

arboricultural impact assessment [AIA]

and tree protection strategy

for proposed development at

Land to rear of
18 Moor Park Road
Northwood
HA6 2DN

On Behalf of: **Smart Build Contractors Ltd**

Reference: **MW.20.0503.AIA**

Date Issued: **15.05.2020**



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executive summary

This report provides the requisite information to enable the local planning authority to meet the duty placed upon them by s.197 of the Town and Country Planning Act (1990).

Included, to support the proposals for a residential dwelling are:

- A BS5837:2012 compliant tree survey
- An arboricultural impact assessment
- A tree protection strategy including a method statement and protection plan

Nine trees of limited quality and value are to be removed to facilitate the proposals.

There are no preservation orders on any of the subject trees and the site is not within a conservation area.

All retained trees can be adequately protected by the standard barrier fencing.

The arboricultural impact of the proposal is considered low, and thus, acceptable.

Correct adherence to the tree protection strategy proposed within this report is critical for ensuring the tree is successfully protected through the construction process. Should any of the protection measures prove incompatible with elements of the build program, please call 01730 239 492.

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1. instructions and terms of reference

- 1.1. In May 2020, I was instructed by Smart Build Contractors Ltd to undertake a tree survey and produce this report, to support a planning application for a dwelling on the site to the rear of 18 Moor Park Road within the administrative boundary of The London Borough of Hillingdon.
- 1.2. Following the recommendations of the British Standard, this report includes the necessary information to enable the local planning authority to meet the duty placed upon them by s.197 of the Town and Country Planning Act (1990).
- 1.3. It demonstrates that the impact, both direct and indirect, of the proposal, has been assessed and where appropriate, mitigation, compensation and tree protection proposed.
- 1.4. Correct implementation of the tree protection specified within this report is critical for ensuring the retained trees are successfully protected throughout the construction process.
- 1.5. Documents supplied to assist this assessment included:
 - Proposed: Site Plan.pdf ref: J3745-D-00 dated April 2020.
- 1.6. The assessment considers the impact of the proposal on the constraint presented by trees retained within the site, and those on adjacent land. Such impact can be caused directly through construction damage and indirectly from post development resentment and pressure to detrimentally prune or remove the trees. The latter is often due to a poor juxtaposition between the proposal and the trees.
- 1.7. The root protection area (RPA) for each tree represents a minimum area in m² that should be left undisturbed around each retained tree. This is initially represented by a circle but is fundamentally an area of rooting volume. This is often adjusted to account for constraints to root growth within the site (primarily highways and buildings). Recommendations are provided in the British Standard as to the protection of existing trees during the construction process. This is achieved by ensuring a tree protection strategy is implemented before any demolition or construction on site.

2. site description

- 2.1. The site is the northern section of the garden of No.18 Moor Park Road.
- 2.2. It is predominantly flat in nature.
- 2.3. The site is centred at Ordnance Survey Grid Reference: TQ 08812 92030. Here is a link to view the site's location online: <http://mild.treat.lasted>



Site photograph

3. statutory legislation

- 3.1. According to Hillingdon Council's on-line service¹, there are no tree preservation orders on the site (checked at the date of writing). Nor is the site within a conservation area.

4. tree survey - scope and methodology

- 4.1. Tree survey data can be found on the appended plan.
- 4.2. The tree survey has been carried out following the recommendations of The British Standard and the trees are assessed objectively and without reference to any site layout proposals. Categories are based on each tree's health and condition, together with an assessment of its life expectancy if its surroundings were to be unchanged.

¹ <http://lbhillingdon.maps.arcgis.com>

- 4.3. The reference numbers of surveyed trees and groups of trees are shown on the tree reference plan, which is appended to this report and based on the supplied survey drawing. Stem locations within groups may be estimated, and indicative of canopy only.
- 4.4. The tree survey was carried out from ground level only, with the aid of binoculars as necessary, following the Visual Tree Assessment² (VTA) method.
- 4.5. Where trees are located on neighbouring land an estimated appraisal has been made of their quality and dimensions.
- 4.6. Where stems or branches are obscured by ivy or other materials a full assessment of those parts will not be possible.
- 4.7. Tree heights were measured with a clinometer or estimated in relation to those measured.
- 4.8. Trunk diameters are measured at 1.5m above ground level, where this is not possible, then Figure C.1 of the British Standard is followed.
- 4.9. Tree canopies, where markedly asymmetrical, were measured (or estimated by pacing) in four directions using a laser measure. Symmetrical canopies are measured in one direction only, with dimensions in the remaining directions assumed to be similar. For the canopies of groups of trees, the maximum radius for each compass point is measured (more complicated groups will have further notes taken and an accurate representation will be shown on the plan).
- 4.10. All estimated dimensions are noted in the data.

² Mattheck, C. & Breloer, H., 1998. The Body Language of Trees: A Handbook for Failure Analysis. London:H.M.S.O.

5. arboricultural impact assessment

- 5.1. It is proposed to build a single residential dwelling on the subject site. The layout and location of which can be seen on the appended plan.

Tree Removals

- 5.2. Nine trees are to be removed to facilitate this proposal. They are listed on the appended plan and comprise two of poor quality (category U), six of low quality (category C) and one of moderate quality (category B). With regard to the moderate quality tree, it is an ornamental conifer of limited wider landscape value.

Tree Surgery

- 5.3. At this time, no tree surgery work is proposed.
- 5.4. Prescribed work is limited to removal of deadwood and lifting crowns to provide adequate ground clearance for reasonable enjoyment of garden spaces.

Construction Impact

- 5.5. All construction is outside the RPAs of retained trees.

Service & Utility Provisions

- 5.6. The proposed layout allows for reasonably open access to all units. There is adequate space to service the site whilst avoiding all RPAs.

Future Pressure

- 5.7. It can be seen from the appended plan that there is sufficient off-set from the trees to provide some open space around the dwelling and allow construction without impact.

Summary

- 5.8. Provided the tree protection strategy is implemented as outlined in the following AMS, it is my opinion that this application is of **low** arboricultural impact, and thus acceptable.

6. [arboricultural method statement \(ams\)](#)

- 6.1. The tree protection on this site is subject to implementation as detailed in the following sections.
- 6.2. The recommendations of the British Standard have been applied where viable. Where deviations from the preferred approach are required, impact on any retained trees is minimised through a combination of supervision from an Arboricultural Clerk of Works and adherence to the associated method statement.
- 6.3. It is imperative that the strategy is followed to avoid not only impact upon the trees, but to adhere to any planning conditions, should consent be granted.
- 6.4. The information from this section forward must be passed to the site foreman and cascaded to all relevant personnel involved in the project.
- 6.5. Any questions about the content or its implementation should be directed to **Mark Welby on 01730 239 492**, before action is taken.
- 6.6. A plan showing the types of tree protection and their locations is appended. It includes the tree survey data, existing site features along with the proposed construction, drainage changes in level and other factors that could impact trees.
- 6.7. The plan must be read in conjunction with this method statement.

[Timing of Operations](#)

- 6.8. It is essential that the following phasing is followed if trees are to be effectively protected throughout construction.

1.Tree removals

2.Erection of protection barriers

3.Excavation for any groundworks & service trenches

4.Construction phase

5.Removal of barriers after all construction work has been completed

6.Soft landscaping (if required)

- 6.9. The above has been drafted at planning stage. Should any of the protection measures prove incompatible with elements of the build program, please call 01730 239 492 to discuss options.

Arboricultural Clerk of Works (ACoW)

- 6.10. Where works have the potential to impact retained trees, supervision may be specified within the method statement.
- 6.11. This is typically the project arboriculturist, who will document the process and provide an auditable record of the operation.
- 6.12. See subsections for requirements.

Construction Exclusion Zone (CEZ)

- 6.13. It is the responsibility of everyone engaged in the construction process to respect the tree protection measures and observe the necessary precautions within and adjacent to them.
- 6.14. Inside the exclusion zone, the following shall apply:
- No mechanical excavation whatsoever;
 - No excavation by any other means without arboricultural site supervision;
 - No hand digging without a written method statement having first been approved by the project arboriculturist;
 - No lowering of levels for any purpose (except removal of grass sward using hand tools);
 - No storage of plant or materials;
 - No storage or handling of any chemical including cement washings;
 - No vehicular access;
 - No fire lighting.

- 6.15. In addition to the above, further precautions are necessary adjacent to trees:
- No substances injurious to tree health, including fuels, oil, bitumen, cement (including cement washings), builder's sand, concrete mixing and other chemicals shall be stored or used within or directly adjacent to the protection area of retained trees;
 - No fire shall be lit such that flames come within 5m of tree foliage.

- 6.16. Variation from the above may be specified in the following sections of this method statement. This is only acceptable where detailed and will typically be subject to supervision by the ACoW.

Protection Barriers

- 6.17. Given the simplicity of this project, the installation of barriers as shown on the appended plan will be more than adequate to protect the subject trees throughout construction.



Typical tree protection barrier construction

- 6.18. Barriers must be fit for the purpose of excluding construction activity and appropriate to the degree and proximity of work taking place around the retained tree(s). Barriers should be maintained to ensure that they remain rigid and complete.
- 6.19. The default specification comprises a vertical and horizontal scaffold framework, well braced to resist impacts, as illustrated on the tree protection plan (TPP). The vertical tubes should be spaced at a maximum interval of 3 m and driven securely into the ground. Onto this framework, welded mesh panels should be securely fixed. Care should be exercised when locating the vertical poles to avoid underground services and, in the case of the bracing poles, also to avoid contact with structural roots. If the presence of underground services precludes the use of driven poles, an alternative specification should be prepared in conjunction with the project arboriculturist that provides an equal level of protection. Such alternatives could include the attachment of the panels to a free-standing scaffold support framework.

Ground Protection

- 6.20. If required (or as shown on the appended tree protection plan), ground protection is to be installed as follows. It must be capable of supporting the expected loads and avoiding rutting, compaction and damage to the soil: as advised in section 6.2.3 of the British Standard.
- 6.21. Stages of ground protection installation:
1. No plant machinery to be used in the area of ground protection for whatever reason;
 2. Dismantle primary TPF and re-erect in secondary location as shown on TPP (if required) OR erect fencing to protect any newly exposed CEZ not to be covered by ground protection;

3. Any shrubs, saplings or trees to be removed, are to be cut or ground out to just below ground level rather than grubbed or winched out, which can damage roots of retained trees;
4. Lay woven geotextile over existing ground surface by hand;
5. Cover the area with compressible layer, woodchip, for example, using hand tools only;
6. Cover compressible layer with side butting scaffold boards or plywood boards;
7. Confirm surface is acceptable for use with project arboriculturist;
8. Area ready for construction access;



Scaffold ground protection

9. Any scaffolding required within the area will be erected with the uprights placed on spreader boards;
10. The boarding will be left in place until the construction works are finished.

6.22. A single thickness of boarding laid on the soil surface will provide sufficient protection for pedestrian loads. However, for wheeled or tracked construction traffic movements within the RPA, ground protection will involve the use of temporary cellular confinement systems, reinforced concrete slabs or track-board systems details of which are to be specified by the project engineer and approved for use by the project arboriculturist and local authority before construction commences.

6.23. Track-boards can be sourced from Trakmats Europe Ltd, 0845 6435388, www.trakmatseurope.com, or groundguards.com

6.24. There is to be no excavation within ground protection area whatsoever. This includes installation of services and associated utilities.

Tree Surgery

6.25. Should any pruning work be required, the following must be adhered to once any requisite consent is obtained.

- 6.26. All work will be carried out in accordance with BS3998³ industry best practice and in line with any works already agreed with the council.
- 6.27. The statutory protection^{4 5} will be adhered to. If further advice is required, particularly if bats are discovered during tree work, it will be obtained from Natural England or other competent persons and recommendations adhered to.
- 6.28. The stumps of any trees removed from within the Construction Exclusion Zone or the RPAs of retained trees will be either cut flush to ground level and left in situ or ground out using a stump grinder. They will not be winched out.
- 6.29. All operations shall be carefully carried out to avoid damage to the trees being treated or neighbouring trees. No trees to be retained shall be used for anchorage or winching purposes.

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³ BS3998:2010- *Recommendations for Tree Work*. London: British Standards Institute

⁴ *Wildlife and Countryside Act*. (1981) London: HMSO.

⁵ *Countryside and Rights of Way Act*. (2000) London: HMSO.

[appendices](#)

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I.

tree categories explained

BS5837:2012 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 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

II.

protection plan

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BS5837 Tree Survey Schedule											
Surveyed Trees											
Ref	Species	Common Name	Height	Stem Diameter	Canopy NESW	Crown Clearance	Age Class	Observations	Recommendations	Est. Remaining Contribution	BS Cat
1	Ilex aquifolium	Common Holly	6m	100mm	2.5 N 1 E 1.5 S 1 W	1m	Mature	Tree of low quality and value.		10 Years	C1
2	Prunus laurocerasus	Laurel Cherry	3.5m	100mm	2 N 2 E 2 S 2 W		Early-Mature	Shrub		10 Years	C2
3	Ilex aquifolium	Common Holly	4.5m	100mm	2 N 2 E 2 S 2 W	1m	Mature	Tree of low quality and value.		10 Years	C1
4	Ligustrum vulgare	Privet	4m	100mm; 100mm; 100mm; 100mm; 100mm; 100mm	2 N 2 E 2 S 2 W	1m	Early-Mature	Shrub		10 Years	C1
5	Prunus sp.	Prunus	5m	200mm	3 N 3 E 3 S 3 W	2m	Mature	Partial dieback and deadwood.		0 Years	U
6	Malus domestica	Cultivar Apple	5m	200mm	3.5 N 3 E 3.5 S 3.5 W	2m	Mature	Fair overall Physiological and Structural condition. Small with limited wider landscape value.		10 Years	C1
7	Picea abies	Norway Spruce	11m	300mm	3.5 N 3.5 E 3.5 S 3.5 W	3m	Early-Mature	Somewhat sparse and apparent low vigour.		10 Years	C1
8	Chamaecyparis lawsoniana	Lawson Cypress	9m	200mm; 100mm	2 N 2 E 2 S 2 W	1m	Early-Mature	Variegated ornamental. Fair overall Physiological and Structural condition.		20 Years	B1
9	Prunus sp.	Prunus	4m	300mm	1 N 2 E 2.5 S 2 W	1m	Mature	Dead		0 Years	U
10	Ligustrum vulgare	Privet	3.5m	100mm	1.5 N 1.5 E 1.5 S 1.5 W	1.5m	Mature	Off-site boundary shrub		10 Years	C1
11	Betula utilis var. jacquemontii	West Himalayan Birch	8m	150mm	3 N 3 E 3 S 3 W	2m	Mature	Fair overall Physiological and Structural condition. Not plotted on survey base plan- location estimated. Off-site and inaccessible- dimensions estimated.		10 Years	C1
12	Prunus sp.	Prunus	6m	400mm	4 N 5.5 E 5.5 S 5.5 W	3m	Mature	Fair overall Physiological and Structural condition. Off-site and inaccessible- dimensions estimated.		20 Years	B1
13	Fraxinus excelsior	Common Ash	13m	200mm; 200mm	4.5 N 4.5 E 4.5 S 4.5 W	2m	Early-Mature	Off-site and inaccessible- dimensions estimated. Fair overall Physiological and Structural condition. Ivy on stem.		20 Years	B1

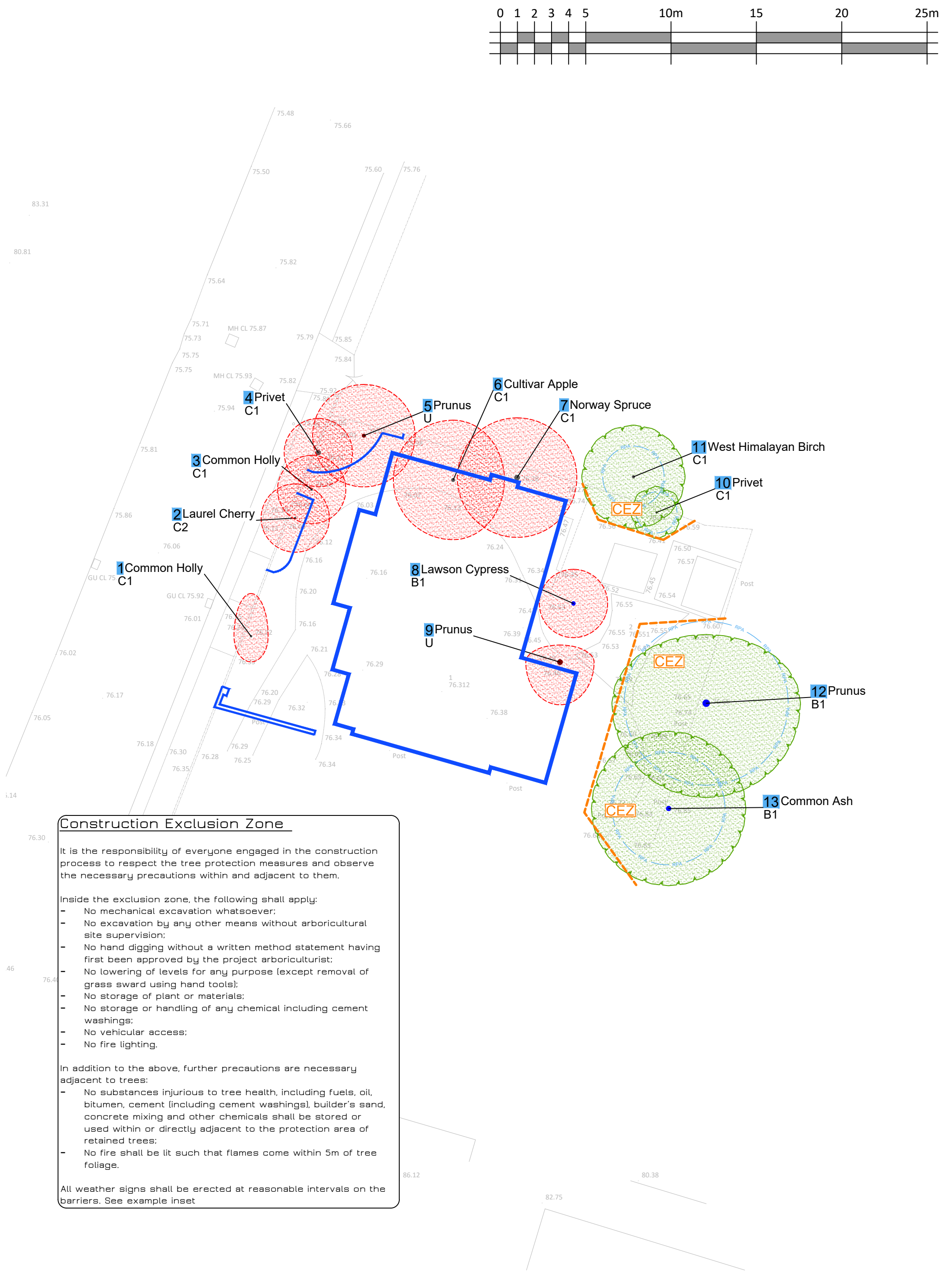
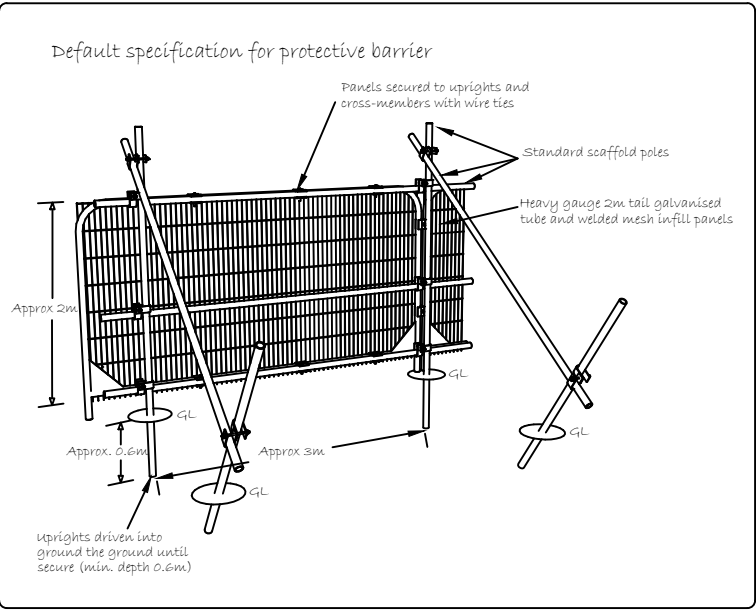
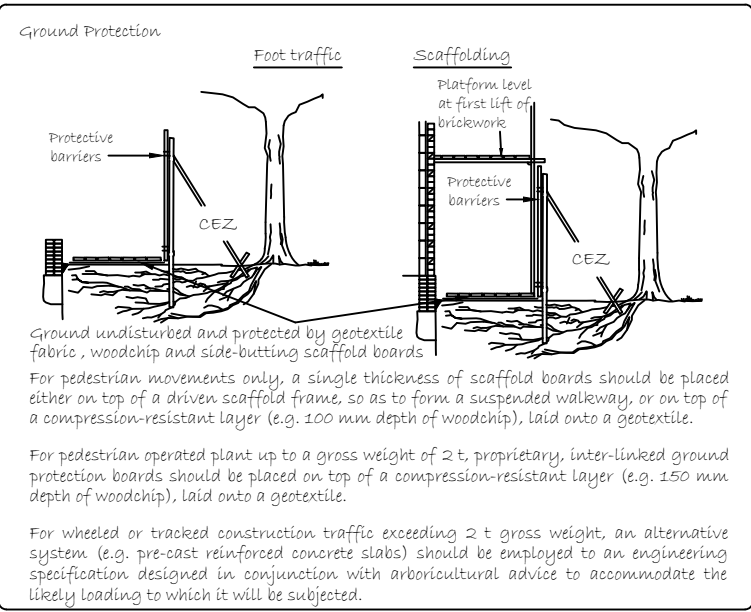
Survey by M Welby RCArborA, FArborA, May 2020

Where dimensions are not listed please refer to the plan graphics for an indicative representation (typically for groups).

Trees for Retention & Removal

Retained Trees			
Ref	Species	Common Name	Category
10	Ligustrum vulgare	Privet	C1
11	Betula utilis var. jacquemontii	West Himalayan Birch	C1
12	Prunus sp.	Prunus	B1
13	Fraxinus excelsior	Common Ash	B1

Trees for Removal			
Ref	Species	Common Name	Category
1	Ilex aquifolium	Common Holly	C1
2	Prunus laurocerasus	Laurel Cherry	C2
3	Ilex aquifolium	Common Holly	C1
4	Ligustrum vulgare	Privet	C1
5	Prunus sp.	Prunus	U
6	Malus domestica	Cultivar Apple	C1
7	Picea abies	Norway Spruce	C1
8	Chamaecyparis lawsoniana	Lawson Cypress	B1
9	Prunus sp.	Prunus	U



Key

Canopy spread

Tree/Group number

Stem location & BS5837 Category colour

Root protection area (RPA)

BS 5837:2012 Tree Quality Categories - Table 1

- Category A - High quality
- Category B - Moderate quality
- Category C - Low quality
- Category U - Unsuitable for retention

Key

- Temporary protective barriers in accordance with section 6.2 - BS5837:2012. See inset details for example barriers
- CEZ
- Construction Exclusion Zone (CEZ)
- Tree to be removed

NOTES:

- Refer to Method Statement & Schedule for further details.
- Survey based on a visual inspection from the ground and is not intended as a full arboricultural inspection.
- All protective measures to be installed prior to commencement of any site works.
- All works to conform with requirements of: BS 3998:2010 - Tree Works BS 5837:2012 - Trees in relation to design, demolition and construction

This plan has been drafted in colour. A monochrome version must not be relied upon

Date	Notes	Rev

Tree Protection

Land to rear of
18 Moor Park Road
Northwood, HA6 2DN

Date: 15/05/2020 Scale: 1:200 @A2

DWG Ref: MW.20.0503.TPP

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