

Former Methodist Church,
Liverpool Road, Maghull.

British Standards 5837:2012 Tree
Survey: Arboricultural Impact
Assessment, Method Statement and
Tree Protection Plan



Client:

DB3 Architecture trading name of
DarntonB3 Limited

Report Reference:

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Project Details

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| Client: | DB3 Architecture trading name of DarntonB3 Limited |
| Project: | Former Methodist Church, Liverpool Road, Maghull |
| Reference | RSE_6895_R1_V1_ARB |
| Report Title | BS 5837:2012 Tree Survey, Arboricultural Impact Assessment (AIA), Arboricultural Method Statement (AMS) & Tree Protection Plan (TPP) |

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Document Control

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1 EXECUTIVE SUMMARY

- I RammSanderson Ecology Ltd was instructed by DB3 Architecture trading name of DarntonB3 Limited to carry out an assessment of trees at Former Methodist Church, Liverpool Road, Maghull which follows the guidance of British Standards 5837:2012 'Trees in relation to design, demolition and construction – Recommendations', and to provide a report on the arboricultural implications to the proposed development of the site.
- ii The current development proposals are for the construction of a convenience store with associated parking.
- iii A current topographical survey of the site in AutoCAD format has been provided and this formed the basis for the Tree Constraints Plan.
- iv Following consultation with the project Architects regarding the arboricultural constraints, a site layout plan has been produced which is considered represent the most appropriate integration between the new buildings and existing trees. A provided AutoCAD copy of this proposed site plan (Drawing Reference: 16091-DB3-B01-00-DR-ASK007 Site Feasibility - Option 07) has been considered during the Arboricultural Impact Assessment and used to produce Tree Protection Plan.
- v The content and scope of this report is listed below:
 - BS 5837:2012 Tree Survey and Categorisation
 - Arboricultural Impact Assessment
 - Arboricultural Method Statement
 - Tree Protection Plan

1.1 Findings and Recommendations

- I The survey assessed 16 individual trees, 1 group of trees and 6 hedgerows. Tree cover was mainly confined to the boundaries of the site, most noticeably along the southern boundary and consisted of mainly low quality (Category C) screening hedgerows and trees with one moderate quality (Category B) tree along this boundary.
- ii There are currently no tree preservation orders (TPO) at this location and the site is not situated within a conservation area. Therefore, none of the trees detailed within this report were subject to statutory protection at the time of the survey.
- iii The proposed development will require the removal of 11 individual trees (T3, T4, T6, T7, T8, T9, T10, T11, T12, T14 and T15), along with the removal of group G1 and hedgerow H4.
- iv The development will require the removal of 1 moderate quality tree (Category B), 10 low quality trees (Category C), 1 low quality group and 1 low quality hedgerow. The arboricultural and amenity value of these trees is limited due to their low quality and general low condition with the main loss considered to be the single category B tree.
- v It is therefore considered that the proposed development will result in a moderate loss of public amenity, mainly due to the loss of T11 and the overall high percentage of tree losses on site. It is therefore recommended that compensatory planting is implemented through effective landscape design for the scheme with the aim being to promote long-term arboricultural and amenity on the site.
- iv It is recommended that temporary protective fencing is erected from the outset of development in order to create a construction exclusion zone which adequately protects the retained trees from damage during the construction works. For full details see the Tree Protection Plan (Appendix D).

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2 INTRODUCTION AND BACKGROUND

2.1 Purpose and Scope of this Report

- i This report has been prepared following the guidance within BS 5837:2012 'Trees in relation to design, demolition and construction – Recommendations' Its purpose is to assess the likely arboricultural implications to the development proposals for the site and to be submitted in support of a planning application to the Local Planning Authority seeking consent for these proposals. It also provides arboricultural guidance on how the proposed development can be achieved while minimising any potential detrimental impacts to retained trees.
- ii In preparing this report, consideration has been given to the proposed layout, the condition of the trees, and the final use of the site with a focus on providing a harmonious, balanced environment between the trees, buildings, and the end users of the site.
- iii Whilst not definitive, the findings and any associated recommendations detailed within this report are considered reasonable, practicable, sustainable, and in the interests of promoting good arboricultural management.
- iv Recommendations included within this report are the professional opinion of an experienced Arboriculturist and are the view of RammSanderson Ecology Ltd. This is based on a review of the information provided by the Client, the brief, and a survey of the site. This report pertains to these results only.
- v This report and the survey(s) on which it depends have been carried out by a competent Arboriculturist.

2.2 Regulatory and Policy Framework

- i Part VIII of the Town and Country Planning Act 1990 (as amended) and the Town and Country Planning (Tree Preservation) (England) Regulations 2012 enable a local planning authority to make a Tree Preservation Order (TPO) to protect specific trees, groups of trees, or woodlands in the interests of amenity. A TPO prohibits the cutting down, toppling, lopping, uprooting, wilful damage, and wilful destruction of protected trees without the local planning authority's written consent.
- ii Section 211 of the Town and Country Planning Act 1990 makes provisions to protect trees which are within a conservation area, but not the subject of a TPO. These provisions require anyone intending to carry out works to a tree within a conservation area to give the local planning authority 6 weeks' notice before carrying out certain works unless an exemption applies.
- iii The Forestry Act (1967) requires that a Felling Licence, issued by the Forestry Commission, is obtained before felling trees, unless an exemption applies; such exemptions include felling small quantities of trees (less than 5m³ of timber in any calendar quarter) or felling in specific areas (e.g. gardens).

2.3 Site Location and Context

- i Site address: Former Methodist Church, Liverpool Road, Maghull, L31 2HP. Central grid ref. SD 37371 403186
- ii The site comprises of a disused Methodist Church with associated outbuildings and car parking. The site is bounded by residential properties to the north, south and east. Liverpool Road lies adjacent to the western boundary of the site.

Figure 1: Site Location Plan



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3 SURVEY METHODOLOGY

3.1 Survey Methods

i The site was visited on Tuesday 21st March 2023 to carry out an assessment in accordance with BS 5837:2012 – Trees in relation to Design, Demolition and Construction - Recommendations.

ii The weather at the time was dry, cloudy and with a persistent breeze and considered to be adequate for conducting the survey during which, the following information was collected:

- Sequential reference number (recorded on the tree survey plan), including reference to type (tree, group, woodland, or hedgerow).
- Species, listed by common name (a key to scientific names is provided at Appendix B).
- Height.
- Stem diameter measured @ 1.5m height (for trees with more than one stem, the combined stem diameter is recorded as per BS5837:2012 Section 4.6).
- Branch spread (measured at the four cardinal points).
- Existing height above ground level of first significant branch.
- Life stage :

Y – Young,
SM – Semi Mature,
EM – Early Mature,
M – Mature,
OM – Over Mature.

- General observations, particularly of structural and/or physiological condition, and/or preliminary management recommendations as appropriate.
- Estimated remaining contribution (future life expectancy) in years (<10, 10+, 20+, 40+);
- Tree quality assessment category grading as per Section 4.5 and Table 1 of BS5837:2012. 'U' or 'A' to 'C' grading with the subcategory 1, 2 or 3 reflecting arboricultural, landscape or cultural values, respectively.

Notes: Only individual trees with a stem diameter of 75mm or greater are included in the survey. It is not always practical or necessary to record individual details for every tree within a group or woodland. Only basic details (height and species) for domestic hedgerows and significant shrubs were recorded. More substantial hedgerows (including evergreen screens) are generally recorded in a similar manner to groups of trees.

iii The measurement conventions used were as follows:

- Height, crown spread, and crown clearance was recorded to the nearest half metre for dimensions up to 10m and to the nearest whole metre for dimensions over 10m.
- Stem diameter was recorded in millimetres, rounded to the nearest 10mm.
- Any estimated dimensions (for offsite or otherwise inaccessible trees where accurate measurements cannot be taken) were clearly identified as such in the tree schedule (Appendix A).

iv The survey includes all trees plotted on the provided topographical survey. Should any relevant trees on or adjacent to the site have been missed on the topographical survey, these have been included where appropriate. However, the positions indicated on any plans included within this report for all trees not included on the provided topographical survey have been approximated for the purposes of identification only, and if accurate locations are required these should be confirmed on site.

4 LIMITATIONS

4.1 Survey

- i Each of the surveyed trees has been plotted and recorded as an individual tree or a tree group in accordance with the criteria detailed in section 4.4.2.5 of BS 5837:2012.
- ii The information contained within this report is based on the author's knowledge and experience in respect of tree related issues. Whilst the appropriate level of skill and care have been used, no investigative method can eliminate the possibility of obtaining partially imprecise, incomplete, or not fully representative information.
- iii Any survey work undertaken will have been subject to natural limitations, including seasonal and phenological aspects.
- iv Trees were assessed from ground level using the Visual Tree Assessment (VTA) method. The trees included in the survey were not climbed, no samples were removed, and no detailed internal investigation of decay was made.
- v Where other vegetation (e.g. ivy or dense ground cover) prevented full access to any tree, this is noted in the tree survey schedule (Appendix A). Dense ivy cover can prevent full access to a tree and so obscure the presence of cavities or other defects. Any such situations are noted in the tree survey schedule with, where appropriate, recommendations for the ivy to be removed and a re-inspection carried out. No ivy was removed from any tree during the survey.
- iv No liability can be accepted by RammSanderson Ecology Ltd. in respect of the trees unless the recommendations of this report are carried out under their supervision and within their recommended timescales. Acceptance of this report represents an agreement with the guiding principles and the terms listed.
- vii The findings and recommendations contained within this report are, assuming its recommendations are observed, valid for a period of twelve months from the date of survey. Trees are living organisms and their condition can change significantly over a relatively short period of time – good practice dictates they are inspected on a regular basis for reasons of safety.
- viii Any hedgerows within the survey area were assessed solely for their general arboricultural condition and value. Further detailed assessment, following the Hedgerow Regulations 1997, is outside the scope of this report and no attempt has been made during this assessment to classify any hedgerow under the criteria within those Regulations.
- ix Tree rooting characteristics and soils are both enormously variable as are their interactions. This makes any attempts to quantify tree related subsidence risk assessment impossible. No attempt has been made to assess subsidence risk potential nor should any be construed.
- x The report relates only to the trees included within the Tree Schedule (Appendix A).

5 RESULTS

5.1 Surveyors

- i The survey was carried out by:
 - Liam Bancroft BSc (Hons) is an assistant ecologist and arboriculturist gaining experience within the field. He has previously worked as a forestry operations supervisor in New Zealand.
- ii The survey was completed during suitable conditions as detailed in the table below.

Table 1: Summary of conditions during survey

| Abiotic Factor | Survey 1 |
|-----------------------------|-------------------------------------|
| Survey type | BS 5837:2012 Tree Survey |
| Date completed | Tuesday 21 st March 2023 |
| Temperature | 11° C |
| Wind speed (Beaufort Scale) | 3 |
| Cloud cover | 90% |
| Precipitation | 0 |

5.2 Statutory Tree Protection

- i Sefton Council confirmed, via their online mapping portal on the 22nd March 2023, that the site is not within a conservation area and that none of the trees detailed within this report are covered by a tree preservation order (TPO).
- ii The trees on the site are therefore not currently subject to any statutory protection and there are no restrictions on tree works being carried out at this location. However, it is recommended that immediately prior to carrying out any future tree works, further confirmation is obtained from Sefton Council that the trees remain unprotected.

5.3 Tree Survey

- i The survey assessed 16 individual trees, 6 hedgerows and 1 group of trees, the quality and value of which are summarised in the table below whilst full results of the tree survey are provided in the Tree Schedule (Appendix A).
- ii The survey identified the arboricultural constraints likely to be associated with the proposals including facilitation of construction.
- iii All of the trees, hedgerows and the group of trees surveyed were of low quality (Category C) with the exception of 1 individual moderate quality (Category B) tree (T11). The majority of the tree cover on site was confined to the southern boundary, with other hedgerows making up sections of the northern and eastern boundaries, providing a minor screening benefit to the site from the adjacent residential properties.

Table 2: Survey Results

| BS5837:2012 Tree Quality Assessment Category | | Trees | Groups | Hedgerows | Total |
|--|---|-------|--------|-----------|-------|
| A | Trees of high quality which are healthy and attractive with high visibility and no significant defects, and which can make a substantial contribution for a minimum of 40 years | 0 | 0 | 0 | 0 |
| B | Trees of moderate quality which are healthy and attractive but with some remediable defects such that they are in a condition to be able to make a significant contribution for a minimum of 20 years | 1 | 0 | 0 | 1 |
| C | Trees of low quality which are unremarkable, of limited merit and that are easily replaced, small-growing, young species which have a relatively low potential amenity value, and low landscape benefits. These trees typically include self-seeded trees of limited life span, small (below 150mm stem diameter) and young trees and trees of poor form and limited amenity value. | 15 | 1 | 6 | 22 |
| U | Trees which are 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 and/or are considered to be unsuitable for retention in the proximity of new dwellings or areas of public open space. | 0 | 0 | 0 | 0 |
| Total | | 16 | 1 | 6 | 23 |

6 ARBORICULTURAL IMPACT ASSESSMENT

6.1 Introduction

- i The arboricultural constraints, both above and below ground, identified during the tree survey (Section 5) and illustrated on the Tree Constraints Plan (Appendix A), have been used, through consultation with the project Architects, to inform the proposed site layout design.
- ii The following arboricultural impact assessment evaluates the direct and indirect effects of the proposed design, with recommendations for appropriate mitigation where necessary. It takes account of the effects of any tree loss required to implement the design and any proposed construction activities which may have the potential to damage retained trees.

6.2 Trees Suitable for Retention

- i Where possible, it is generally considered desirable for any Category 'A' and Category 'B' trees to be retained and appropriately integrated within the layout for new developments. Category 'U' trees are unsuitable for retention other than for the very short-term or exceptionally for their conservation value and therefore should not be considered to be a constraint to development.
- ii In assessing the probable impact of the proposed development on the trees and vice versa, and therefore identifying which trees are suitable for retention and integration within the context of the proposed layout, the following factors have all been considered:
 - Root Protection Areas for Retained Trees
 - Shading
 - Direct Damage
 - Construction Activity
 - Demolition/Ground Works
 - Future Pressure for Tree Removal and Pruning
 - Seasonal Nuisance
 - Infrastructure
 - Future Management

6.3 Root Protection Areas (RPAs)

- i Recommended Root Protection Areas (RPA) for all individual trees on or immediately adjacent to the survey area are detailed within the Tree Schedule (Appendix A) and illustrated on the Tree Constraints Plan (Appendix C).
- ii These RPAs have been calculated following the recommendations within BS5837:2012 Section 4.6 and are represented on the Tree Constraints Plan as a circle centred on the base of the tree's stem. Should any deviation from this circular RPA be considered appropriate, for example where previous site conditions (the presence of roads, structures, and underground apparatus), topography, or soil type/structure will have influenced root growth, any modifications to the RPA will be clearly explained and reflect a soundly based arboricultural assessment of the likely root distribution for the individual tree. Any such modified RPA will be of an overall area which is equivalent to the BS5837:2012 recommendation.
- iii Recommendations for RPAs for any groups of trees, woodlands, or hedgerows, where the positions of individual trees are not included on the provided topographical survey, also reflect a soundly based arboricultural assessment of the likely collective root distribution of the constituent trees.

6.4 Recommendations for Tree Removals

- i The proposed development layout will require the removal of 1 moderate quality (Category B) tree (T11), and 10 low quality (Category C) trees. A low-quality group (G1) and a low-quality hedgerow (H4) will also require

removal. The individual trees for removal pertain to T3-Sycamore, T4-Cherry laurel, T6-Elder, T7-Small-leaved lime, T8-Small-leaved lime, T9-Sycamore, T10-Sycamore, T11-Sycamore, T12-Sycamore, T14-Hawthorn and T15-Hawthorn.

- ii Table 5 (section 7.1) below provides a summary of all recommended tree works (pruning and removals).
- iii All Arboricultural work should be carried out by qualified and competent Arborists working to BS 3998:2010 'Tree Work – Recommendations'.

6.5 Tree Loss Evaluation

- I There will be a reduction in amenity as a result of the proposals, albeit somewhat minimised due to the low quality of the majority of removals, with just 1 moderate quality tree requiring removal due to the combined impact the proposals would have on the above and below ground tree structure. The trees proposed for removal, in addition to being of low quality, are in close proximity to the proposed construction zone with some of the trees already leaning north therefore any disturbance to this rooting area could potentially lead to the trees failing either during or post development.
- ii It is therefore considered that the proposed development will result in a moderate loss of public amenity, due to the loss of T11 in addition to the high percentage of low quality tree losses. These losses should be adequately compensated for through the landscape design replanting.
- iii Any arboricultural and amenity losses should be balanced against the overall benefits of the development and mitigated against/compensated for through appropriate new tree planting, as part of the overall landscaping scheme for the development with the aim of maintaining an appropriate amount of tree cover whilst improving the long term arboricultural value of the site.

6.6 Recommendations for Tree Pruning

- I Slight pruning back to the southern canopy of H2 and the western canopy of H3 may be required for aesthetic reasons as well as facilitating development in those associated areas.
- ii Any recommendations within the Tree Survey Schedule (Appendix A) details pruning works solely in the context of the current use of the site that are recommended in the interest of good arboricultural management of the trees irrespective of any changes in use of the site. These recommendations should not be considered as necessary to implement or facilitate the proposed development.
- iii Any additional pruning which is recommended solely to accommodate the proposed site layout (e.g. access facilitation pruning) is detailed within Table 5 (section 7.1).
- iv All Arboricultural work should be carried out by qualified and competent Arborists working to BS 3998:2010 'Tree Work – Recommendations'.

6.7 Tree Protection Plan

- I The Tree Protection Plan (Appendix D), when read in conjunction with this report, details the required tree protection and mitigation measures for all trees proposed to be retained and integrated within the proposed layout.
- ii The Tree Protection Plan is superimposed on the proposed layout and includes details of;
 - Trees selected for retention and trees proposed for removal.
 - The precise location and specification of protective barriers to form a construction exclusion zone around the retained trees.
 - The extent and type of any temporary ground protection, and/or any additional physical measures, that are recommended in association with any temporary access or other activities which are permitted within the construction exclusion zone.

- The position, extent and general construction specification of any new permanent new hard surfacing within the RPA.

6.8 Shading

- i Although there are circumstances where shade from trees could be considered beneficial, excessive shading of buildings by trees can be a problem, particularly where it affects rooms which require natural light. Similarly, it is often considered that open spaces such as gardens and sitting areas benefit from direct sunlight, for at least part of the day, and therefore that excessive shading of these areas by trees is undesirable.
- ii In this instance, no further investigation, illustration or mitigation is considered necessary due to the generally favourable layout orientation and the nature of the proposal (i.e. non-residential) which means that the development is not considered likely to be subjected to an unreasonable level of shading from trees.

6.9 Direct Damage

- i All new developments should consider the likelihood of direct damage occurring to any new structures, hard surfacing or associated utilities from incremental tree stem/ root growth or mechanical damage resulting from encroachment of branches.
- ii For any proposed new planting, Table 3 below, taken from Annex A of BS 5837:2012, provides recommendations that are advised as minimum distances from structures and services for new tree plantings.

Table 3: Minimum distance between young trees or new planting and structure to avoid direct damage to a structure from future tree growth

| Type of structure | Minimum distance between young trees or new planting and structure, in metres (m) | | |
|---|---|---------------------------------------|---------------------------------|
| | Stem dia. $\leq 300\text{mm}^A$ | Stem dia. 300mm to 600mm ^A | Stem dia. $\geq 600\text{mm}^A$ |
| Building and heavily loaded structures | --- | 0.5 | 1.2 |
| Lightly loaded structures such as garages, porches etc. | --- | 0.7 | 1.5 |
| Services | | | |
| $\leq 1\text{m}$ deep | 0.5 | 1.5 | 3.0 |
| $\geq 1\text{m}$ deep | --- | 1.0 | 2.0 |
| Masonry boundary walls | --- | 1.0 | 2.0 |
| In-situ concrete paths and drives | 0.5 | 1.0 | 2.5 |
| Paths and drives with flexible surfaces or paving slabs | 0.7 | 1.5 | 3.0 |

A) Diameter of stem at 1.5m above ground level at maturity.

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6.10 Temporary Ground Protection

- i The proposed site layout does not include any conflict between the necessary construction working space and retained trees. Therefore, it is not considered that any temporary ground protection will be required to implement the development.
- ii British Standard 5837:2012 advises that temporary ground protection should be capable of supporting any traffic entering or using the site without being distorted or causing compaction to underlying soil and further provides the following note:

The ground protection might comprise one of the following:

a) for pedestrian movements only, a single thickness of scaffold boards placed either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100 mm depth of woodchip), laid onto a geotextile membrane;

b) for pedestrian-operated plant up to a gross weight of 2 t, proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane;

c) for wheeled or tracked construction traffic exceeding 2 t gross weight, an alternative system (e.g. proprietary systems or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the likely loading to which it will be subjected.

- iii Final on-site measurements should be taken to ascertain the extent of any tree protection measures and provide an indication of whether incursions, which have not been anticipated, into the RPAs of retained trees might prove necessary.

6.11 Excavation / Ground Works

- i The installation of any protective mitigation measures, if necessary, prior to the commencement of any works on site, will allow excavations and ground works to take place whilst minimising any anticipated adverse effect and/or impact on the retained trees.
- ii All plant and vehicles engaged in ground works should either operate outside the RPAs, or run on appropriate ground protection, if necessary, in the proximity of retained trees.
- iii Where trees stand adjacent to hard surfaces and/or buildings to be removed, excavation should be undertaken inwards, from within the footprint of the existing hard surfacing, or outside of the RPAs.

6.12 Construction Within the Root Protection Area

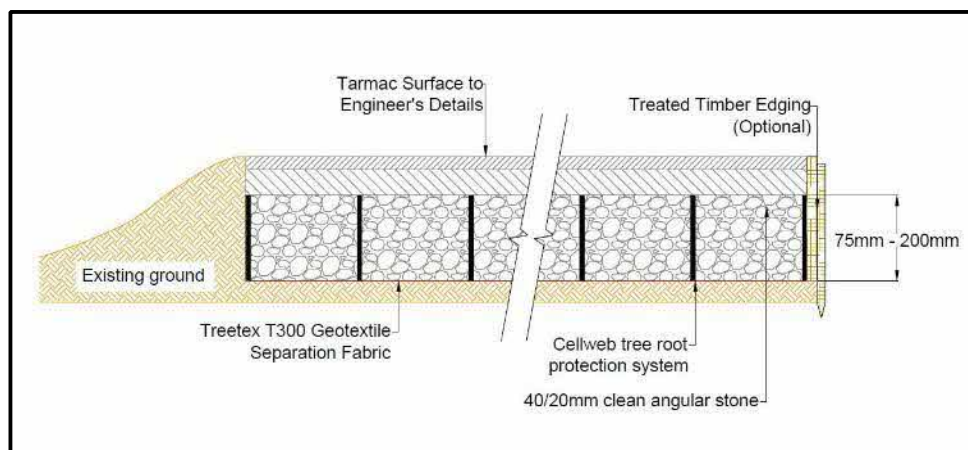
- i The use of traditional strip foundations can result in extensive root loss and should be avoided. However, BS5837:2012 recommends that the insertion of specially engineered structures within RPAs may be justified if it enables the retention of a good quality tree (usually category A or B) that would otherwise be lost.
- ii The foundation design should minimise any adverse impact on the trees and should take into consideration all relevant site-specific constraints. In order to arrive at a suitable solution, the combined advice of the project arboriculturist and an engineer will be required.
- iii BS5837:2012 recommends that root damage can be minimised by using piles, located optimally to avoid any structural roots, by means of hand tools or compressed air soil displacement, to a minimum depth of 600mm, or beams laid at or above ground level to avoid tree roots.

- iv Where piling is to be installed near to trees, the smallest practical pile diameter should be used to reduce the possibility of striking major tree roots. Temporary ground protection, appropriate to the size of the piling rig in use, should be used as detailed above in section 6.6.
- v It may be appropriate for slabs for minor structures (e.g. a shed base) to be formed within the RPA. It should however be placed on the existing ground level with no new excavation and should not exceed an area greater than 20% of the unsurfaced ground within the RPA.
- iv The proposed layout does not include any construction within the RPA and so there is no requirement for any specially engineered structures in this instance.

6.13 Hard Surfacing Within the Root Protection Area

- I Proposed parking bays are slightly located within the RPA of H3.
- ii This is considered to be acceptable in this instance, providing that the existing hard surfacing within the RPA of H3 is retained to act as the subbase for the proposed parking bays. The incursion into the RPA of this hedgerow is considered to be very minor and therefore if the parking bays can be constructed without excavation below the depth of the existing subbase then no further mitigation will be required in this instance.
- iii It is not anticipated that the installation of any specially engineered hard surfaces to protect the roots of retained trees will be necessary in this instance. However, general guidance on such surfacing is provided below should a subsequent need arise.
- iv BS5837:2012 recommends that three-dimensional cellular confinement systems, incorporating geotextile or impermeable barriers as necessary, may be appropriate sub-base options for new hard surfacing within the RPA.
- v A 'no-dig' design should be used which does not require excavation into the soil other than the removal, using hand tools, of any turf layer or other surface vegetation. The structure of the hard surface should be designed to avoid localised compaction and in all cases, the advice of a structural engineer should be sought to ensure that the design is suitable for the anticipated vehicle loads it will be subjected to.
- iv An assessment should be made to establish whether the existing site topography lends itself to the installation of a three-dimensional cellular confinement system. Final on-site measurements should be taken to ascertain the extent of any incursions into the RPA and provide subsequent guidance on the extent of any 'no-dig' installation.
- vii The new hard surfacing should be resistant to deformation by tree roots and should be set back from the tree's stem and above ground buttresses by a minimum distance of 500mm to allow for growth and movement. Where no-dig installations are proposed to be located particularly close to the main stems of retained trees then it is recommended that consideration is given to realigning the hard surfacing in order to reduce the total area (m²) of RPAs affected in order to reduce the likelihood for future pruning pressure and minimise the potential for any detrimental impact on the retained trees.
- viii It is recommended that the total area for all new permanent hard surfacing should not exceed 20% of any existing unsurfaced ground within the RPA.
- ix Indicative cross-sectional drawings of a suitable three-dimensional cellular confinement system (CellWeb™) are shown below (Figure 2).

Figure 2: Cross section illustrating a permeable tarmac surface finish



6.14 Construction Activity

- i The installation of any recommended protective or mitigation measures prior to the commencement of any works on site will allow the development to take place whilst minimising any anticipated adverse effect and/or impact on the retained trees.
- ii All plant and vehicles engaged in construction works should either operate outside the RPA, and/or run-on appropriate ground protection.

6.15 Future Pressure for Tree Pruning/ Removal

- i Whilst the presence of retained trees can often enhance the immediate environment upon completion, any proposed layout should provide sufficient space that will allow for future tree growth and to provide a subsequently reduced need for future, frequent remedial pruning.
- ii The tree works detailed in Table 5 are considered, in this instance, to provide an environment and layout juxtaposition that will allow for the future growth of the retained trees whilst minimising any immediate future pruning pressures.

6.16 Seasonal Nuisance

- i Foliage, fruit, and cone fall can be considered by some to be a nuisance and requests to Local Planning Authorities to carry out pruning works to negate these issues are often refused due in part to their brief, seasonal nature of the problem.
- ii Providing a suitable juxtaposition when considering new layouts will help in minimising issues experienced by people living in proximity to trees.
- iii A certain level of leaf fall in the autumn will be inevitable due to the generally deciduous nature of the existing trees on the site. This is however not considered to be unreasonable in the context of the site's use.

6.17 Infrastructure

- i Infrastructure requirements have been considered and there is no evidence to suggest that retained trees will have an impact on lighting, signage, CCTV sightlines or visibility splays.
- ii Where the installation of any underground apparatus and drainage is considered necessary then particular care should be taken in its routing and methods of installation and wherever possible be routed outside RPAs.

- iii Where routeing services outside RPAs is not possible then detailed plans showing the proposed routeing should be drawn up in conjunction with the project Arboriculturist. Trenchless insertion methods are considered appropriate for this purpose and British Standards 5837:2012 details solutions for differing utility apparatus requirements (see table 4 below).
- iv British Standards 5837:2012, Section 7.7.2 suggests that in the event roots can be retained and appropriately protected during exposure, then excavation using hand-held tools might be acceptable for shallow service runs. The National Joint Utilities Group's publication 'NJUG Volume 4' contains further guidelines on the installation of new underground services in proximity to trees.

Table 4: Trenchless solutions for differing utility apparatus installation requirements

| Method | Accuracy | Bore dia. ^{A)} | Max sub. ^{B)} length | Applications | Not suitable for |
|---------------------------------------|-------------------|-------------------------|-------------------------------|---|---|
| Micro tunnelling | ≤20 | 100 to 300 | 40 | Gravity -fall pipes, deep apparatus, watercourse/ roadway undercrossing | Low-cost projects due to relative expense |
| Surface-launched directional drilling | ≈100 | 25 to 1,200 | 150 | Pressure pipes, cables including fibre optic | Gravity-fall pipes, e.g. drains and sewers ^{C)} |
| Pipe ramming | ≈150 | 150 to 2,000 | 70 | Any large-bore pipes and ducts | Rocky and other heavily obstructed soils |
| Impact moling ^{D)} | ≈50 ^{E)} | 30 to 180 ^{F)} | 40 | Gas, water and cable connections, e.g. from street to property | Any application that requires accuracy over distances in excess of 5m |

A) *Dependent on strata encountered.*

B) *Maximum subterranean length.*

C) *Pit-launched directional drilling can be used for gravity fall pipes up to 20m subterranean length.*

D) *Impact moling (also known as thrust-bore) generally requires soft, cohesive soils.*

E) *Substantial inverse relationship between accuracy and distance.*

F) *Figures given relate to single pass up to 300mm bore achievable with multiple passes.*

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6.18 Landscaping

- I BS 5837:2012 advises that any new tree planting and associated landscaping proposals should consider the ultimate height and spread, form, habit and colour, density of foliage, and maintenance implications, in relation to both the built form of the new development, and the retained landscape features.
- ii Consideration should also be given to the advice detailed in section 6.4 in respect of distances of newly planted trees in relation to new structures.
- iii For all new tree planting, the guidance within BS 8545:2014 'Trees: from nursery to independence in the landscape – Recommendations' should be followed.
- iv Appropriate planting should be undertaken within the landscape design for the scheme to compensate for proposed losses.

6.19 Issues to be addressed by an Arboricultural Method Statement

- I The Arboricultural Method Statement (Section 7) details the general methodology for the implementation of those aspects of the proposed development that have the potential to result in damage to the retained trees.

7 ARBORICULTURAL METHOD STATEMENT

7.1 Recommended Tree Works/Removals

- i Tree works tabled below (Table 5) have been identified as a result of one or more of the following reasons:
- to directly implement the proposal,
 - to facilitate the implementation and construction of the proposals,
 - to assist in the creation of a balanced and desirable layout juxtaposition and
 - in the interests of reasonable arboricultural management.
- ii All tree works should be carried out by qualified and competent Arborists working to BS 3998:2010 'Tree Work – Recommendations'.

Table 5: Summary of Recommended Tree Works

| Tree No. | Species | BS5837:2012 Category | Recommended Works |
|----------|-------------------|----------------------|---|
| T3 | Sycamore | C1 | Remove - to accommodate the proposed development. |
| T4 | Cherry laurel | C1 | |
| T6 | Elder | C1 | |
| T7 | Small-leaved lime | C1 | |
| T8 | Small-leaved lime | C1 | |
| T9 | Sycamore | C1 | |
| T10 | Sycamore | C1 | |
| T11 | Sycamore | B1 | |
| T12 | Sycamore | C2 | |
| T14 | Hawthorn | C2 | |
| T15 | Hawthorn | C1 | |
| H2 | Mixed | C2 | Prune back canopies overhanging site if required. |
| H3 | Mixed | C2 | |

7.2 Summary of Mitigation

- i The table below summaries the mitigation methods required for the site, specific to any trees where their RPA may be subject to impact by the proposed development.
- ii Each specific requirement is detailed further in the subsequent sections of this report.

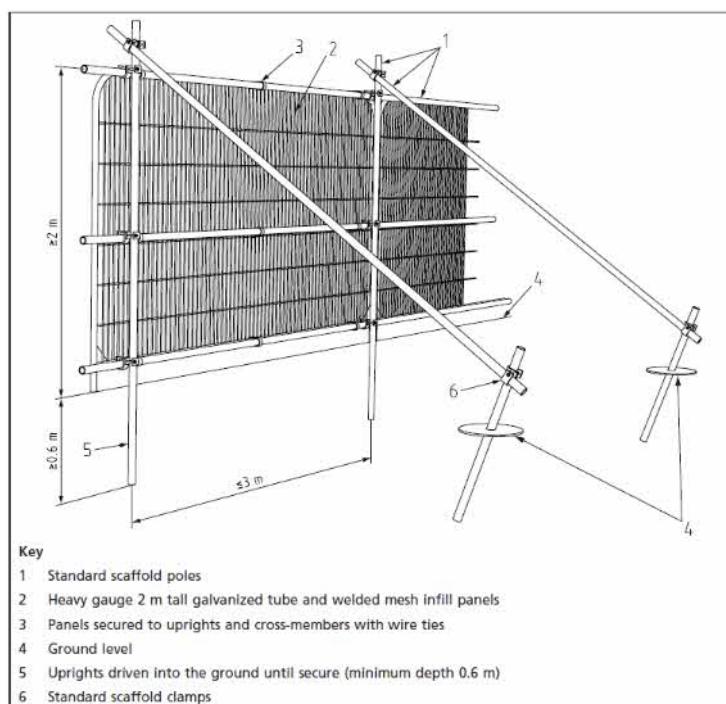
Table 6: Summary of Mitigation Requirements

| Tree No. | Species | Works effecting | Mitigation Required |
|---------------------|---------|--|--|
| Throughout the site | | Retained trees in general proximity to the proposed construction works | Create a construction exclusion zone, by erecting and maintaining temporary tree protection fencing for the duration of the construction works. The tree protection fencing should be installed as detailed on the Tree Protection Plan (Appendix D). |

7.3 Erection of Protective Fencing

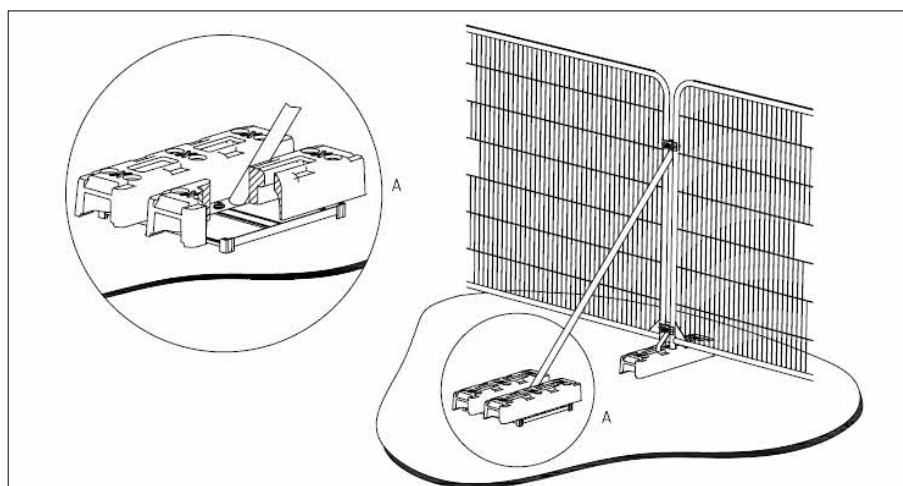
- i It is recommended that temporary protective fencing should be erected in order to create a construction exclusion zone which adequately protects the retained trees from damage during the construction works. This fencing should be erected at the outset of the development works before any activities (including demolition and ground works) are carried out and materials/ plant are brought onto site.
- ii Tree protection fencing in some instances is to be used to reinforce the existing boundary fencing on site. The recommended position for protective fencing is detailed on the Tree Protection Plan (Appendix D).
- iii The fencing should consist of a vertical and horizontal scaffold framework which is well braced to resist impacts as seen below in Figure 3.

Figure 3: Default specification for protective barrier © British Standards Institute



- iv All-weather warning notices should be attached to the fencing to clearly identify the area as a tree protection exclusion zone into which access is not permitted
- v Once erected, the protected area should be regarded as sacrosanct and the fencing should not be removed or altered unless recommended by the project Arboriculturist and, where necessary, approval from the local planning authority.
- iv Where the site circumstances and associated risk of damaging incursion into the RPAs do not necessitate the default level of protection, an alternative specification may be considered to be appropriate. For example, 2m tall welded mesh panels on rubber or concrete feet as illustrated below in Figure 4.

Figure 4: Alternative Specification for Protective Fencing © British Standards Institute



- vii In this instance, it is considered that the associated risks to trees from the proposed development do not necessitate the default specification and therefore that use of the alternative specification will be appropriate.

7.4 Additional General Precautions Outside of the Exclusion Zone

- i Fires on site should be avoided wherever possible. Where they are unavoidable, they should be kept well away from the exclusion zone, and only lit in positions where heat will not affect foliage or branches. The potential size of a fire and wind direction should be taken into account, and it should be attended at all times until safe to leave.
- ii Any materials, fuel, or chemicals whose accidental spillage would cause damage to a tree should be stored and handled well away from the exclusion zone.

7.5 Site Monitoring

- i Following consideration of the likely arboricultural impacts to the development, together with the recommended mitigation options, it is not considered that on-site arboricultural monitoring will necessary during the construction works.

7.6 Ground Works, Demolition & Construction Works

- i Installation of all recommended protective mitigation measures prior to the commencement of any works, combined with use of temporary ground protection and/or the retention of existing hard surfacing within the RPAs, will allow the ground works to take place whilst minimising any adverse effect or impact on the retained trees.
- ii All plant and vehicles engaged in ground works should either operate outside the RPA or run-on temporary ground protection or existing hard standing, where appropriate.
- iii During ground works and demolition, the utmost caution should be used to not sever any roots, especially those measuring $\geq 25\text{mm}$ in diameter. Any roots uncovered roots should be wrapped/covered to prevent them from desiccation and rapid temperature changes (any wrapping should be removed prior to backfilling).
- iv In the case where plant or wide/ tall loads are being used, it must be ensured that all parts of the equipment remain outside of the RPAs, in order that they can operate without coming into contact with any of the on-site or adjacent trees. All works must have appropriate supervision by a banksman, to ensure that adequate clearance from trees is maintained at all times.

- v Access facilitation pruning should not be necessary on site but if it does become necessary to maintain a safe clearance. All work must be approved by the project Arboriculturist and carried out by a qualified and competent Arborist working to BS 3998:2010.
- iv If damage occurs to part of a tree during the works, the project Arboriculturist must be contacted without delay.

7.7 Soil Compaction and Remediation Measures

- I Soil that has been compacted will not provide suitable conditions for the survival and growth of vegetation, whether existing or new, and is a common cause of post-construction tree loss on development sites.
- ii Compacted soil will adversely affect drainage, gas exchange, nutrient uptake, and organic content, and will seriously impede or restrict root growth.
- iii Soil compaction should be avoided around existing vegetation, including trees, and in areas where new planting or seeding is proposed.
- iv Where soil compaction has occurred near to existing trees, remedial works might include sub-soil aeration using compressed air, and the addition of other materials, preferably of a bulky, organic nature (but excluding peat), to improve structure.
- v Heavy mechanical cultivation such as ploughing or rotavating should not occur within the RPA.
- iv Any cultivation operations should be undertaken carefully by hand to minimize damage to the tree, particularly the roots.
- vii Decompaction measures include forking, spiking, soil augering and tilled radial trenching. Care should be taken during such operations to minimize the risk of further damage of tree roots.

7.8 Contractors Storage, Parking & Access

- I Provision should be made for welfare facilities, the site office, contractor parking, storage for materials, plant and spoil, and space for mixing, all outside of the RPAs of retained trees.
- ii In this instance, it is considered that there is sufficient space for provision of the above, without placing significant constraints on the working space available for the construction and its associated activities.

7.9 Completion

- I At the completion of the construction works, before removal of any of the tree protection measure at the completion of the project, it is recommended that the advice of the project Arboriculturist is sought regarding whether a re-survey of the retained trees is necessary for signs or symptoms of damage and/or stress that the construction may have caused.
- ii The protective fencing and ground protection measures should remain in position until its use is considered unnecessary and any risk of damage to the retained trees and/or their respective RPAs e.g. soil compaction from vehicular plant or machinery, has completely passed.

7.10 Tree Planting & After Care

- I When planning or implementing any new tree planting scheme, it is recommended that the guidance within BS 8545:2014 'Trees: from nursery to independence in the landscape – Recommendations' is followed.
- ii The following points summarise good after care for newly planted trees with an additional consideration to any necessary formative, corrective and maintenance pruning:
- iii Water the trees immediately after planting and weekly throughout the first growing season by allowing 10 – 20 litres of water for each tree. This is especially important during prolonged periods of dry weather in which case the frequency of watering may need to be increased.

- iv Do not allow weeds or grass to grow within a 500mm radius of the stem.
- v Maintain an organic mulch (e.g. composted woodchip or bark) to a minimum depth of 75mm for a radius of 500mm around the base of new trees.
- iv At the end of each growing season, check that tree-ties are not damaging the tree stems and loosen if necessary.
- vii Ensure that the tree stakes remain firm while the new planting becomes established and only remove when the tree can support itself, usually after a period of 2 -3 years.
- viii Carry out formative pruning to the young trees by removing dead, weak, and crossing branches, epicormic growth, and suckers arising from the roots.

7.11 Contacts

- I RammSanderson Ltd. 0115 930 2493, info@rammsanderson.com

Appendix A Tree Schedule

| Tree N ^o | Species | Age | Height (m) | Dia (mm) | Crown Spread (m) | | | | Life Exp | Cat | Cond | General Observations | Preliminary Management Recommendations | RPA (m ²) | RPA Radius (m) |
|---------------------|----------------|-----|------------|------------|------------------|---|---|---|----------|-----|------|--|--|-----------------------|----------------|
| | | | | | N | E | S | W | | | | | | | |
| T1 | Sawara Cypress | EM | 5 | 140 | 1 | 1 | 1 | 1 | 10+ | C2 | Fair | Located 20cm from hard standing to South and East of main stem. Previous pruning points evident at 1 metre on Southern canopy to clear pathway. | No works recommended at present. | 9 | 1.7 |
| T2 | Lawson Cypress | M | 9 | 500 (Est.) | 3 | 3 | 3 | 3 | 10+ | C1 | Fair | Located offsite in private garden. Not on topographical plan. Located approximately 5 metres from site boundary. Limited VTA. Main stem not observed. Estimated DBH. | No works recommended at present. | 113 | 6 |
| T3 | Sycamore | SM | 5 | 105 | 1 | 1 | 1 | 1 | 10+ | C1 | Poor | Not plotted on topographical plan. Limited VTA due to bramble preventing access. Fair amount of new growth on stems. Growing up against building. Main stem with 70mm DBH is snapped at 1.7 metres. Minor snapped branching on all stems. | No works recommended at present. | 5 | 1.3 |
| T4 | Cherry Laurel | EM | 5 | 248 | 4 | 2 | 1 | 2 | 10+ | C1 | Fair | Not plotted on topographical plan. Located 1 metre from southern boundary fence, and 4 metres from eastern boundary. Co-dominant stems from base. Stem leaning to North has various pruning points on Southern canopy. Lower leaves effected by shot-hole. | No works recommended at present. | 28 | 3 |

| Tree N ^o | Species | Age | Height (m) | Dia (mm) | Crown Spread (m) | | | | Life Exp | Cat | Cond | General Observations | Preliminary Management Recommendations | RPA (m ²) | RPA Radii (m) |
|---------------------|-------------------|-----|------------|------------|------------------|---|---|-----|----------|-----|------|---|---|-----------------------|---------------|
| | | | | | N | E | S | W | | | | | | | |
| T5 | Paper Bark Maple | SM | 3 | 100 (Est.) | 1 | 1 | 1 | 0.5 | 10+ | C1 | Fair | Located offsite. Not plotted on topographical plan. Estimated DBH. Located in private garden 30cm from boundary fence. Tree looks in fair condition. | No works recommended at present. | 5 | 1.2 |
| T6 | Elder | SM | 4 | 173 | 2 | 2 | 1 | 1 | 10+ | C1 | Fair | Not plotted on topographical plan. Location estimated. Multi stemmed from base. Minor deadwood in canopy. Bramble entwined throughout. Fair vitality. | No works recommended at present. | 14 | 2.1 |
| T7 | Small-leaved Lime | M | 13 | 675 | 7 | 6 | 6 | 4 | 10+ | C1 | Poor | Ivy present on mainstems from base to 8 metres. Insect bore holes on first 2 metres of stems. Large amount of minor deadwood present within canopy. Bark peeling/removed on main stem from 6 metres to 10 metres. Poor vitality. Located on raised bank, ground level change to the north of the mainstem within the root protection area. | Remove deadwood >25mm. Sever ivy. Monitor in light of condition and growing location. | 206 | 8.1 |
| T8 | Small-leaved Lime | M | 12 | 580 | 7 | 3 | 6 | 5 | <10 | C1 | Poor | Ivy present on mainstems from base to 8 metres. Insect bore holes on first 2 metres of main stem. Large west facing dead branch at 1.5 metres. Large poor pruning point with splitting at 2 metres. Large amounts of dead wood over 80mm throughout. Large amount of minor deadwood present within canopy. Poor vitality. Located on raised bank, ground level change to the north of the | Remove all dead wood >25mm. Sever ivy. Monitor in light of condition and growing location. Remove if in conflict with development. | 154 | 7 |

| Tree N ^o | Species | Age | Height (m) | Dia (mm) | Crown Spread (m) | | | | Life Exp | Cat | Cond | General Observations | Preliminary Management Recommendations | RPA (m ²) | RPA Radius (m) |
|---------------------|----------|-----|------------|----------|------------------|---|---|---|----------|-----|---|---|--|-----------------------|----------------|
| | | | | | N | E | S | W | | | | | | | |
| | | | | | | | | | | | mainstem within the root protection area. | | | | |
| T9 | Sycamore | M | 12 | 330 | 5 | 2 | 3 | 1 | 10+ | C1 | Poor | Ivy present on main stem from base to 6m. Located on raised bank, ground level change to the north of the mainstem within the root protection area. Slight lean to the northwest. Suppressed Southern and eastern canopy. Dead wood over 25mm throughout canopy. Poor vitality. | Remove dead wood >25mm. Sever Ivy. Monitor tree in light of lean and change in ground level. Remove if in conflict with developments. | 50 | 4 |
| T10 | Sycamore | M | 12 | 320 | 4 | 1 | 3 | 4 | 10+ | C1 | Poor | Ivy present on main stem from base to 6 metres. Located on raised bank, ground level change to the north of the mainstem within the root protection area. Slight north-westerly lean. Suppressed eastern canopy. Minor deadwood under 25mm throughout canopy. Poor overall vitality. Small branch wounds at 3 metres. | Sever ivy. Monitor tree in light of lean and change in ground level. | 45 | 3.8 |
| T11 | Sycamore | M | 14 | 709 | 4 | 4 | 4 | 4 | 20+ | B1 | Fair | Multi-stemmed tree joined at base with included bark. Fair vitality of all stems. Ivy present from base to 3 metres. Bird nest observed in tree. Overhanging on site building to north and private garden to the south. Limited VTA of southern aspect. Located on raised bank, ground level change to the north of the | Sever Ivy. Monitor tree in light of lean and change in ground level. | 227 | 8.5 |

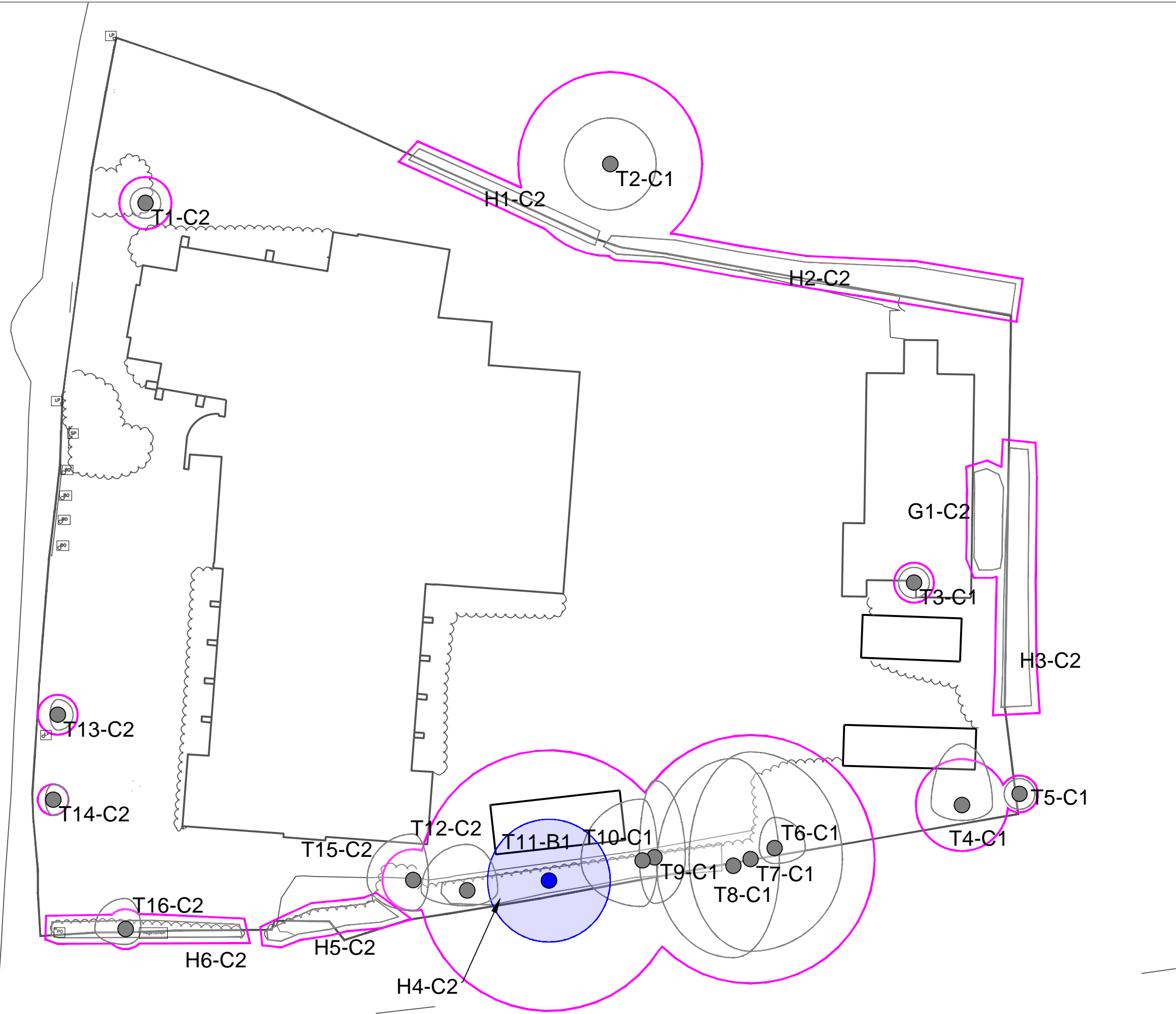
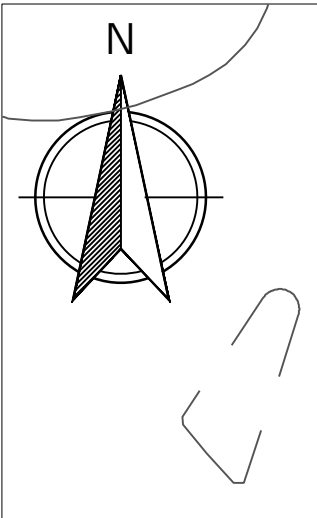
| Tree N ^o | Species | Age | Height (m) | Dia (mm) | Crown Spread (m) | | | | Life Exp | Cat | Cond | General Observations | Preliminary Management Recommendations | RPA (m ²) | RPA Radii (m) |
|---------------------|-------------|-----|------------|-----------|------------------|---|---|-----|----------|-----|--|--|--|-----------------------|---------------|
| | | | | | N | E | S | W | | | | | | | |
| | | | | | | | | | | | mainstem within the root protection area | | | | |
| T12 | Sycamore | M | 8 | 210 | 3 | 2 | 1 | 3 | 10+ | C2 | Fair | Not plotted on topographical plan. Estimated location. Located on raised bank, ground level change to the north of the mainstem within the root protection area. Small amount of ivy present on mainstem. Minor screening benefit to private garden to south. Northern canopy within 50cm of onsite building to north. | Sever ivy. Reduce northern canopy to prevent contact with building. | 20 | 2.5 |
| T13 | Hawthorn | EM | 3 | 112 | 1 | 1 | 1 | 0.5 | 10+ | C2 | Fair | Thick base to main stem leading to an intertwined multi stemmed small tree. Located 50cm from hard standing. Fair vitality. Poor structure. | No works recommended at present. | 5 | 1.3 |
| T14 | Hawthorn | EM | 3 | 80 | 1 | 1 | 1 | 0.5 | 10+ | C2 | Fair | Standalone small tree. Located 50cm from hard standing. Fair vitality. | No works recommended at present. | 3 | 1 |
| T15 | Hawthorn | EM | 5 | 180 | 3 | 1 | 2 | 3 | 10+ | C1 | Fair | Small tree located up against fence. Multi stemmed. Fair vitality. Previous pruning points evident. Northern canopy in contact with onsite building. | Reduce northern canopy to prevent contact with onsite building. | 15 | 2.2 |
| T16 | English Oak | SM | 3 | 106 | 2 | 1 | 1 | 2 | 10+ | C2 | Fair | Multi stemmed from base. Fused stems at base with fused branching. Minor pruning points evident. Minor screening benefit to site. | No works recommended at present. | 5 | 1.3 |
| G1 | Sycamore | SM | 6 (Avg.) | 70 (Avg.) | / | / | / | / | 10+ | C2 | Fair | Not plotted on topographical plan. Unable to access base of trees due to location behind building and thick vegetation. | No works recommended at present. | / | 0.8 |

| Tree N ^o | Species | Age | Height (m) | Dia (mm) | Crown Spread (m) | | | | Life Exp | Cat | Cond | General Observations | Preliminary Management Recommendations | RPA (m ²) | RPA Radius (m) |
|---------------------|---------------------------------------|-----|------------|-----------|------------------|---|---|---|----------|-----|--|---|--|-----------------------|----------------|
| | | | | | N | E | S | W | | | | | | | |
| | | | | | | | | | | | Limited VTA. Minor screening benefit to residential housing to the east of site. | | | | |
| H1 | Cotoneaster | SM | 2.5 (Avg.) | 50 (Avg.) | / | / | / | / | 10+ | C2 | Fair | Located offsite. Hedgerow is approximately 1 metre wide. Well maintained. Dense. Provides screening to residential housing to the north of site. | No works recommended at present. | / | 0.6 |
| H2 | Leyland Cypress, Bay | SM | 2.5 (Avg.) | 50 (Avg.) | / | / | / | / | 10+ | C2 | Fair | Located offsite. Limited VTA. Bay tree (<i>Laurus nobilis</i>) making up 5 metres of hedgerow to the far east. | No works recommended at present. | / | 0.6 |
| H3 | Leyland Cypress, Lawson Cypress | SM | 5 (Avg.) | 90 (Avg.) | / | / | / | / | 10+ | C2 | Fair | Boundary hedgerow. Poor continuity. Unkempt. Screening benefit to residential housing. approximately 2 metres wide throughout. | No works recommended at present. | / | 1.1 |
| H4 | Privet | Y | 2 (Avg.) | 50 (Avg.) | / | / | / | / | 10+ | C2 | Fair | Privet understory hedgerow. Poor continuity. unkempt. Small stems. Minor screening benefit to residential housing to the south of the site. Canopy 2m wide. Ground ivy throughout. | No works recommended at present. | / | 0.6 |
| H5 | Sycamore, Privet | SM | 3 (Avg.) | 50 (Avg.) | / | / | / | / | 10+ | C2 | Poor | Ivy present throughout. Poor continuity. Sycamore stems topped pruned to 1.5 metres with new shoots growing. Minor screening benefit to residential housing to the south of the site. | No works recommended at present. | / | 0.6 |
| H6 | Sycamore, Hawthorn, Evergreen spindle | SM | 2 (Avg.) | 50 (Avg.) | / | / | / | / | 10+ | C2 | Poor | Small section of hedgerow with poor continuity. Fair vitality throughout. Approximately 1 metre wide. | No works recommended at present. | / | 0.6 |

Appendix B: Key to Species Scientific Names

| Common Name | Scientific Name |
|-------------------|------------------------------------|
| Cherry laurel | <i>Prunus laurocerasus</i> |
| Cotoneaster | <i>Cotoneaster frigidus</i> |
| English oak | <i>Quercus robur</i> |
| Elder | <i>Sambucus nigra</i> |
| Evergreen spindle | <i>Euonymus japonicus</i> |
| Hawthorn | <i>Crataegus monogyna</i> |
| Lawson cypress | <i>Chamaecyparis lawsoniana</i> |
| Leyland cypress | <i>X Cupressocyparis leylandii</i> |
| Paper bark maple | <i>Acer griseum</i> |
| Privet | <i>Ligustrum ovalifolium</i> |
| Sawara cypress | <i>Chamaecyparis pisifera</i> |
| Small-leaved lime | <i>Tilia cordata</i> |
| Sweet bay tree | <i>Laurus nobilis</i> |
| Sycamore | <i>Acer pseudoplatanus</i> |

Appendix C: Tree Constraints Plan – RSE_6895_TCP_V1



LEGEND:

- TX/A Category A - Trees of High Quality
- TX/B Category B - Trees of Moderate Quality
- TX/C Category C - Trees of Low Quality
- TX/U Category U - Trees Unsuitable for Retention

- Tree Trunk
- Root Protection Areas (RPA)
- Tree Canopy Spread

Note: The following trees were not plotted on the provided topographical survey: T2, T3, T4, T5, T6 and T12
 The positions for these trees as shown on this plan are therefore indicative only and should be confirmed on site if accurate locations are required.



| | | |
|--|---------------------|----------------------|
| Client : DB3 Architecture | | |
| Project: Former Methodist Church | | |
| Drawing Title : Tree Constraints Plan | | |
| Drg No. RSE_6895_TCP | Rev : V1 | |
| Dm By : LJB | Scale : 1:250@A3 | Date : 22/03/2023 |

Appendix D: Tree Protection Plan - RSE_6895_TPP_V1

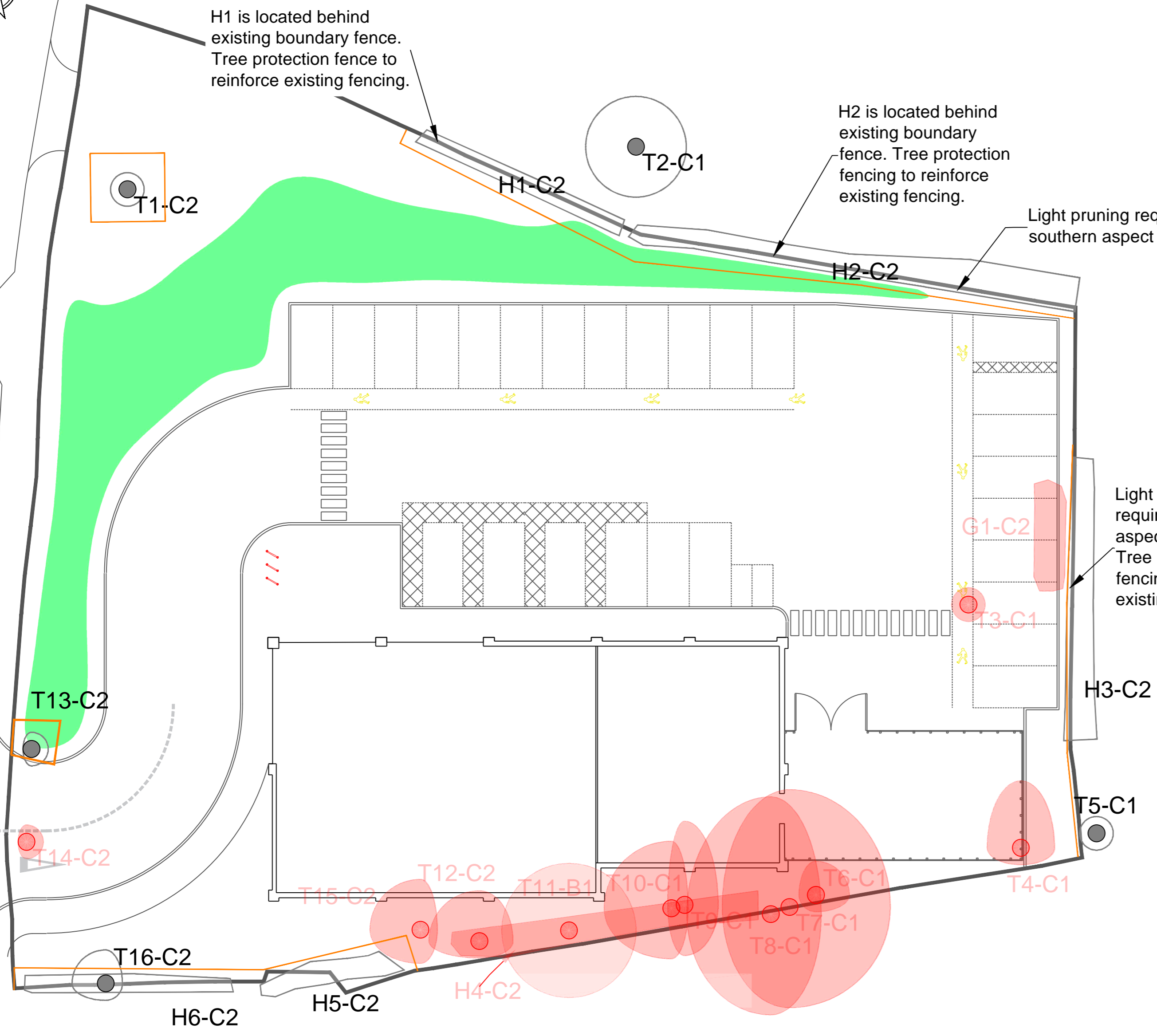


H1 is located behind existing boundary fence. Tree protection fence to reinforce existing fencing.

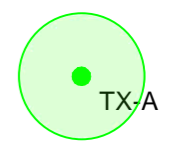
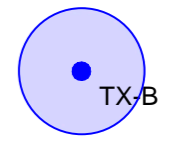
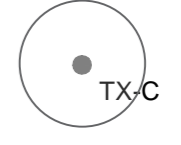
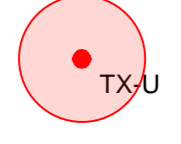
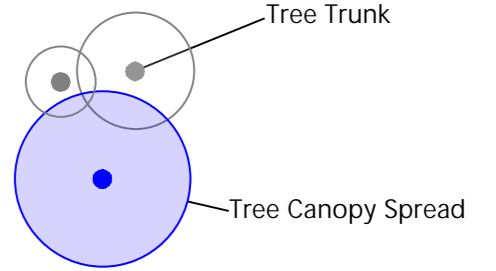
H2 is located behind existing boundary fence. Tree protection fencing to reinforce existing fencing.

Light pruning required to southern aspect of H2 canopy.

Light pruning required to western aspect of H3 canopy. Tree protection fencing to reinforce existing fencing.



LEGEND:

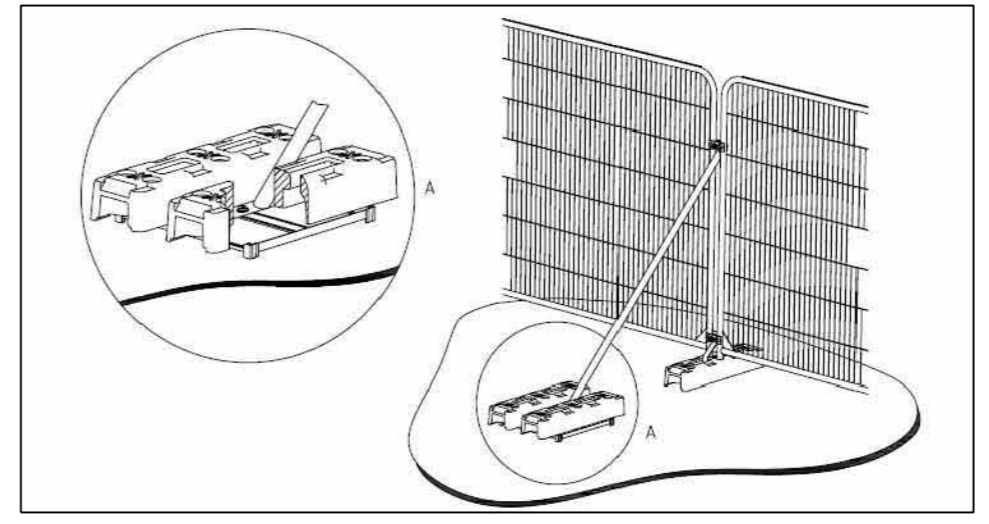
-  Category A - Trees of High Quality
-  Category B - Trees of Moderate Quality
-  Category C - Trees of Low Quality
-  Category U - Trees Unsuitable for Retention
-  Tree Trunk
Tree Canopy Spread

Tree Protection Fencing

Tree protection fencing is to be installed at the positions shown at the commencement of works, before any ground works or soil stripping are carried out and before vehicles or materials are brought onto site.

The fencing will consist of a robust framework which is well braced to resist impacts as shown. The areas enclosed are to be maintained as a total exclusion zone to all construction activity. All-weather warning notices will be attached to the fencing to clearly identify the area as a tree protection exclusion zone into which access is not permitted.

No working activity, storage of materials, ground level changes, excavations or vehicular access is permitted within the protected area. Once erected, the protected area are to be regarded as sacrosanct and the fencing must not be removed or altered unless recommended by the project Arboriculturist and, where necessary, approval from the local planning authority.



Client :
DB3 Architecture

Project:
Former Methodist Church, Maghull

Drawing Title :
Tree Protection Plan

Drg No. :
RSE_6895_TPP

Rev :
V1

Drn By :
LJB

Scale :
1:200@A2

Date :
23/03/2023

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