Standards publication: Tree work – Recommendations (BS3998:2010).
- 3.5.2 Demolition/removal of structures (including underground structures) within what would otherwise be an RPA should proceed with due caution to avoid unnecessary damage to trees.
- 3.5.3 All plant and vehicles engaged in demolition works (removals only), if not operating on existing hard standing, should either operate outside the RPA or should run on a temporary surface designed to protect the underlying soil structure. See section 6.2.3.3 for further detail.
- 3.5.4 Where trees stand adjacent to structures scheduled for demolition, it will be necessary to undertake demolition inwards within the footprint of the existing building (often referred to as “top down, pull back”).

-
- 3.5.5 If the weather is “dry,” the site should be watered down to reduce dust travelling to adjacent properties. Where levels of dust build-up on trees occurs it may be necessary to seek the advice of the designated arboriculturalist on remedial measures, e.g. hose down the tree(s) immediately following any significant accumulation of dust.
 - 3.5.6 Heavy plant used to remove materials should work systematically *away from retained trees*. The aim is to ensure that spoil is removed away from RPAs, but it is very important that the original soil levels are not altered.

3.6 Changes in Grade

- 3.6.1 The upper layer of top soil (top 60cm) contains the majority of a tree’s roots, and if this is disturbed by a change in ground level, serious damage can be caused. On this basis, as a minimum, level changes should be avoided within RPAs.
- 3.6.2 If any significant section of ground-level requires raising within RPAs, this should be achieved using coarse, granular material such as pebbles. See section 7.4.4.4 of BS5837:2012.
- 3.6.3 If ground levels need to be altered within 1.5 metres of any tree trunk prior agreement must be sought and given by the local authority tree officer.

3.7 Construction Measures

- 3.7.1 No specialist construction methods are required for the building footprint or for new hard standing in terms of trees.

3.8 Removal of Tree Protective Barrier

- 3.8.1 The protective fencing may be removed only upon completion of the development phase when all drainage and service runs have been installed and any site machinery has been removed.

3.9 Post Construction Landscaping

- 3.9.1 Following the developing phase, some trees may be subject to either landscaping or seeding beneath their canopy, but, at this stage, the protective fencing will have been removed.
- 3.9.2 Any approved landscaping works should avoid the changing of ground levels or deep digging. Mechanised cultivation such as tractor-mounted rotovation must not be used within the RPAs of existing trees.
- 3.9.3 Heavy machinery should not be used in the vicinity of any retained trees.
- 3.9.4 If herbicides are to be used, they should be appropriate to their purpose and not be used in such a way as to damage any retained trees or vegetation.
- 3.9.5 Ideally, retained trees should be within a shrub area as this reduces the chances of compaction and disturbance of root systems.

4.0 Summary of Proposed Methods

4.1 Table of Impacts and Mitigation

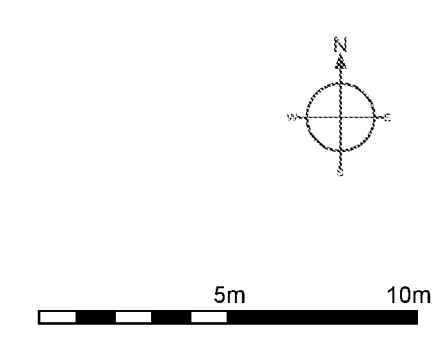
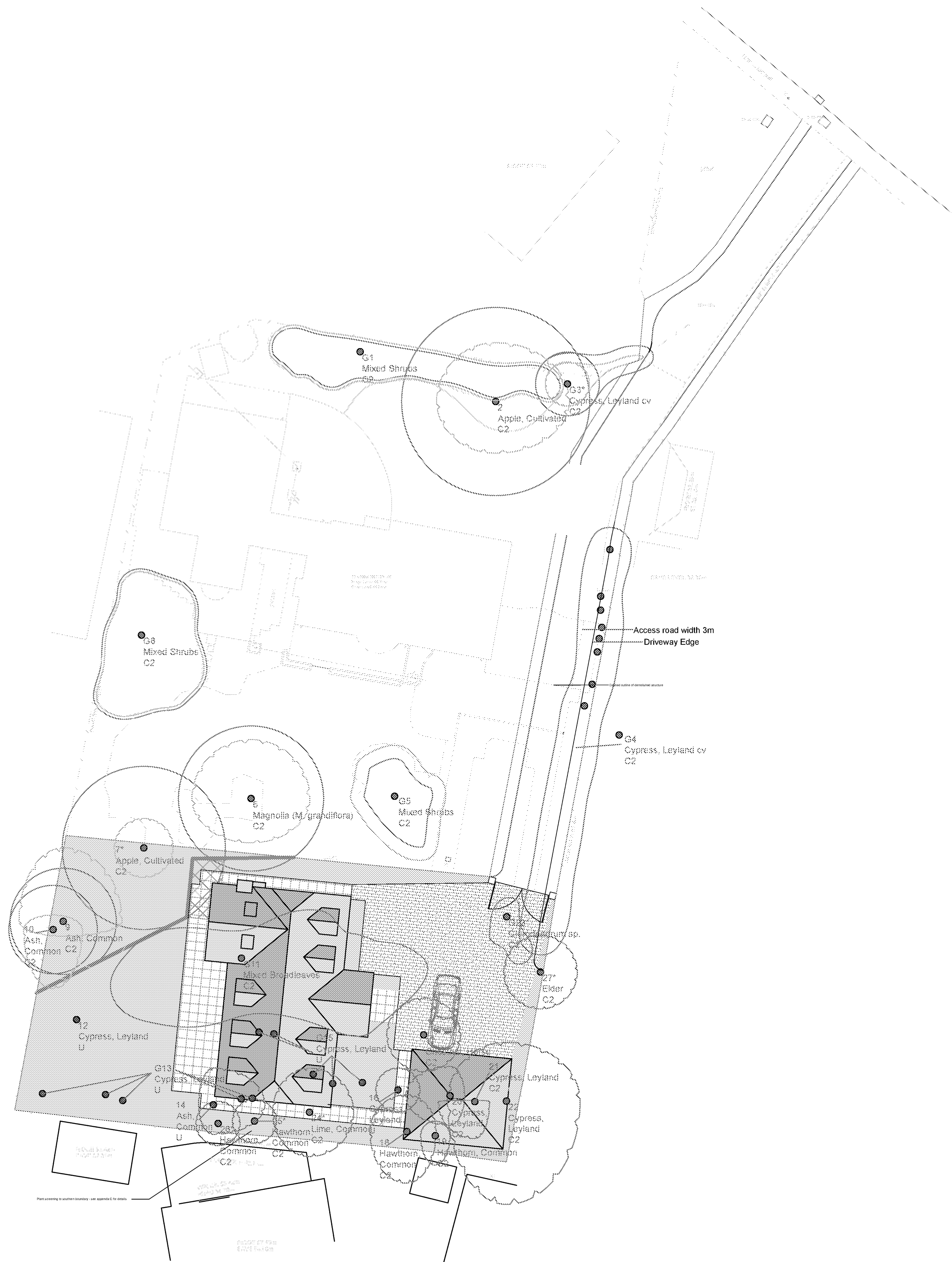
4.1.1 The table below summarises the main areas where trees could become damaged by the proposed development and the methods that need to be adopted in order to prevent such damage:

<u>Impact</u>	<u>Mitigation</u>	<u>Reference</u>	<u>Trees Affected</u>
Passage of machinery and storage of materials over RPAs	Construction of protective fencing to acceptable standards	Sections 2.3. Fencing spec Appendix C, Tree Protection Plan Appendix A	6, 7, 9 & 10
Works within RPAs of retained trees	Ground protection	Section 2.2.1	7

5.0 Completion

5.1 Completion Meeting

- 5.1.1 Following completion of the approved works on site, the designated arboriculturist will meet with a local authority representative and agree upon any remedial works deemed necessary (if any).
- 5.1.2 Any works agreed in the above meeting will be confirmed in writing and should be performed to BS3998:2010.
- 5.1.3 Any work proposed post-development should be checked to avoid penalty for performing illegal work on a protected tree.



Arbortrack Systems Ltd

The Granary Studio, Crewe Lane, Kenilworth, CV8 2LA

07986 122074 / james@arbortrackservices.com

Site: 22 Vermont Drive

Drawing Title: Tree Protection Plan

Appendix: A

1:200@A1

Rev A,

July 2021

Key:

Category A

Category B

Category C

Category U

Tree Proposed for Removal

Tree Protection Fencing

Ground Protection

Category

Root Protection Area

1.8m close board fence

Crown Spread

Tree Number

Species

Category

Do not scale from this drawing. Please check all dimensions on site and notify us of any discrepancies.

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ARUN DISTRICT COUNCIL EPI12521P1

Site: 22 Vermont Drive East Preston

Date: 29th June 2021

Appendix B

BS5837:2012 Tree Survey Schedule

Arbortrack Systems Ltd



Surveyor(s): James Bell

Ref: jwmb/rpt1/22vermontdrive/AIAAMS



Tree No.	English Name	Height	Crown Spread				Ground Clearance	Stem Diameter	Protection Radius	Age Class	Growth Vitality	Structural Condition	B S Cat	Sub Cat	Useful Life	Comments
			N	S	E	W										
G1	Mixed Shrubs	2	1.5	1.5	1.5	1.5	0	75 #	0.9	Early Mature	Normal	Good	C	2	10+	Mixed shrubs: mostly escallonia
2	Apple, Cultivated	7	4	3.5	5	4	2	532	6.4	Mature	Normal	Fair	C	2	10+	Garden fruit tree Climbing/rambling rose growing through crown
G3	Cypress, Leyland cv	6	1.5	1.5	1.5	1.5	0	180	2.2	Semi-mature	Normal	Fair	C	2	10+	Some dead material within screen
G4	Cypress, Leyland cv	30	1.5	1.5	1.5	1.5	0	150	1.8	Semi-mature	Normal	Fair	C	2	10+	Screen beside eastern boundary
G5	Mixed Shrubs	2.5	2	2	2	2	0	93 #	1.1	Semi-mature	Normal	Good	C	2	10+	Shrub rose, choysia, philadelphus, buddleia, viburnum etc
6	Magnolia (M. grandiflora)	6.5	4	3	4	4	2.5	410	4.9	Mature	Normal	Fair	C	2	10+	Included bark in main stem unions Garden ornamental
7	Apple, Cultivated	5	2	2	2	2	1.75	461	5.5	Mature	Normal	Fair	C	2	10+	Entry wounds on trunk Decay in trunk Reflushing from topping cuts @ 2.5-3m

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			N	S	E	W										
G8	Mixed Shrubs	5	2	2	2	2	0	184 #	2.2	Early Mature	Normal	Good	C	2	10+	Garden ornamental Bottle brush, rhododendron, rose, vibernum etc
9	Ash, Common	10	5	1	4	3	2.5	300 #	3.6	Early Mature	Normal	Fair	C	2	10+	Ivy smothered Very early chalara symptoms
10	Ash, Common	9	1	4	2	2	2.5	250 #	3.0	Early Mature	Normal	Fair	C	2	10+	Ivy smothered Very early chalara symptoms;
G11	Mixed Broadleaves	7.5	2.5	2.5	2.5	2.5	0	110 #	1.3	Early Mature	Normal	Good	C	2	10+	Vibernum, griselina, cornus, elder, crab apple, buddleia
12	Cypress, Leyland	7						800 #	9.6	Mature	Dead	Fair	U			Ivy clad monolith
G13	Cypress, Leyland	7						650 #	7.8	Mature	Dead	Fair	U			Ivy clad monoliths 5 in group
14	Ash, Common	12	2.5	2	3.5	1	6	420	5.0	Early Mature	Poor	Fair	U		<10	Ivy smothered Topped @ 6.5-7m with minor residual crown.

Site: 22 Vermont Drive East Preston

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Tree No.	English Name	Height	Crown Spread				Ground Clearance	Stem Diameter	Protection Radius	Age Class	Growth Vitality	Structural Condition	B S Cat	Sub Cat	Useful Life	Comments
			N	S	E	W										
G15	Cypress, Leyland	7.5						450 #	5.4	Early Mature	Dead	Fair	U			Ivy smothered
16	Cypress, Leyland	2.75	1.5	1.5	1.5	1.5	1.5	380 #	4.6	Early Mature	Dead	Fair	U			Ivy smothered stump
17	Chestnut, Horse	4.5	2.5	2.5	2.5	2.5	1.5	750 #	9.0	Mature	Normal	Fair	C	2	10+	Ivy smothered stump with residual crown
18	Hawthorn, Common	7	2.5	3.5	2	2.5	1.5	320 #	3.8	Early Mature	Moderate	Fair	C	2	10+	
19	Hawthorn, Common	5	1	2	1	1	2.5	170 #	2.0	Semi-mature	Moderate	Fair	C	2	10+	Growing with an elder
20	Cypress, Leyland	8	2	2	1	3	2.5	260	3.1	Early Mature	Poor	Fair	C	2	10+	Dying back (lead stem /centre)
21	Cypress, Leyland	8	0	2.5	1	2.5	4.5	330	4.0	Early Mature	Moderate	Fair	C	2	10+	Asymmetry (major)

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			N	S	E	W										
22	Cypress, Leyland	13	4	7	5	4	3	710	8.5	Mature	Moderate	Fair	C	2	10+	Ivy clad
G23	Clerodendrum sp.	3	2	2	2	2	1.75	106 #	1.3	Semi-mature	Normal	Good	C	2	10+	Multiple stem clump
24	Lime, Common	8.5	3	3	3	2.5	2	360	4.3	Early Mature	Moderate	Fair	C	2	10+	A sparser than normal canopy Ivy smothered Chlorotic crown
25	Hawthorn, Common	7	1.5	1.5	1.5	1.5	2	300	3.6	Early Mature	Moderate	Fair	C	2	10+	Ivy smothered
26	Hawthorn, Common	6	1.5	1.5	1.5	1.5	2.5	314	3.8	Early Mature	Moderate	Fair	C	2	10+	Ivy smothered
27	Elder	4	2.5	2.5	2.5	2.5	1.5	160 #	1.9	Early Mature	Normal	Good	C	2	10+	Ivy smothered

Site: 22 Vermont Drive East Preston

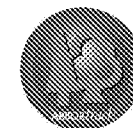
Date: 29th June 2021

Appendix B Recommended Tree Works

Arbortrack Systems Ltd

Surveyor(s): James Bell

Ref: jwmb/rpt1/22vermontdrive/AIAAMS



Tree No.	English Name	Height	Stem Diameter	Crown Spread				BS Cat	Sub Cat	Recommended Works	Comments / Reasons
				N	S	E	W				
G4	Cypress, Leyland cv	30	150	1.5	1.5	1.5	1.5	C	2	Remove	Screen beside eastern boundary To permit development
G11	Mixed Broadleaves	7.5	110	2.5	2.5	2.5	2.5	C	2	Remove	Viburnum, griselinia, cornus, elder, crab apple, buddleia To permit development
12	Cypress, Leyland	7	800					U		Remove	Ivy clad monolith To permit development
G13	Cypress, Leyland	7	650					U		Remove	Ivy clad monoliths 5 in group To permit development
14	Ash, Common	12	420	2.5	2	3.5	1	U		Remove	Ivy smothered Topped @ 6.5-7m with minor residual crown. To permit development

Site: 22 Vermont Drive East Preston

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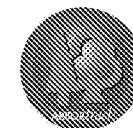
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Tree No.	English Name	Height	Stem Diameter	Crown Spread				BS Cat	Sub Cat	Recommended Works	Comments / Reasons
				N	S	E	W				
G15	Cypress, Leyland	7.5	450					U		Remove	Ivy smothered To permit development
16	Cypress, Leyland	2.75	380	1.5	1.5	1.5	1.5	U		Remove	Ivy smothered stump To permit development
17	Chestnut, Horse	4.5	750	2.5	2.5	2.5	2.5	C	2	Remove	Ivy smothered stump with residual crown To permit development
18	Hawthorn, Common	7	320	2.5	3.5	2	2.5	C	2	Remove	To permit development
19	Hawthorn, Common	5	170	1	2	1	1	C	2	Remove	Growing with an elder To permit development

Site: 22 Vermont Drive East Preston

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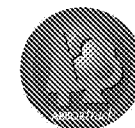
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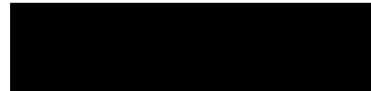
Tree No.	English Name	Height	Stem Diameter	Crown Spread				BS Cat	Sub Cat	Recommended Works	Comments / Reasons
				N	S	E	W				
20	Cypress, Leyland	8	260	2	2	1	3	C	2	Remove	Dying back (lead stem /centre) To permit development
21	Cypress, Leyland	8	330	0	2.5	1	2.5	C	2	Remove	Asymmetry (major) To permit development
22	Cypress, Leyland	13	710	4	7	5	4	C	2	Remove	Ivy clad To permit development
G23	Clerodendrum sp.	3	106	2	2	2	2	C	2	Remove	Multiple stem clump To permit development
24	Lime, Common	8.5	360	3	3	3	2.5	C	2	Remove	A sparser than normal canopy Ivy smothered Chlorotic crown To permit development

Site: 22 Vermont Drive East Preston

Date: 29th June 2021

Appendix B Recommended Tree Works

Arbortrack Systems Ltd



Ref: jwmb/rpt1/22vermontdrive/AIAAMS

Tree No.	English Name	Height	Stem Diameter	Crown Spread				BS Cat	Sub Cat	Recommended Works	Comments / Reasons
				N	S	E	W				
25	Hawthorn, Common	7	300	1.5	1.5	1.5	1.5	C	2	Remove	Ivy smothered To permit development
26	Hawthorn, Common	6	314	1.5	1.5	1.5	1.5	C	2	Remove	Ivy smothered To permit development
27	Elder	4	160	2.5	2.5	2.5	2.5	C	2	Remove	Ivy smothered To permit development

Appendix B

Notes on Tree Survey Schedule:

- ¿ Height describes the approximate height of the tree measured in metres from ground level.
- ¿ The Crown Spread refers to the crown radius in metres from the stem centre and is expressed as an average of N SE W aspect if symmetrical.
- ¿ Ground Clearance is the height in metres of crown clearance above adjacent ground level.
- ¿ Clear Stem Height is the distance between trunk base and first branch separation measured in metres.
- ¿ Stem Diameter is the diameter of the stem measured in millimetres at 1.5m from ground level for single stemmed trees. See section 4.6 for detail of treatment for multistems.
- ¿ Protection Radius is a radial distance in metres measured from the trunk centre.
- ¿ Growth Vitality - Normal growth, Moderate (below normal), Poor (sparse/ weak), Dead (dead or dying tree).
- ¿ Structural Condition - Good (no or only minor defects), Fair (remediable defects), Poor - Major defects present.
- ¿ B.S. Category refers to (British Standard 5837:2012 Table 1) and refers to tree/ group quality and value; 'A' - High, 'B' - Moderate, 'C' - Low, 'U' - Unsuitable for Retention.
- ¿ Sub Cat refers to the retention criteria values where 1 is mainly arboricultural qualities, 2 is mainly landscape qualities and 3 is mainly cultural values including conservation.
- ¿ Useful Life is the tree's estimated remaining contribution in years.
- ¿ First Significant Branch (FSB) is the height of the first significant branch above ground level taken at the trunk separation point.

Notes on Recommended Tree Works:

1, 2,3	Urgent (ASAP), Standard (6-12 months), Non-Urgent (2-3 years)
CB	Cut back to boundary/ clear from structure
CL#	Crown lift to given height in meters
CT#%	Crown Thinning by identified %
CCL	Crown clean (remove deadwood/ crossing & hazardous branches & stubs)
CR#%	Crown Reduce by given maximum percentage (of outermost branch & twig length)
DWD	Remove deadwood
Fell	Fell to ground level
FInv	Further Investigation (generally with decay detection equipment)
Pol	Pollard or re-pollard
Mon	Monitor ongoing condition (annually by staff/ owners & every 2-3 years by consultant). Svr Ivy/ Clr Bs Sever Ivy/ clear base and re-inspect base/ stem for concealed defects

Appendix C Tree Protective Fencing Detail (from BS5837:2012)

Figure 2 Default specification for protective barrier

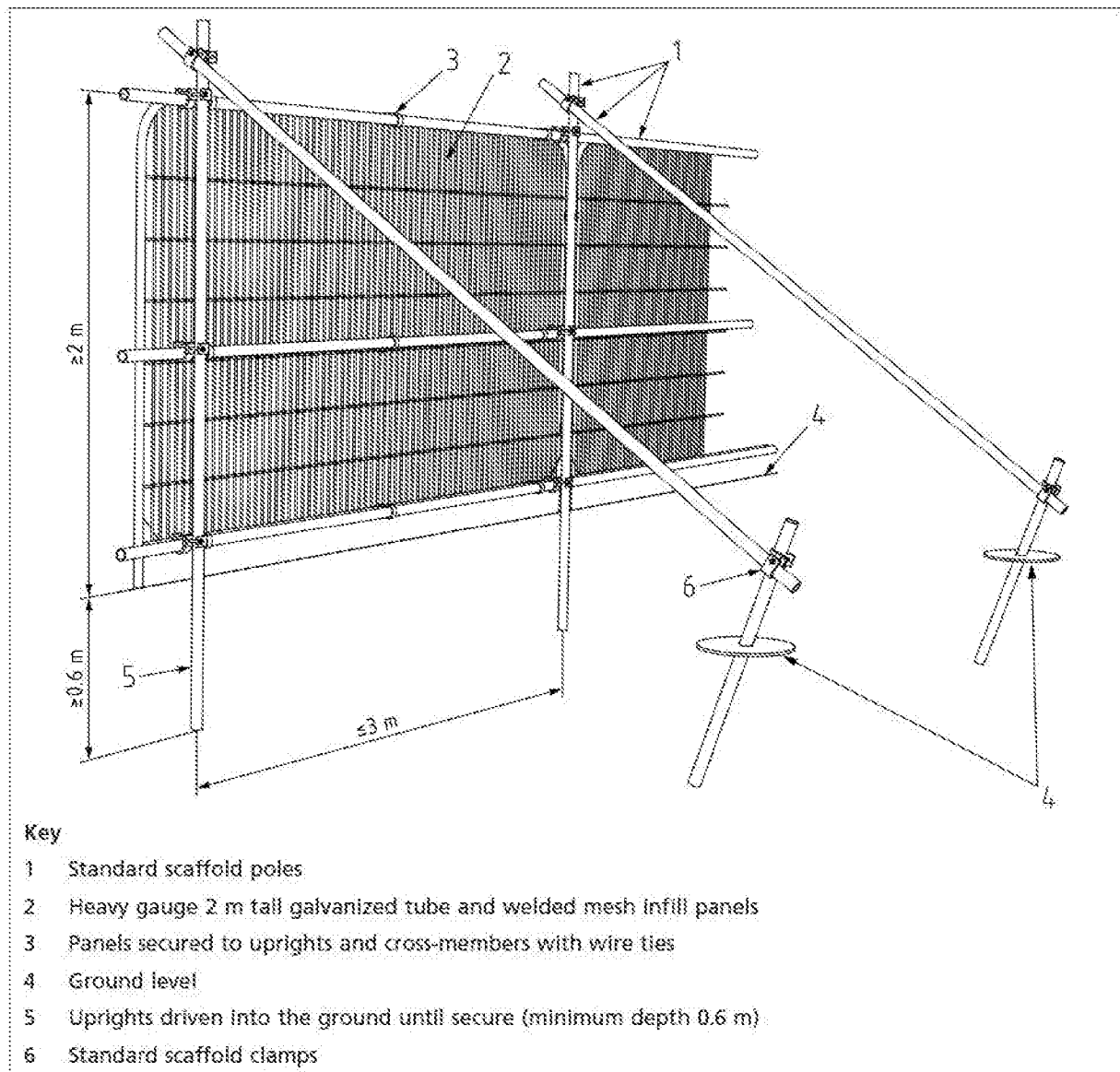
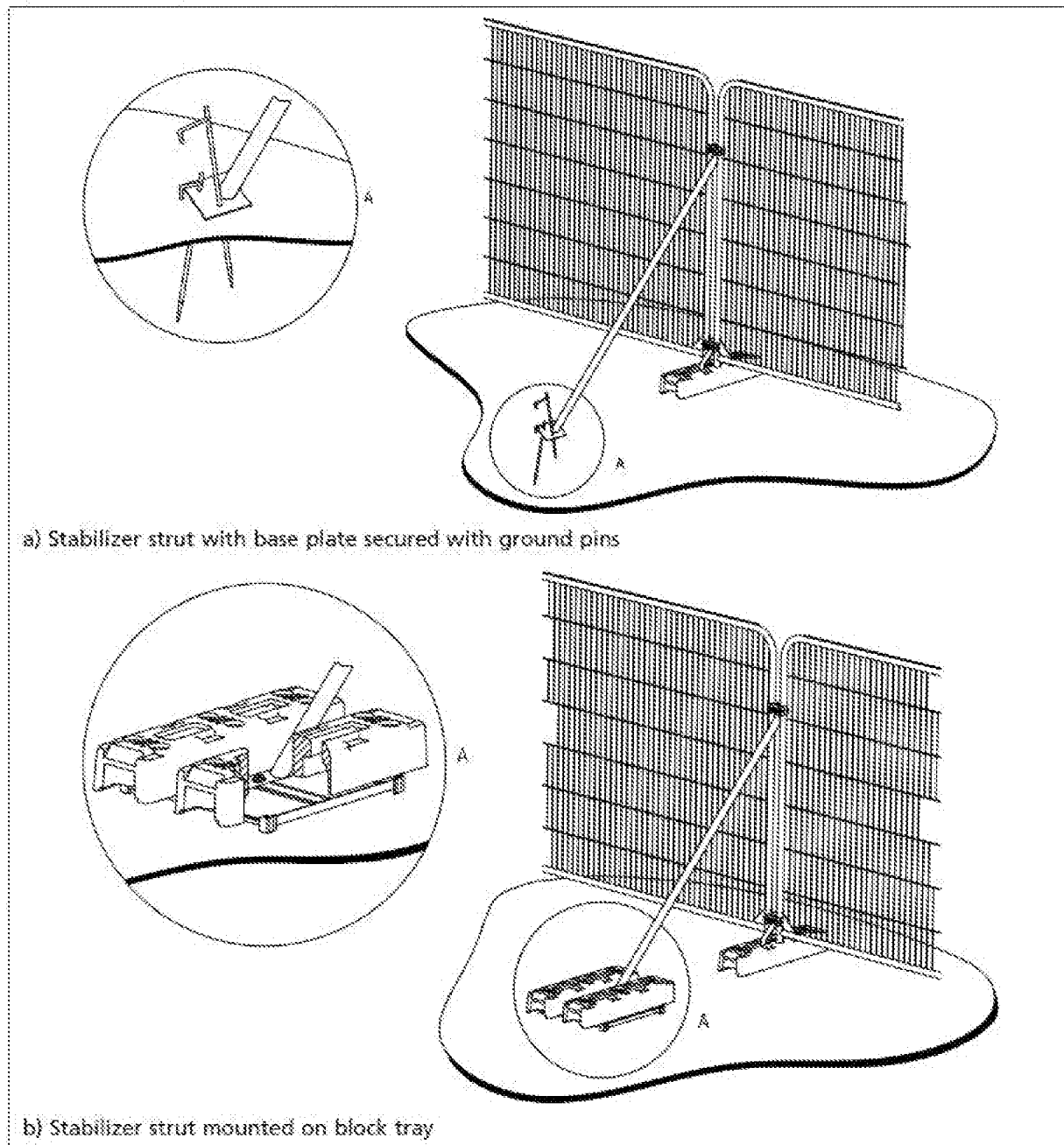


Figure 3 Examples of above-ground stabilizing systems



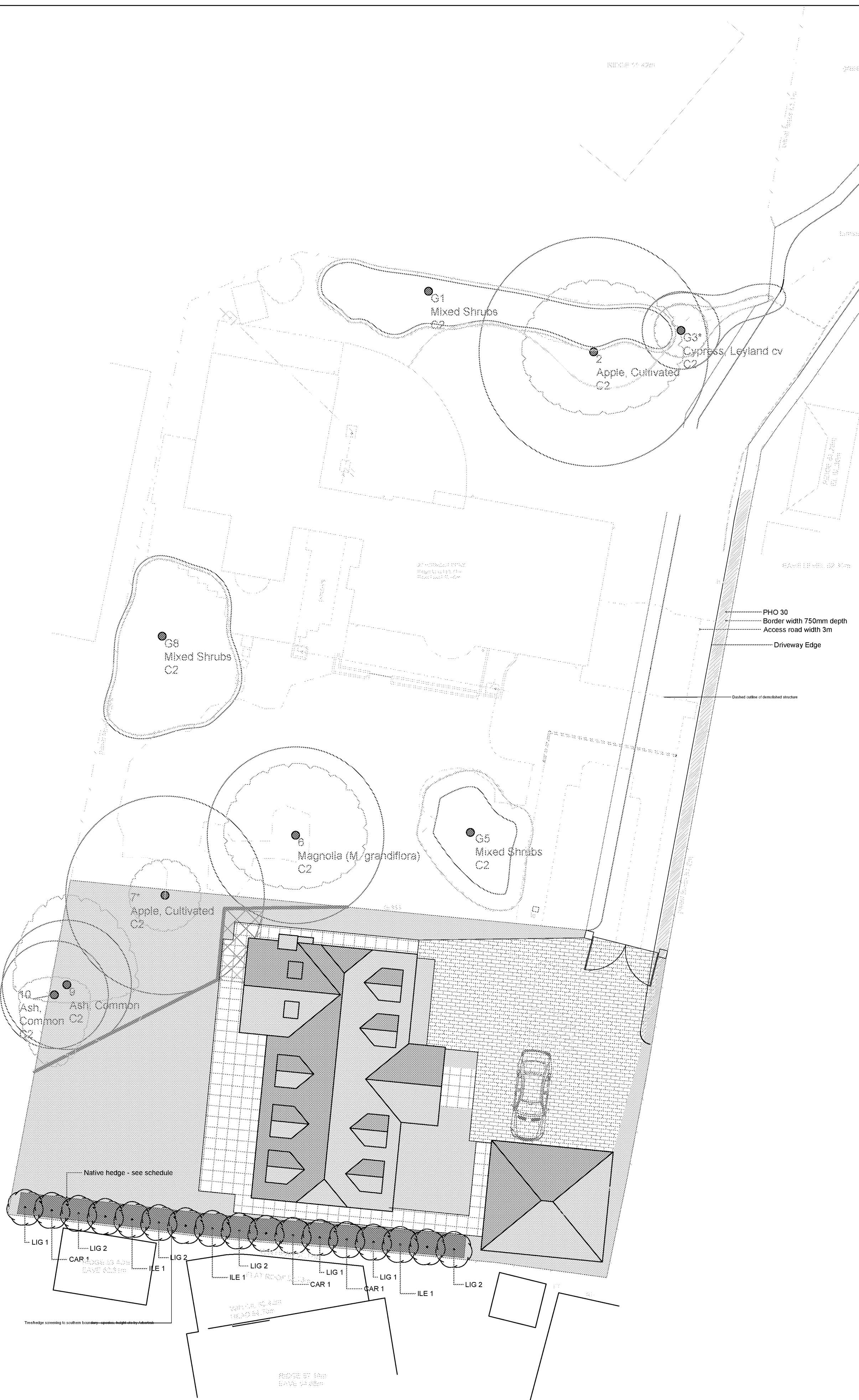
Appendix D

1.0 Glossary of Terms & Abbreviations

Canker	Disease damaged area of a tree, usually caused by fungus or bacteria.
Co-dominant Stem	A stem which has grown in direct competition to the main stem and which has formed a substantial size influencing the appearance of the tree.
Crown Lift	The removal of the lowest branches, usually to a given height. It allows more residual light and greater clearance underneath for vehicles etc.
Crown reduce	The reduction of a tree's height or spread while preserving its natural shape.
Crown thin	The removal of some of the density of a tree's crown, usually 5-25% allowing more light through its canopy and reducing wind resistance.
Deadwood	The removal of all dead, dying and diseased branches from a tree. Also, wood which is dead.
Dieback	Where branches are beginning to show signs of death usually at the tips in the crown.
Epicormic shoots	Small branches that grow in uncharacteristic clusters around the base or the stem of a tree, usually as a result of bad pruning or some other stress factor.
Formative pruning	The trimming of a tree to remove weaknesses and irregularities which may lead to problems. The formative pruning operation is aimed at reducing the potential for future weaknesses or problems within the tree's crown.
Included bark	Where the bark on two adjoining branches or stems is growing tight together, forming a joint with limited physical strength.
Pollarding	A method of tree management in which the main trunk of the tree is cut at about 4m, and the resulting branches are then cropped on a regular basis.
Remedial pruning	The removal of old stubs, deadwood, epicormic growth, rubbing or crossing branches and other unwanted items from the tree's crown. Sometimes referred to as crown cleaning.
Topping	Topping is a form of pruning that removes terminal growth leaving a 'stub' cut end. Topping causes serious health problems to a tree.

2.0 General Guidelines

- 2.1 All work must be to BS 3998:2010 – Tree work-Recommendations
- 2.2 Staff carrying out the work must be qualified, experienced and ideally be Arboricultural Association approved contractors, and should be covered by adequate public liability insurance.
- 2.3 Any defects seen by a contractor or the client that were not apparent to the consultant must be brought to the consultant's attention immediately.
- 2.4 No liability can be accepted by the consultant in respect of the trees unless the recommendations of this method statement are carried out under the supervision of the designated arboriculturist.
- 2.5 It is advisable to have trees inspected by designated arboriculturist regularly. On this site it is recommended that these inspections are made every year.



Tree Schedule

Nr	Abbr	Species	Form	Height	Girth	Clear stem	Root	Staking
3	CAR	Carpinus betulus	Std	3m+	10-12cm	2.20m	RB - 35Lir	Double
3	ILE	Ilex aquifolium Nellie Stevens	Std	3m+	10-12cm	2.20m	RB - 35Lir	Double
11	LIG	Ligustrum japonicum	Std	3m+	10-12cm	2.20m	RB - 35Lir	Double

Hedge Schedule

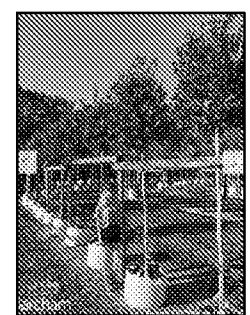
Nr	Abbr	Species	Size	Root	Density per M
30	PHO	Photinia x fraseri 'Red Robin'	120-150	C	1m centres

Native Hedge Schedule

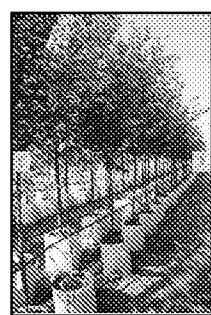
Nr	Species	Height	Root	Nr m²
212	Crataegus monogyna	90-120	BR	7 per m
140	Corylus avellana	90-120	BR	7 per m
88	Prunus spinosa	60-90	BR	7 per m
88	Viburnum lantana	60-90	BR	7 per m
88	Ilex aquifolium	40-60	BR	7 per m
88	Viburnum opulus	40-60	BR	7 per m



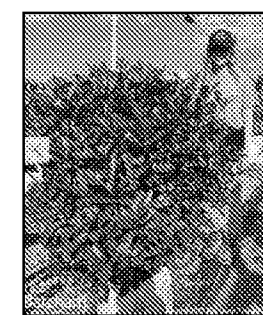
Ligustrum japonicum



Ilex aquifolium Nellie Stevens



Carpinus betulus



Photinia x fraseri 'Red Robin'

KEY

New tree screen planted at 1.5m centres
see separate planting detail

Native Hedge: Species mix to be as follows:
30% Hawthorn (Crataegus monogyna)
20% Hazel (Corylus avellana)
12.5% Blackthorn (Prunus spinosa)
12.5% Wayfaring (Viburnum lantana)
12.5% Ilex aquifolium (Common holly)
12.5% Guelder Rose (Viburnum opulus)

New hedge see hedge schedule

Tree pits to be lined with root protection barrier
- see separate detail

5m 10m

General Requirements

- Planning notes to be read in conjunction with all other surveys, arboricultural and ecological reporting.
- All landscape works to be undertaken by competent persons, with appropriate knowledge, training and equipment.
- The landscape contractor must manage, comply and proceed with all current health and safety legislation, risk assessments and CDM requirements where appropriate.
- All landscape operations to be carried out in accordance with BS 4428:1989 (Code of Practice for general landscape operations)

Risk: The landscaping contractor must ascertain for himself the exact location of underground services before commencing work.

Waste Management

- All waste and arisings to be removed from site to licensed facility at contractor's expense unless noted otherwise or agreed with client.

NEW REQUIREMENTS

- Prepare new shrub borders to a depth of 450mm depth and back fill with good quality topsoil.
- Standard tree planting depths 750mm and forestry/transplants 300mm depth.
- Maintain all new plantings and turfseedings until handover to client or clients agent or as agreed.

Proposed Planting

- Should planting be required outside of the planting season (October - March) any bare root or rootballed stock specified is to be replaced with containerised stock to an appropriate or similar specification to that indicated in the planting schedule.
- All new planting to be maintained for a period of 5 years, with any dead or dying trees or plants replaced.

Trees Generally

- All trees to be in accordance with BS 3938 / 4043. BS 4043:1989 (Transplanting rootballed trees), BS 4043:1989 (Transplanting root balled trees) & BS8545:2014 (Trees, From Nursery To Independence)
- Trees are to be healthy and vigorous and either containerised, rootballed or bare rooted depending on the planting season.
- All trees to be inspected annually for a period of five years.**
- All dead, diseased or damaged trees are to be removed and replaced annually as per specification.

Tree Planting

- For tree pits in open field/uncompacted ground conditions, dimension of the tree pit to be at least 75mm greater than the rootball. The depth of the pit shall be no deeper than the existing rootball and container depth in accordance with BS 8545.
- Topsoils and subsoils to be excavated and stored separately for reuse.
- Tree pit to be backfilled with stored subsoil and topsoil at depths to replicate the existing soil horizons.
- Topsoil to be mixed enriched with 40L of peat free tree planting compost.
- Root balls to be encircled by Root Rain Method similar irrigation pipe. Well water after planting.
- Trees to be staked in accordance with BS 4428. See staking notes
- The base of trees to be planted in grass areas are to be covered with 75mm amenity grade bark mulch or similar approved to 1.0 metre diameter and kept weed free.
- Strim guards to be install as required

Urban Areas & Close To Buildings

- In confined urban areas i.e. car parks & housing estates where trees are to be planted in heavily compacted ground, larger tree pits are to be excavated to achieve circa 5m³ of uncompacted growing volume with pits approximately 2.5m x 2.5m backfilled with excavated subsoil and topsoil (as described above) mixed with 160L of peat free tree planting compost
- In locations close to buildings, walls and structures root barriers Greenleaf, ReRoot or similar are to be installed in accordance with manufacturer's instructions.

Services and Risks

- Where proposed tree locations conflict with services, trees are to be relocated in accordance with the appropriate utilities guidance notes subject to client/local authority approval. Proprietary root barrier Greenleaf, ReRoot or similar to be installed in accordance with manufacturer's instructions where relocation is not considered appropriate.

Note:

- All tree rootball weights & sizes are indicated as advisory and should be confirmed with chosen tree supplier.
- Care should be taken when handling new stock on site and delivery to final location.

Tree Staking

- Landscape contractor to decide the best method for site and planting conditions
- All stakes should penetrate the soil to at least 60cm (2ft) deep. If the stake moves in the ground, it will not anchor the plant.
- Single staked (10-12cm girth trees)
- Double staked (14-16cm girth trees)
- Triple staked (16-18cm - 18-20cm girth trees)
- Tree stakes and ties should be removed within 18-24 months of planting

Double stake

- Standard method of staking container-grown and rootballed trees.
- Two or three stakes can be inserted opposite each other, or equally spaced around the tree outside the root ball and secured to the trunk by long ties or a timber crossbar and tie. This method is also useful on windy sites.

Tree ties

- Special tree ties are available made of durable, long-lasting plastic with buckles for fastening and adjustment.
- These ties can be loosened as the tree girth expands. Use spacers to prevent the stem and stake rubbing against each other
- Make a figure of eight to hold the tree to the stake, with the spacer in between the tree and the stake, and secure the tie to the stake with a nail

Underground ground anchors (optional)

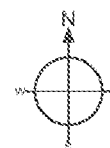
- Ground anchors are essentially underground staking systems. They offer discreet anchorage of the rootball and are particularly useful for specimen trees or those in highly visible areas where above-ground methods would be unsightly. Tree anchors must be fitted at the time of planting. Systems such as the Platipus Tree Anchor and biodegradable tree anchors made from potato starch are available.

Shrub Planting

- All species subject to availability at the time of planting. Make alternative options as required.
- Check plant numbers and quantities against site requirements.
- Plants to be in accordance with BS 3938 and handled in accordance with CPSE guidelines and planted in accordance with BS 4428.
- Where plants are to be planted in mixes group plants into groups of 3m².
- All shrubs to have a minimum of three breaks, except Hedera with a minimum of two.
- Well water plants immediately after planting and prior to spreading of mulch.
- Planting areas to be covered with 75mm depth amenity grade bark mulch (or similar approved) and kept weed free.

Hedge & Native Hedge Planting

- Plants to be in accordance with BS 3938 and handled in accordance with CPSE guidelines and planted in accordance with BS 4428.
- Planted areas to be covered with 75mm depth bark mulch and kept weed free.
- All transplants shall be protected with a 400mm high plastic spiral rabbit guard supported by a 750mm stake or cane.
- Stock proof fencing should be erected to protect hedging from grazing animals as required.
- The hedge is to be maintained for a period of 5 years following planting, ensuring adequate watering and fertilising is carried out to ensure good establishment.
- Allow for irrigation of new hedge until establishment of plants**
- All dead, diseased or damaged plants are replaced annually where required.



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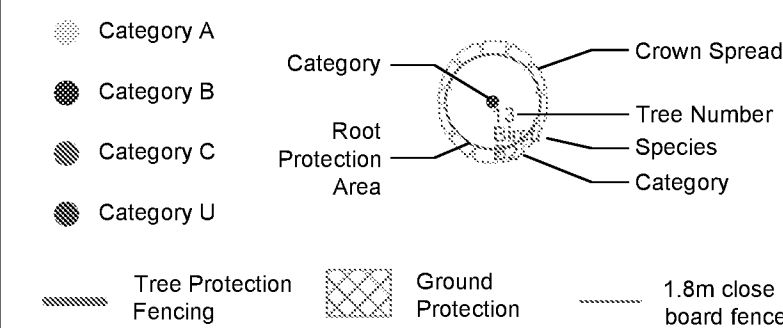
The Granary Studio, Crewe Lane, Kenilworth, CV8 2LA
07986 122074 / james@arbortrackservices.com

Site: 22 Vermont Drive

Drawing Title: Planting Plan 1:150@A1

Appendix: E Rev A, July 2021

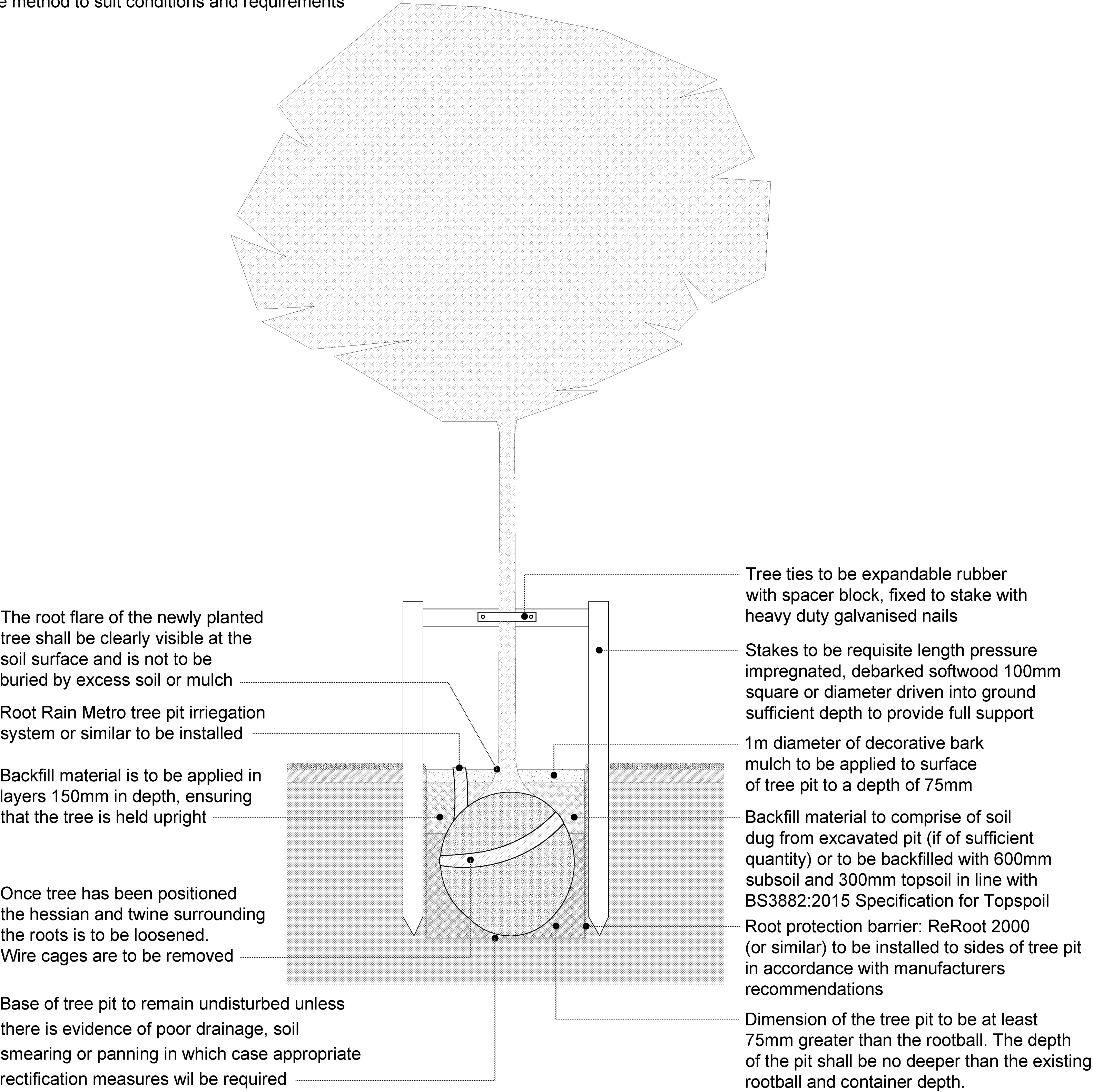
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Generic Tree Planting Detail

Revise method to suit conditions and requirements



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07986 122074 / james@arbortrackservices.com

Site: 22 Vermont Drive

Drawing Title: Tree Pit Detail

NTS@A1

Appendix: E

July 2021

Key:

Category A

Category B

Category C

Category U

Category

Root Protection Area

Crown Spread

Tree Number

Species

Category

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