



Arboricultural
Impact Assessment
with
Tree Protection Measures

**The Greenfinch
140 Palatine Road
Didsbury**

Project No. AIA.13448.01

28th March 2022

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SUMMARY

Thirty-seven individual trees, four groups of trees and one hedge were recorded. In accordance with *BS5837:2012 Trees in relation to design, demolition and construction* twelve individual trees were recorded as retention category 'B'; and a mixture of twenty-four individual trees, four groups of trees and one hedge were recorded as retention category 'C'.

The trees were generally found to be in a good to fair condition, however, one individual tree (**T18**) was classified as retention category 'U' (unsuitable for retention). This tree is located on adjacent land.

The proposed development directly impacts upon one individual tree and one section of hedge, both are considered to be low quality ('C' category) specimens. The tree and hedge shall require removal due to their close proximity to construction activity.

It is understood that the proposed tree removal will be mitigated as part of a post development planting scheme of well-structured new trees that will add to the quality of the area and help integrate the proposed development into the surrounding landscape.

The retained trees will be protected to British Standard *BS5837:2012 Trees in relation to design, demolition and construction* to ensure that they remain in a healthy condition during and post development. The *Tree Protection Plan* to the rear of this report highlights the recommended tree protection measures.

Any arboricultural work undertaken should be done so by a competent arborist in line with British Standard *BS3998:2010 Tree Work*, and after permission has been granted to do so by the local planning authority.

It is recommended that a detailed tree risk assessment is undertaken post development to identify any potential hazards obscured during the initial tree survey, and is used to inform an arboricultural management strategy.

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1. Introduction

1.1. Project outline

- 1.1.1. This report has been produced in accordance with *British Standard BS5837: 2012 Trees in relation to design, demolition and construction* to achieve a harmonious and sustainable relationship where tree retention or planting is proposed in conjunction with nearby construction (site-based operations with the potential to affect existing trees).

1.2. Scope of this report

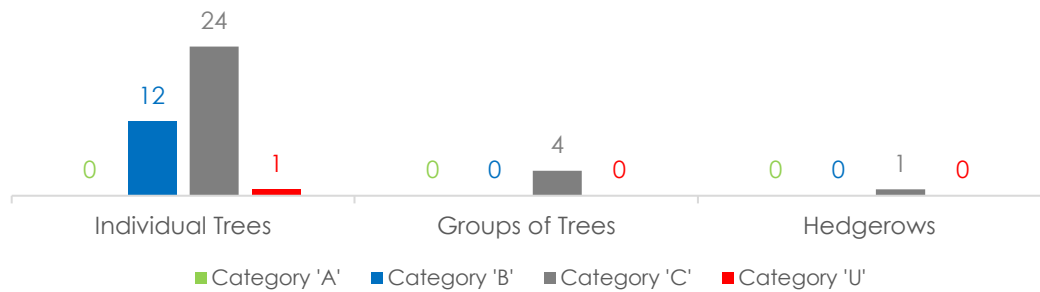
- 1.2.1. This report has been produced to comply with planning requirements where trees are to be considered as part of a proposed development. To achieve this, arboricultural constraints have been identified and a detailed plan (*Tree Constraints Plan*) has been produced showing the location, root protection areas and retention category of trees within the site.
- 1.2.2. In addition, this report provides an *Arboricultural Impact Assessment* that evaluates the direct and indirect effects of the proposed development, and where necessary makes recommendations for mitigation measures. This report also includes *Tree Protection Measures* and a *Tree Protection Plan*, which demonstrate how the retained trees will be protected during construction, and where tree protection measures are to be implemented.
- 1.2.3. Recommendations for tree works within this report are specific to the construction of the proposed development. This report does not form part of a tree safety inspection or tree management strategy, and general arboricultural management works may be required post development. To manage the safety and risk from trees it is advised that trees are inspected in detail for this purpose by an arboriculturist using a suitable risk management strategy.

1.3. Data collection

- 1.3.1. A ground level inspection was undertaken by Godwins on 2nd September 2020. The client has confirmed that several trees have been removed from site since this date, and have been removed from this report. As recommended by *BS5837*, the position of all trees within the site with a stem diameter of 75 mm or more, measured at 1.5 m above highest adjacent ground level are recorded. The position of trees with an estimated stem diameter of 75 mm or more that overhang the site or are located beyond the site boundaries within a distance of up to 12 times their estimated stem diameter were also recorded. For individual trees the crown spread taken at four cardinal points; for tree groups the overall extent of the canopy was recorded.
- 1.3.2. Tree positions were plotted using a topographical plan supplied by the client, which is the basis for which the *Tree Constraints Plan* has been prepared.

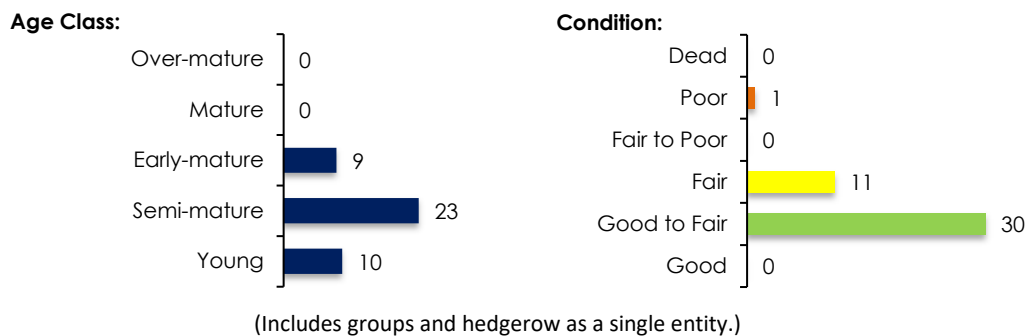
2. Arboricultural Constraints

2.1. Tree retention categories



- 2.1.1. Thirty-seven individual trees, four groups of trees and one hedge were recorded. In accordance with *BS5837:2012 Trees in relation to design, demolition and construction* twelve individual trees were recorded as retention category 'B'; and a mixture of twenty-four individual trees, four groups of trees and one hedge were recorded as retention category 'C'.
- 2.1.2. The trees were generally found to be in a good to fair condition, however, one individual tree (**T18**) was classified as retention category 'U' (unsuitable for retention). This tree is located on adjacent land.

2.2. Tree age class and condition



- 2.2.1. Please see *Appendix 1* for the detailed list on existing species, age class, dimensions and condition of trees within the site, and *Appendix 2* for an explanation of retention category criteria. Tree locations can be seen on the *Tree Constraints Plan* at the rear of this report (*Drawing 1*).
- 2.2.2. The inspection of several trees and groups was restricted as detailed at *Appendix 1*. The inspection of these trees was limited to a cursory observation of the parts of the trees that could be clearly observed, without obstruction, from the available vantage point. However, sufficient tree related data was collected to fulfil the requirements detailed within the scope of this report.

- 2.2.3. Where inspections are limited by restrictions such as stem ivy, understory vegetation, limited access, epicormic growth or being located on adjacent land, any form of tree condition hazard assessment was restricted. A full assessment of the levels of risk posed by trees can only be informed by considering site use together with assessing any hazards present within a tree. Trees are dynamic structures that continue to develop and decline; in addition, changes in site use are likely to occur during and as a result from the proposed development. On this basis, it is recommended that a detailed tree risk assessment is undertaken post development to identify any potential hazards obscured during the initial tree survey, and is used to inform an arboricultural management strategy.

2.3. Root Protection Areas

- 2.3.1. The tree Root Protection Area (RPA) is a layout design tool indicating the area around a tree that, along with the tree stem and branches, must be considered during development. The protection of the roots and soil structure within the RPA should be treated as a priority. The RPA of each tree or group is marked on the *Tree Constraints Plan* at the rear of this report.

2.4. Tree protection status

- 2.4.1. A statutory tree protection enquiry was made with Manchester City Council on 9th June 2021. It is understood that the site is located within the Albert Park Conservation Area, and that several trees are listed within a Tree Preservation Order. Please see *Appendix 5* for details.
- 2.4.2. **It is essential that no tree works (including works to category 'U' trees), and no construction works that may affect retained trees, are undertaken within the site prior to consideration and consent of the proposed works under FULL planning approval only by the local planning authority, regardless of whether the trees are currently protected or not.**

3. Arboricultural Impact Assessment

3.1. The proposed development

- 3.1.1. Alterations to the existing building and the construction of a new residential development with associated car parking and access road is proposed. The proposed layout drawing can be seen within the *Tree Protection Plan* to the rear of this report. This drawing has been used to assess the potential direct and indirect arboricultural impacts.

3.2. Proposed tree works

- 3.2.1. The proposed development directly impacts upon one individual tree and one section of hedge, both are considered to be low quality ('C' category) specimens. The tree and hedge shall require removal due to their close proximity to construction activity. Please see the table below for the proposed tree removal details.

	Category 'A'	Category 'B'	Category 'C'
Trees to be removed to enable the construction of the proposed development	None	None	T35 & H36 (section)

- 3.2.2. The formative pruning of several (**T12, T13, T16, T22, T23, T26, T29, T34 and T42**) is recommended to ensure sufficient clearance between the proposed dwellings and adjacent branches.
- 3.2.3. The proposed pruning works relate to the crown lifting/pruning of small tertiary branches. The overall shape of the trees from the proposed pruning works would not be affected, and therefore the proposed pruning works would not have a negative impact on the visual amenity of the trees, and would maintain all the positive aspects the trees bring to the area. In addition, the proposed pruning works will have no adverse impacts on tree health and longevity.
- 3.2.4. Several trees may benefit from general arboricultural works as part of a practical post-development arboricultural management strategy; however, these works are not covered within the scope of this report.
- 3.2.5. Within *Appendix 1* the term 'No action required' relates specifically to those tree works required to enable the proposed development and does not mean that general post development arboricultural management works are not required.

3.3. Proposed mitigation measures

- 3.3.1. It is understood that the proposed tree removal will be mitigated as part of a post development planting scheme of well-structured new trees that will add to the quality of the area and help integrate the proposed development into the surrounding landscape.

3.4. Site construction traffic and demolition works

- 3.4.1. To protect the trees from construction site traffic (including demolition works) the remaining trees should be protected by a temporary protective barrier (see *Section 4.2*), put in place prior to any construction activity. The barrier will ensure that the trees remain in a healthy condition during and after development.
- 3.4.2. Several of the retained trees are located beyond topographical site features, existing boundary fencing/walls or away from the proposed development area. As such, these trees shall not require protection via temporary protective barriers as they are already provided protection due to their inaccessible location that is remote from the proposed construction activity.

3.5. Hard surfaces within the RPA

- 3.5.1. Sections of RPA from several trees (**T5**, **T26**, **T29** and **T30**) extend beyond the temporary barrier and into areas proposed for hard surface paving/patio areas (or an access ramp for **T5**). Given the minor potential area of RPA disturbance (less than 9% of total RPA for each tree), the proposed hard surfaces are not expected to cause any long-term harm to adjacent trees. Also, it should be noted that tarmac hard surfaces are currently in place above these RPAs. However, as a precautionary measure, it is recommended that the proposed hard surfaces are constructed using a *Minimum-Dig* technique that is sympathetic to tree roots.
- 3.5.2. In addition, sections of RPA from trees **T34**, **T38** and **T42** also extend beyond the temporary barrier and into areas proposed for hard surface parking/paving areas. Given the potential area of RPA disturbance (10% to 18% of total RPAs), it is recommended that these hard surfaces are constructed using techniques sympathetic to tree roots (a *No-Dig* Cellular Confinement System). It should be noted that these sections of RPA are also currently located beneath existing tarmac hard surfaces, and that the removal of this base and its replacement with a porous surfaced Cellular Confinement System would not cause any harm to the adjacent trees.

3.6. Post development impacts

- 3.6.1. No soil samples were taken during the site visit. It is recommended that soil assessment is undertaken by a competent person to determine whether the soil is shrinkable, and that foundation design is undertaken in line with detailed guidance given in the National House Building Council (NHBC) publication *Building near trees, Chapter 4.2*.
- 3.6.2. It is essential that consideration is also given by a suitably qualified professional to how the proposed tree removal may affect soil conditions and the stability of any future foundations.

4. Tree Protection Measures

4.1. Tree works prior to development

- 4.1.1. Care should be taken to ensure during tree removal or remedial work that damage to the retained trees and disturbance to the RPA is avoided. All tree works, as described in *Appendix 1*, should be carried out in accordance with *BS 3998: 2010 Recommendations for tree work*, and after permission has been granted to do so by the local planning authority. It is essential that those appointed to undertake any tree works carry out adequate checks to ensure that no statutory laws are contravened during tree work operations.

4.2. Tree protection barriers

- 4.2.1. Once the tree works have been completed, all trees that may be affected by construction activity and are being retained on site should be protected by barriers before any materials or machinery are brought onto the site, and before any demolition, development or stripping of soil commences. No hardcore, rubble or soil from groundworks should be located within the protective barriers. It should be confirmed by an arboriculturist or the local authority that the barriers have been correctly set out on site, prior to the commencement of any other operations.
- 4.2.2. The protected area should be regarded as off limits, and once installed barriers should not be removed or altered without prior recommendation by an arboriculturist and, where necessary, approval from the local planning authority. Unless otherwise stated in this report, existing ground levels within the RPAs of trees within the protected area must remain as existing during and post-development.
- 4.2.3. Please see *Appendix 4* for suggested barrier construction detail. It is recommended that in this instance the protective barrier shown in *Figure 1* would be appropriate. The suggested location for protective fencing is shown on the *Tree Protection Plan (Drawing 2)*.
- 4.2.4. Only when the development phase is complete and the site machinery has been removed, the local planning authority should be invited to inspect the site to give approval for the removal of the tree protection measures.

4.3. Services within the RPA

- 4.3.1. Wherever possible, under-ground services should be routed outside of the RPA of retained trees, and plans showing the proposed routeing should be drawn up. Where excavations may be required hand-held tools might be acceptable for shallow service runs.

4.4. Removal of existing hard surfaces within the RPA

- 4.4.1. The removal of the existing tarmac hard surfaces must only be undertaken by hand within the RPA of retained trees. The underlying existing soil sub-base ground levels must be retained, avoiding the use of heavy machinery within the exposed RPA. Once existing ground level has been reached, the exposed ground level must be protected by temporary ground protection until the Cellular Confinement System has been installed, or on-site construction activity has been completed.

4.5. Temporary ground protection

- 4.5.1. Ground protection in the form of ridged material, suitable to distribute the weight of any potential traffic, should be installed over exposed areas of RPAs from trees that extend beyond the protective barrier. British Standard BS5837 recommends that:

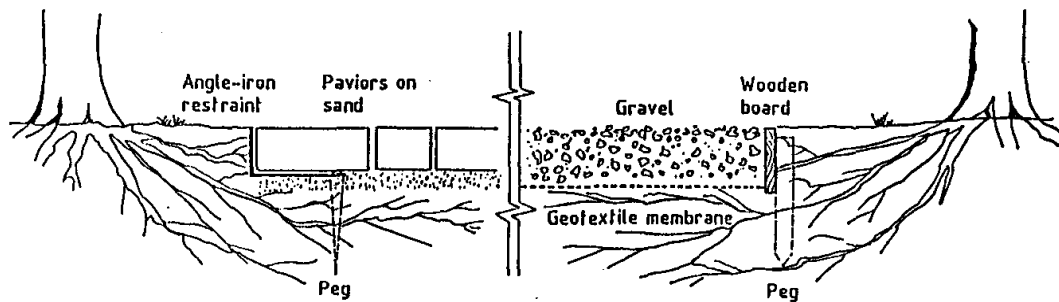
The ground protection might comprise one of the following:

- 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.*

4.6. Hard surfaces within the RPA – Minimum-Dig

- 4.6.1. It is recommended that the proposed paving/patio areas within the RPAs of **T5**, **T26**, **T29** and **T30** are constructed in a manner that would not cause the adjacent trees any long-term harm. In this instance, it is recommended that a 'Minimum-Dig' method is used.
- 4.6.2. Excavations within the RPA *must only* be undertaken by hand to establish the presence of roots. Any tree roots exposed within the RPA must be left as intact as careful digging with hand tools will allow, avoiding the use of heavy machinery within the RPA.
- 4.6.3. No more than 100mm of soil should be removed before the ground is inspected for roots. Depending on the presence of roots it may then be acceptable to remove a further 50mm of soil down to the required depth.

- 4.6.4. During excavations, roots smaller than 25mm diameter may be pruned back, making a clean cut with a suitable sharp tool (e.g. bypass secateurs or handsaw), except where they occur in clumps. Roots occurring in clumps or of 25mm diameter and over should be severed only following consultation with an arboriculturist; as such roots might be essential to the tree's health and stability. Any tree roots exposed within the RPA must be left as intact as careful digging with hand tools will allow, avoiding the use of heavy machinery within the RPA.
- 4.6.5. Any roots exposed during excavations should immediately be wrapped or covered in damp hessian to prevent desiccation and to protect them from rapid temperature changes. Any wrapping should be removed prior to backfilling, which should take place as soon as possible. Prior to backfilling, retained roots should be surrounded with topsoil or un-compacted sharp sand (builders' sand should not be used because of its high salt content, which is toxic to tree roots), or other loose inert granular fill, before soil or other suitable material is replaced.



Example of a light duty drive constructed using the **Minimum Dig Method**.

- 4.6.6. The existing tarmac surface would require removal using hand tools only. Following the removal of the existing hard surface, once underlying soil level has been reached, temporary ground protection in the form of ridged material, suitable to distribute the weight of any potential traffic, should be installed over the RPAs until the new hard surface is installed.

4.7. Hard surfaces within the RPA – No-Dig

- 4.7.1. It is recommended that the proposed parking/paving areas within the RPAs of trees **T34**, **T38** and **T42** are constructed in a manner that would not cause the trees any long-term harm. In this instance, it is recommended that a 'No-Dig' technique incorporating a Cellular Confinement System is used to prevent damage to the underlying RPA.
- 4.7.2. Please see *Appendix 6* for examples of ways to install the access track on top of existing ground levels. The three examples show different methods for installing non-intrusive kerb edgings to retain the Cellular Confinement System. The product shown is Cellweb, which is designed by Geosynthetics.

- 4.7.3. A porous finished surface, to be agreed with the client and the local planning authority would complete the finished surface. The finished hard surface would prevent soil compaction whilst allowing the diffusion of moisture, air and nutrients to the roots below, and thus would not have any long-term adverse effect on the health of the adjacent trees.
- 4.7.4. It is essential that the existing tarmac surface within these RPAs is removed using hand tools down to underlying ground levels. Once existing ground level has been reached, the exposed ground level must be protected by temporary ground protection until the Cellular Confinement System has been installed.

4.8. Fencing within the RPA

- 4.8.1. Where proposed boundary fencing lies within the RPAs of retained trees, it is essential that the post holes are excavated by hand. It is recommended that initial trial holes are dug using a hand-held auger to establish the presence and size of any adjacent tree roots.
- 4.8.2. On this basis, for fixed length fencing it is recommended that all footing locations are identified before committing to their final locations. All post locations must be as narrow as possible, with a suggested maximum diameter of 300mm. Excavations must only be undertaken as detailed in *Section 4.6* above.

4.9. Post development landscaping

- 4.9.1. Any ground works or excavations required to implement landscaping proposals must be undertaken by hand within the RPA of any retained tree. Existing ground levels within RPAs must not be significantly raised or lowered, and machinery such as rotovators must not be used within an RPA as this will sever tree roots and may lead to the decline of the affected tree.
- 4.9.2. The use of herbicides within the RPA of retained trees should be avoided. If they are to be used then consideration must be given to the using only those herbicides that will not affect the underlying tree roots system.

Client: Wren Properties Limited
Project No: AIA.13448
Issue: 01

Date Issued: 28th March 2022
Status: FINAL

Signed for on behalf of Godwins Arboricultural Limited:

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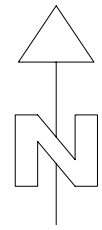
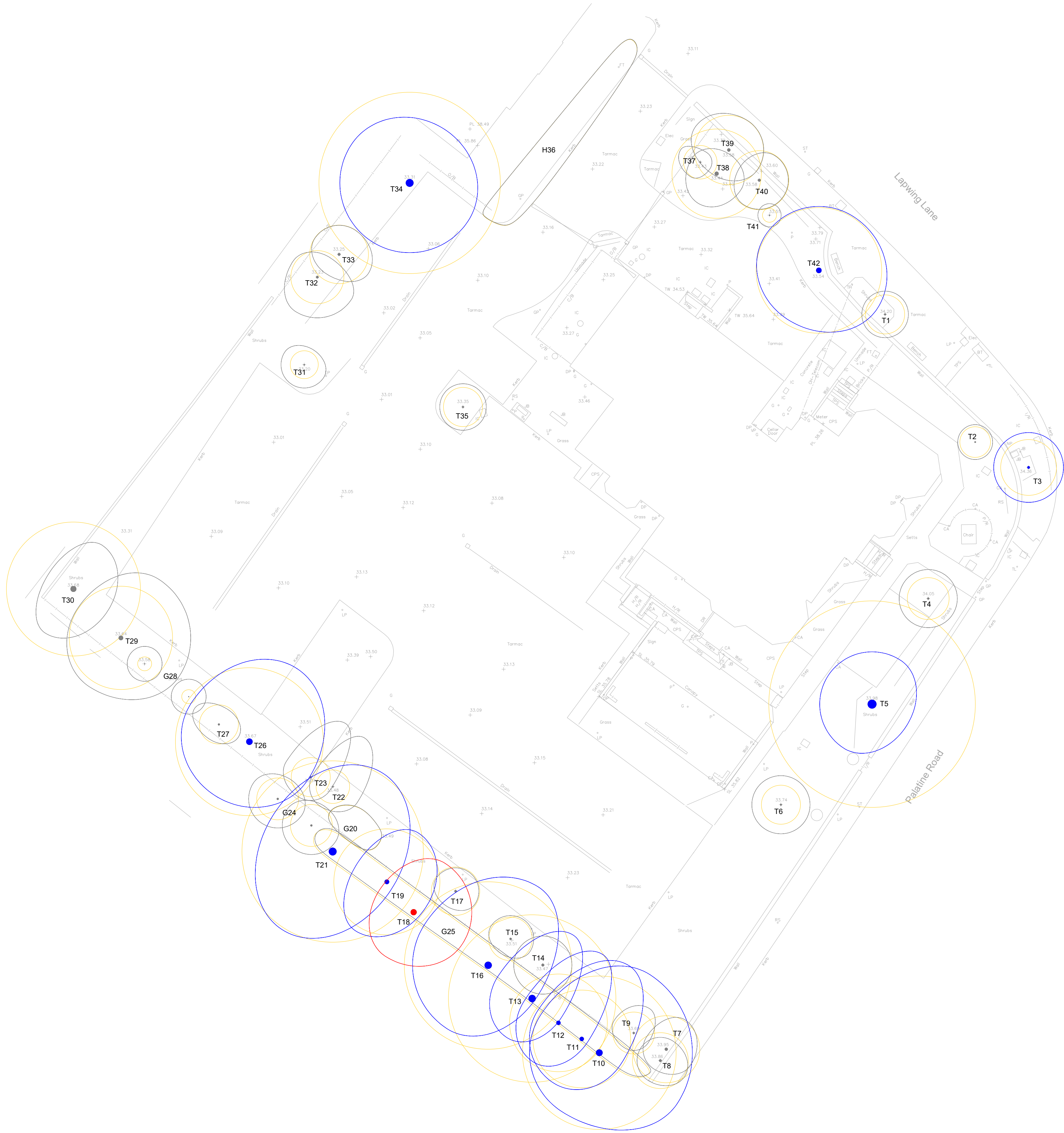
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Drawing 1. Tree Constraints Plan



T	G	H	W	S
INDIVIDUAL TREE	GROUP OF TREES	HEDGEROW	WOODLAND GROUP	SHRUB

	EXISTING LAYOUT
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TREE QUALITY ASSESSMENT CATEGORY	
	CATEGORY 'A' HIGH QUALITY
	CATEGORY 'B' MODERATE QUALITY
	CATEGORY 'C' LOW QUALITY
	CATEGORY 'U' UNSUITABLE FOR RETENTION

Based on British Standard 5837:2012 Table 1.
Please refer to Appendix 2 of the arboricultural report for more detailed category definitions.

	ROOT PROTECTION AREA (RPA)
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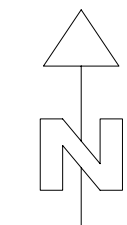
The Root Protection Area (RPA) is a layout design tool highlighting the underground tree constraints. Along with the tree stem and branches the RPA must be considered prior to and during development.

Written consent must be obtained from Godwins Arboricultural Limited before copying or using the data within this drawing other than for the purpose it was originally supplied.
Do not scale from this drawing.

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PROJECT TITLE: The Greenfinch, 140 Palatine Road, Didsbury		
DRAWING TITLE: TREE CONSTRAINTS PLAN	SCALE: 1:200 @ A1	ISSUE DATE: 24.03.22
DRAWING NUMBER: TCP.13448	REVISION: .01	DRAWN BY: RG

Drawing 2. Tree Protection Plan



T	G	H	W	S
INDIVIDUAL TREE	GROUP OF TREES	HEDGEROW	WOODLAND GROUP	SHRUB

	EXISTING LAYOUT
	PROPOSED LAYOUT

PROPOSED TREE WORKS	
	TREE PROPOSED FOR RETENTION
	TREE PROPOSED FOR PRUNING
	T12, T13, T16, T22, T23, T26, T29, T34 & T42
	TREE PROPOSED FOR REMOVAL (ARBORICULTURAL REASONS)
	T18 (located on adjacent land - permission for removal must be granted the the tree owner).
	TREE PROPOSED FOR REMOVAL (TO ENABLE DEVELOPMENT)
	T35 & H36 (section)

Please refer to Appendix 1 of the Arboricultural Impact Assessment for details on tree condition and proposed works.

	ROOT PROTECTION AREA (RPA)
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The Root Protection Area (RPA) is a layout design tool highlighting the underground tree constraints. Along with the tree stem and branches the RPA must be considered prior to and during development.

TREE PROTECTION MEASURES	
	TEMPORARY PROTECTIVE BARRIER Refer to Appendix 4 of the Arboricultural Impact Assessment for specification details.

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PROJECT TITLE: The Greenfinch, 140 Palatine Road, Didsbury		
DRAWING TITLE: TREE PROTECTION PLAN	SCALE: 1:200 @ A1	ISSUE DATE: 24.03.22
DRAWING NUMBER: TPP.13448	REVISION: .01	DRAWN BY: RG

Appendix 1. Tree Schedule

Tree No.	Species	Age	Stems at 1.5m	Stem Dia (mm)	Height (Crown Hgt) (m)	FSB (D) (m)	Branch Spread (m)				Observations	Cond	Life Exp	Tree Works Required to Enable Development	Root Protection Area (RPA)		Retention Category
							N	E	S	W					Radius (m)	Area (m²)	
T 1	Castanea sativa (Sweet Chestnut)	Young	1	140	5(2)	2(S)	2	2	2	2	Balanced crown. Situated on adjacent land.	Good to Fair	40+	No action required.	1.7	8.9	C
T 2	Crataegus monogyna (Hawthorn)	Semi-mature	1	110	5(2.5)	2.5(S)	1.5	1.5	1.5	1.5	Balanced crown. Staked stem.	Good to Fair	40+	No action required.	1.3	5.5	C
T 3	Castanea sativa (Sweet Chestnut)	Young	1	200	5.5(2.5)	2.5(S)	3	3	3	3	Balanced crown. Situated on adjacent land.	Good to Fair	40+	No action required.	2.4	18.1	B
T 4	Sorbus aucuparia (Rowan)	Semi-mature	1	150	5(2)	2(W)	2.5	2.5	2.5	2.5	Balanced crown.	Good to Fair	40+	No action required.	1.8	10.2	C
T 5	Salix babylonica (Weeping Willow)	Early-mature	1	740	9(2.5)	2.5(W)	4.5	3.5	4.5	4.5	Asymmetrical crown. Limited inspection - dense ivy on stem/base. Previously pollarded at 5m.	Good to Fair	40+	No action required.	8.9	247.8	B
T 6	Acer campestre (Field Maple)	Young	1	140	5(1.5)	1.5(W)	2.5	2.5	2.5	2.5	Balanced crown. Staked stem.	Good to Fair	40+	No action required.	1.7	8.9	C
T 7	Tilia X europaea (Common Lime)	Semi-mature	1	240	10(2)	2(N)	3	2.5	2	2	Unbalanced crown. Limited inspection - epicormic growth. Limited inspection - dense undergrowth.	Good to Fair	40+	No action required.	2.9	26.1	C
T 8	Tilia X europaea (Common Lime)	Semi-mature	1	200	11(2)	2(E)	2	2.5	2	2	Unbalanced crown. Limited inspection - epicormic growth. Limited inspection - dense undergrowth.	Good to Fair	40+	No action required.	2.4	18.1	C
T 9	Ilex aquifolium (Holly)	Semi-mature	1	150	6.5(2)	2(N)	2.5	1.5	1.5	2	Unbalanced crown. Limited inspection - dense undergrowth.	Good to Fair	40+	No action required.	1.8	10.2	C
T 10	Tilia X europaea (Common Lime)	Early-mature	1	550	17(8)	10(N)	8	8	6	6	Asymmetrical crown. Limited inspection - situated on adjacent land.	Good to Fair	40+	No action required.	6.6	136.9	B

Tree No.	Species	Age	Stems at 1.5m	Stem Dia (mm)	Height (Crown Hgt) (m)	FSB (D) (m)	Branch Spread (m)				Observations	Cond	Life Exp	Tree Works Required to Enable Development	Root Protection Area (RPA)		Retention Category
							N	E	S	W					Radius (m)	Area (m ²)	
T 11	Fagus sylvatica (Beech)	Semi-mature	1	350	12(2)	2(N)	7.5	4	4.5	4.5	Unbalanced crown. Limited inspection - situated on adjacent land.	Good to Fair	40+	No action required.	4.2	55.4	B
T 12	Acer pseudoplatanus (Sycamore)	Semi-mature	1	350	15(4)	4(N)	7	3	4	3.5	Unbalanced crown. Limited inspection - situated on adjacent land.	Good to Fair	40+	Crown lift north-east canopy to ensure 2m clearance from the proposed dwelling.	4.2	55.4	B
T 13	Aesculus hippocastanum (Horse Chestnut)	Early-mature	1	600	17(7)	7(N)	6.5	3	4	3.5	Unbalanced crown. Limited inspection - situated on adjacent land. Leaf miner noted.	Fair	40+	Crown lift north-east canopy to ensure 2m clearance from the proposed dwelling.	7.2	162.9	B
T 14	Ilex aquifolium (Holly)	Semi-mature	3	120	8(1.5)	1.5(N)	2.5	2.5	2.5	2.5	Balanced crown. Multi-stemmed from ground level.	Good to Fair	40+	No action required.	2.5	19.6	C
T 15	Ilex aquifolium (Holly)	Semi-mature	2	110	7(1.5)	1.5(N)	2	2	1.5	2	Asymmetrical crown. Twin-stemmed from ground level.	Good to Fair	40+	No action required.	1.9	11.0	C
T 16	Aesculus hippocastanum (Horse Chestnut)	Early-mature	1	600	15(6.5)	4(N)	8	5	6.5	6.5	Asymmetrical crown. Limited inspection - situated on adjacent land. Leaf miner noted.	Fair	40+	Crown lift north-east canopy to ensure 2m clearance from the proposed dwelling.	7.2	162.9	B
T 17	Ilex aquifolium (Holly)	Semi-mature	4	70 70 100 100	7(0.5)	0.5(N)	2	2	1.5	2	Asymmetrical crown. Multi-stemmed from ground level.	Good to Fair	40+	No action required.	2.1	13.6	C
T 18	Aesculus hippocastanum (Horse Chestnut)	Early-mature	1	500	14(6)	8(N)	5	5	4.5	3.5	Asymmetrical crown. Limited inspection - situated on adjacent land. Decay fungus at base. Leaf miner noted.	Poor	<10	Recommended remove for arboricultural reasons. Tree located on adjacent land.	6.0	113.1	U
T 19	Aesculus hippocastanum (Horse Chestnut)	Semi-mature	1	380	16(4.5)	4(N)	5	4	5	3	Asymmetrical crown. Limited inspection - situated on adjacent land. Leaf miner noted.	Fair	40+	No action required.	4.6	65.3	B
G 20	Cupressus sp. (Cypress)	Semi-mature	1	120	3.5(0)	0(N)	1.5	1.5	1.5	1.5	Individuals crowns restricted by group. Maintained.	Good to Fair	40+	No action required.	1.4	6.5	C

Tree No.	Species	Age	Stems at 1.5m	Stem Dia (mm)	Height (Crown Hgt) (m)	FSB (D) (m)	Branch Spread (m)				Observations	Cond	Life Exp	Tree Works Required to Enable Development	Root Protection Area (RPA)		Retention Category
							N	E	S	W					Radius (m)	Area (m²)	
T 21	Aesculus hippocastanum (Horse Chestnut)	Early-mature	1	650	17(6)	4.5(N)	8	6	8	6	Asymmetrical crown. Limited inspection - situated on adjacent land. Leaf miner noted.	Fair	40+	No action required.	7.8	191.2	B
T 22	Fraxinus excelsior (Ash)	Young	1	120	8.5(3)	3(N)	5	2.5	2	2	Crown suppressed by adjacent trees.	Fair	40+	Crown lift north-east canopy to ensure 2m clearance from the proposed dwelling.	1.4	6.5	C
T 23	Fraxinus excelsior (Ash)	Young	1	140	10(4)	4(N)	5.5	2	2	2.5	Crown suppressed by adjacent trees.	Fair	40+	Crown lift north-east canopy to ensure 2m clearance from the proposed dwelling.	1.7	8.9	C
G 24	Ilex aquifolium (Holly)	Semi-mature	1	150	9(2)	2(N)	2	2.5	2.5	2.5	Limited inspection - situated on adjacent land. Individuals crowns restricted by group.	Good to Fair	40+	No action required.	1.8	10.2	C
G 25	Ilex aquifolium (Holly), Ligustrum ovalifolium (Privet)	Semi-mature	1	75	3(0.5)	0.5(N)	1	1	1	1	Situated on adjacent land. Individuals crowns restricted by group. Linear boundary group.	Fair	20+	No action required.	0.9	2.6	C
T 26	Acer pseudoplatanus (Sycamore)	Early-mature	1	530	15.5(6)	6(N)	7.5	6	5.5	6	Asymmetrical crown. Previously pollarded at 7m.	Fair	40+	Crown lift north-east canopy to ensure 2m clearance from the proposed dwelling.	6.4	127.1	B
T 27	Cupressus sp. (Cypress)	Semi-mature	1	140	6(0)	0(N)	1.5	2	1.5	2.5	Asymmetrical crown. Limited inspection - dense undergrowth. Individuals crowns restricted by group. Maintained.	Good to Fair	40+	No action required.	1.7	8.9	C
G 28	Alnus glutinosa (Common Alder), Sorbus aucuparia (Rowan)	Young	1	50	3(1)	1(N)	1.5	1.5	1.5	1.5	Balanced crowns.	Fair	20+	No action required.	0.6	1.1	C
T 29	Fraxinus excelsior (Ash)	Semi-mature	1	370	10(3)	3(N)	6	6	5	4.5	Asymmetrical crown. Previously pollarded at 5m. Crown overhangs adjacent building.	Fair	20+	Crown lift north-east canopy to ensure 2m clearance from the proposed dwelling.	4.4	61.9	C
T 30	Fraxinus excelsior (Ash)	Semi-mature	1	480	12(4)	4(E)	4.5	3.5	4.5	2.5	Asymmetrical crown. Previously pollarded at 5m. Crown overhangs adjacent building.	Fair	20+	No action required.	5.8	104.2	C

Tree No.	Species	Age	Stems at 1.5m	Stem Dia (mm)	Height (Crown Hgt) (m)	FSB (D) (m)	Branch Spread (m)				Observations	Cond	Life Exp	Tree Works Required to Enable Development	Root Protection Area (RPA)		Retention Category
							N	E	S	W					Radius (m)	Area (m ²)	
T 31	Betula pendula (Silver Birch)	Young	1	100	7.5(1)	1(E)	1.5	2	2	2	Asymmetrical crown.	Good to Fair	40+	No action required.	1.2	4.5	C
T 32	Fraxinus excelsior (Ash)	Semi-mature	1	190	9.5(2)	2(E)	2	3.5	3.5	2.5	Asymmetrical crown. Occasional pruning wounds.	Good to Fair	40+	No action required.	2.3	16.3	C
T 33	Fraxinus excelsior (Ash)	Semi-mature	1	210	11(2)	2(E)	2.5	3	2	2.5	Asymmetrical crown. Occasional pruning wounds.	Good to Fair	40+	No action required.	2.5	20.0	C
T 34	Salix babylonica (Weeping Willow)	Early-mature	1	650	12(1.5)	1.5(E)	5.5	6	6	6	Balanced crown. Occasional pruning wounds.	Good to Fair	40+	Crown lift south-east canopy to ensure 2m clearance from the proposed dwelling.	7.8	191.2	B
T 35	Sorbus aria (Whitebeam)	Young	1	140	4(1.5)	1.5(N)	2	2	2	2	Balanced crown.	Good to Fair	40+	Remove to enable the construction of the proposed development.	1.7	8.9	C
H 36	Cupressus sp. (Cypress)	Semi-mature	1	100	4(0)	0(S)	1	1	1	1	Linear boundary hedge. Maintained.	Good to Fair	40+	Remove section to enable the construction of the proposed development.	1.2	4.5	C
T 37	Quercus robur (Common Oak)	Young	1	120	9(3)	3(S)	1	1	1.5	2	Asymmetrical crown.	Good to Fair	40+	No action required.	1.4	6.5	C
T 38	Betula pendula (Silver Birch)	Semi-mature	1	320	11(4)	4(S)	2	2.5	3	2.5	Asymmetrical crown.	Good to Fair	40+	No action required.	3.8	46.3	C
T 39	Acer pseudoplatanus (Sycamore)	Semi-mature	2	160 190	9(3)	3(W)	3	3	2.5	3.5	Asymmetrical crown. Twin-stemmed from ground level.	Good to Fair	40+	No action required.	3.0	27.9	C
T 40	Acer pseudoplatanus (Sycamore)	Semi-mature	2	150	6.5(2.5)	2.5(W)	2.5	2.5	2.5	2	Asymmetrical crown. Twin-stemmed from ground level.	Good to Fair	40+	No action required.	2.5	20.3	C

Tree No.	Species	Age	Stems at 1.5m	Stem Dia (mm)	Height (Crown Hgt) (m)	FSB (D) (m)	Branch Spread (m)				Observations	Cond	Life Exp	Tree Works Required to Enable Development	Root Protection Area (RPA)		Retention Category
							N	E	S	W					Radius (m)	Area (m²)	
T 41	Betula pendula (Silver Birch)	Young	1	50	4(1)	1(S)	1	1	1	1	Balanced crown.	Good to Fair	40+	No action required.	0.6	1.1	C
T 42	Tilia X europaea (Common Lime)	Early-mature	1	450	11(3)	3(S)	5.5	6	5	5.5	Balanced crown. Limited inspection - epicormic growth.	Good to Fair	40+	Crown lift south-west canopy to ensure 2m clearance from the proposed dwelling.	5.4	91.6	B

Appendix 2. Explanatory Notes

A2.1. Tree statistics and measurements

Survey record	Description
<i>Tree No.</i>	Unique tree reference number. (T) = Individual tree, (G) = Group of trees or woodland that form cohesive arboricultural features, (H) = Hedgerows and substantial internal or boundary hedges.
<i>Species</i>	Species listed by scientific name, with (common name).
<i>Age</i>	Life stage – Young, Semi-mature, Early-mature, Mature, Over-mature and Veteran.
<i>Stem Count</i>	Number of stems recorded at 1.5m above ground level.
<i>Stem Diameter</i>	Stem diameter recorded in millimetres at 1.5 meters above ground. Where the tree is multiple stemmed, each stem has been recorded.
<i>Height (Crown Height)</i>	Height of the tree in metres – to the closest 0.5m. Average canopy height in brackets, e.g. 10(3).
<i>First Significant Branch</i>	Existing height above ground level of first significant branch and direction of growth, e.g. 3(N)
<i>Branch Spread</i>	Branch spread, taken as a minimum at the four cardinal points – North, East, South and West.
<i>Observations</i>	General observations, particularly of structural and/or physiological condition (e.g. the presence of any decay, physical defect or historic pruning).
<i>Cond</i>	Condition of the tree recorded as Good, Good to Fair, Fair, Fair to Poor, Poor or Dead.
<i>Life Exp</i>	Life Expectancy - classed as less than 10 years, 10 plus years, 20 plus years, or more than 40 years.
<i>Tree Works Required to Enable Development</i>	Tree works specifically required to enable the proposed development, or to reduce significant risk of harm. The term 'No action required' does not mean that general post development arboricultural management works are not required.
<i>RPA Radius</i>	Radius of the root protection area, when plotted as a circle centred on the base of the stem.
<i>RPA Area</i>	Total area of RPA in metres squared, e.g. 100m ² .
<i>Retention Category</i>	See below – A2.2.

A2.2. Tree retention categories

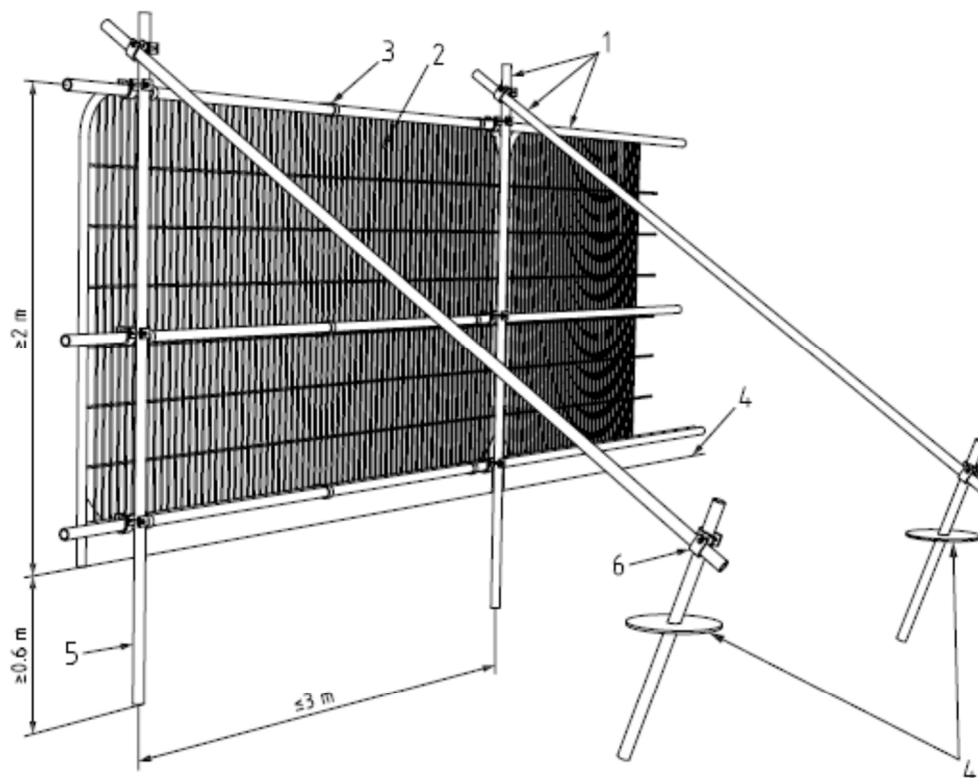
Retention category and definition	Criteria
<i>U (marked in red on the Tree Constraints Plan) = trees for removal.</i>	Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.
<i>A (marked green on the Tree Constraints Plan) = Trees of high quality</i>	Trees of high quality with an estimated remaining life expectancy of at least 40 years.
<i>B (marked in blue on the Tree Constraints Plan) = Trees of moderate quality</i>	Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
<i>C (marked in grey on the Tree Constraints Plan) = Trees of low quality</i>	Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.

Appendix 3. Report Limitations & General Guidelines

- A3.1 Where the inspection of trees was limited (*see Appendix 1*), the 'Tree statistics and measurements' (*Appendix 2.1*) are estimated, and observations, condition and life expectancy are based on an inspection from the available vantage point.
- A3.2 It is recommended that qualified and experienced companies are sought when appointing tree work contractors and they should be approved under the Arboricultural Association Approved Contractors scheme. It is essential that all appointed tree work contractors have adequate Public Liability, Products Liability and Employers Liability Insurance. All tree works must conform to the current BS 3998 "*Recommendations for Tree Work*".
- A3.3 Godwin's Arboricultural Ltd will not accept liability for works undertaken by third party companies. All necessary checks must be made by the appointed tree work contractor prior to undertaking any works to ensure that no statutory tree protection measures or relevant laws are contravened.
- A3.4 The validity, accuracy and findings of this report are directly related to the accuracy of the information made available prior to and during the inspection process. No checking of independent third party data will be undertaken. Godwin's Arboricultural Ltd will not be responsible for the recommendations within this report where essential data are not made available, or are inaccurate.
- A3.5 The assessment and works recommendations relate to conditions found at the time of our inspection. Any significant alteration to the site post our site inspection but pre submission for planning that may affect the trees present, or have a bearing on the planning implications (including level changes, hydrological changes, storms, extreme climatic events or site works) will necessitate a re-assessment of the trees and the site.
- A3.6 This report has been carried out in order to inform the planning process, and not to assess the potential hazards and risks posed by trees. Where clear and obvious hazards have been observed to accessible trees, these have been addressed in the works recommendations. Where inspections were limited by restrictions such as stem ivy, understory vegetation, limited access, epicormic growth or being located on adjacent land, any form of tree condition assessment was restricted. A full assessment of the levels of risk posed by trees can only be informed by considering site use together with assessing any hazards present within a tree.
- A3.7 Trees are dynamic structures that continue to develop and decline; in addition, changes in site use are likely to occur during and as a result from the proposed development. On this basis, regular tree risk assessments are advised.
- A3.8 Godwin's Arboricultural Ltd plans are to scale whenever possible but care should be taken when measuring from a plan without first checking the original data.

Appendix 4. Protective Barrier Construction

- A4.1 The default specification for protective barriers should consist of a vertical and horizontal scaffold framework, well braced to resist impacts, as illustrated below. 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.



Key

- 1 Standard scaffold poles
- 2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
- 3 Panels secured to uprights and cross-members with wire ties
- 4 Ground level
- 5 Uprights driven into the ground until secure (minimum depth 0.6 m)
- 6 Standard scaffold clamps

Figure 1. Default protective fencing barrier as detailed in BS 5837: 2012.

- A4.2 Where the site circumstances and associated risk of damaging incursion into the RPA do not necessitate the default level of protection, an alternative specification may be adopted. This system includes 2 m tall welded mesh panels on rubber or concrete feet, secure enough to provide an adequate level of protection from cars, vans, pedestrians and manually operated plant. In such cases, the fence panels should be joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence. The distance between the fence couplers should be at least 1 m and should be uniform throughout the fence. The panels should be supported on the inner side by stabilizer struts, which should normally be attached to a base plate secured with ground pins (Figure 2a). Where the fencing is to be erected on retained hard surfacing or it is otherwise unfeasible to use ground pins, e.g. due to the presence of underground services, the stabilizer struts should be mounted on a block tray (Figure 2b).

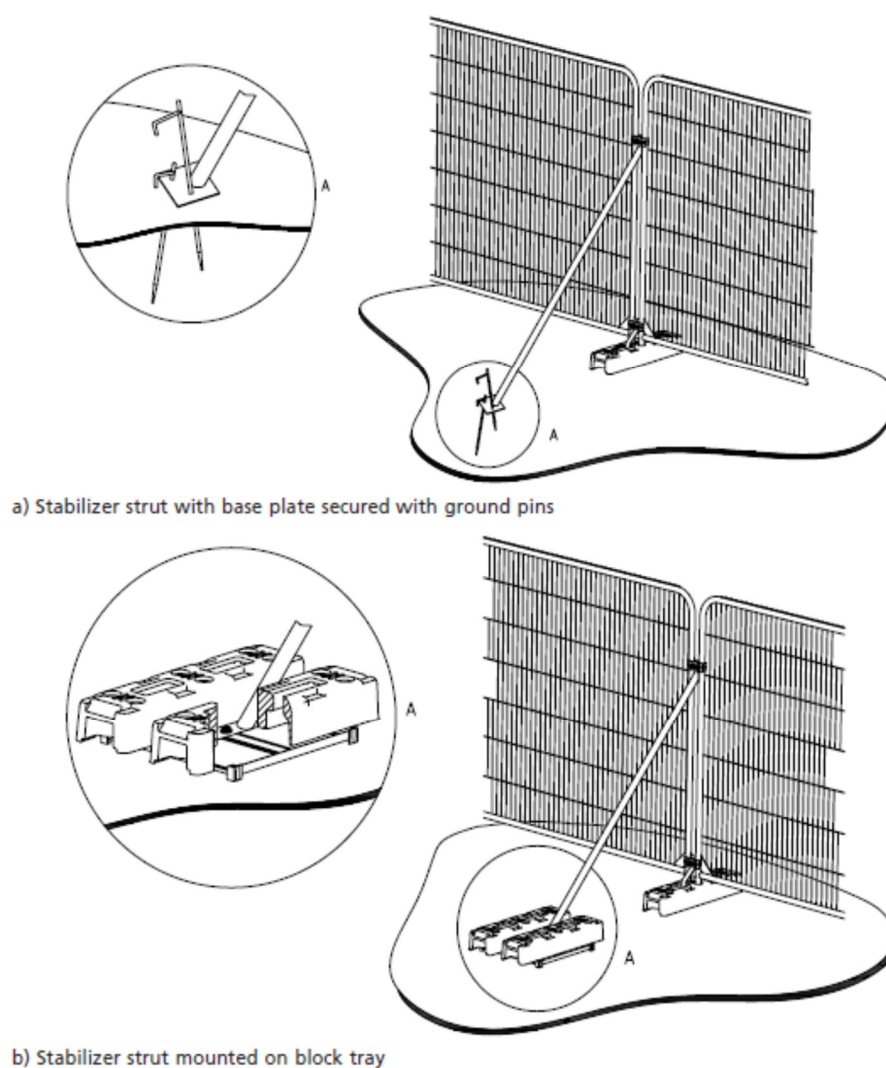


Figure 2. Examples of above-ground stabilizing systems

A4.3 Figure 3 (below) shows the technique for ground protection recommended where RPAs lie outside of the protective fencing barrier.

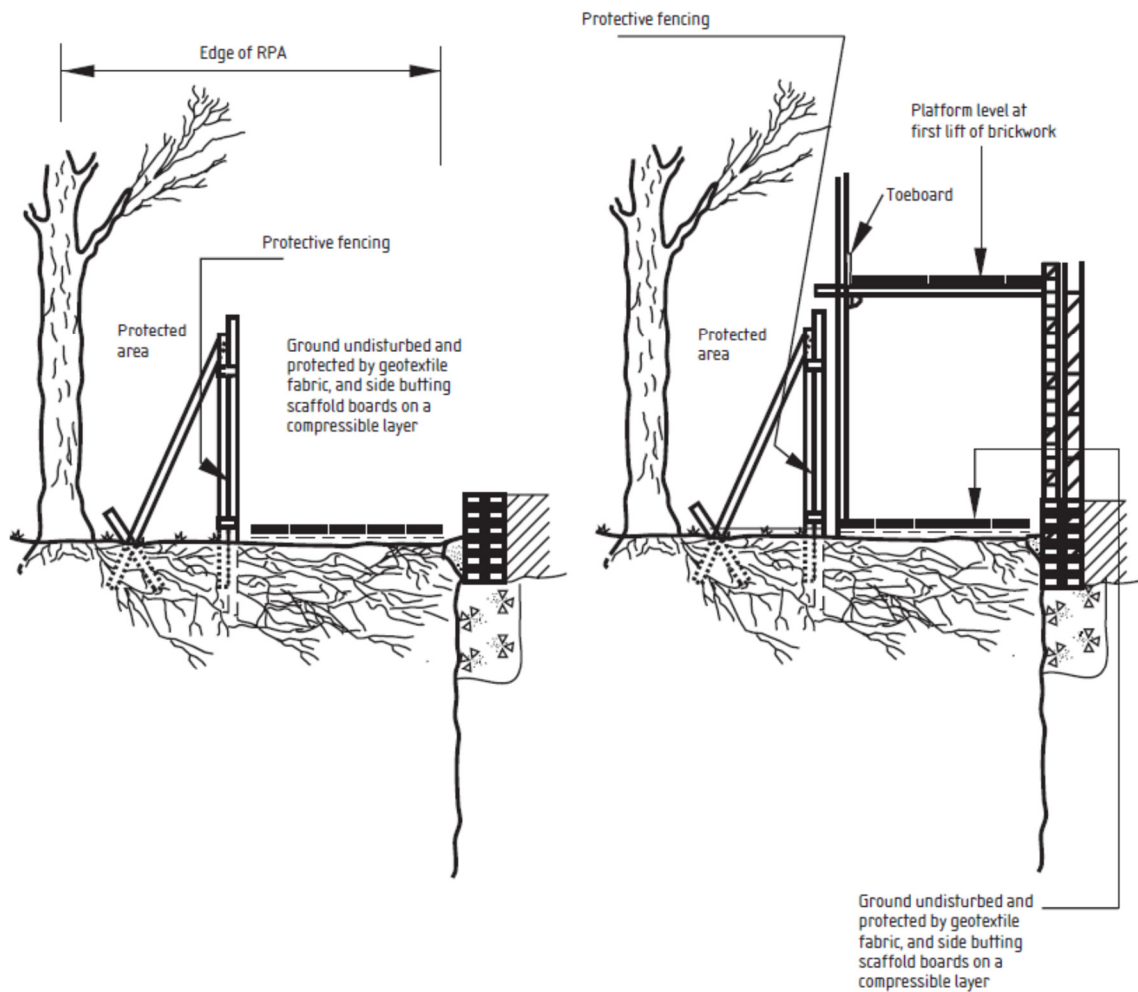


Figure 3. Ground protection and scaffold construction within an RPA.

Appendix 5. Statutory Tree Protection Enquiry Results



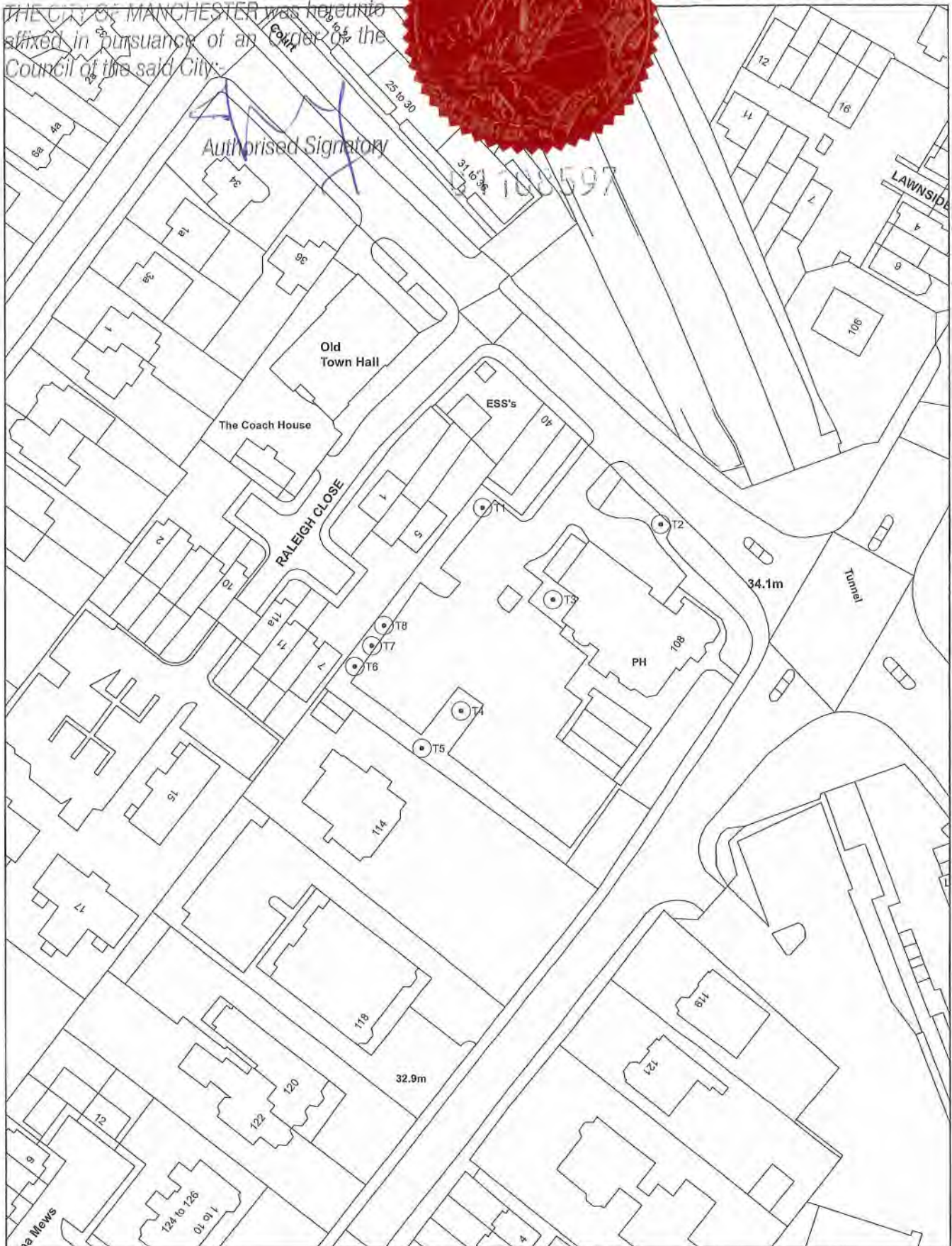
MANCHESTER
CITY COUNCIL

THE COMMON SEAL of THE COUNCIL OF
THE CITY OF MANCHESTER was hereunto
affixed in pursuance of an Order of the
Council of the said City:



Authorised Signatory

1000597



**Land at The Greenfinch PH, 108 Palatine Road, Didsbury
Tree Preservation Order 2020**

© Crown copyright and database rights 2020. Ordnance Survey 100019568

Handwritten signature



1:750

SCHEDULE

Article 3

Specification of trees

Trees specified individually

(encircled in black on the map)

<i>Reference on map</i>	<i>Description</i>	<i>Situation</i>
T1	Weeping Willow	The Greenfinch Public House, 108 Palatine Road, West Didsbury, Manchester, M20 3ZA
T2	Lime	The Greenfinch Public House, 108 Palatine Road, West Didsbury, Manchester, M20 3ZA
T3	Birch	The Greenfinch Public House, 108 Palatine Road, West Didsbury, Manchester, M20 3ZA
T4	Weeping Willow	The Greenfinch Public House, 108 Palatine Road, West Didsbury, Manchester, M20 3ZA
T5	Sycamore	The Greenfinch Public House, 108 Palatine Road, West Didsbury, Manchester, M20 3ZA
T6	Birch	The Greenfinch Public House, 108 Palatine Road, West Didsbury, Manchester, M20 3ZA
T7	Birch	The Greenfinch Public House, 108 Palatine Road, West Didsbury, Manchester, M20 3ZA
T8	Birch	The Greenfinch Public House, 108 Palatine

Appendix 6. No Dig Construction Techniques

Cellweb® TRP

Tree Root Protection

Cellweb® TRP is a 3D cellular confinement tree root protection system. The system provides a 'no dig' solution for the construction of new hard surfaces within root protection areas (RPAs). Cellweb® TRP has been designed and independently tested to comply with recommendations made in Arboricultural Practice Note 12 and BS 5837 2012 – Trees in relation to design, demolition and construction.



Cellweb® TRP Key Functions

Cellweb® is a 'no dig' solution which is constructed directly on the existing ground surface. This eliminates the requirement for excavation, preventing root severance.

Cellweb® is a completely porous system allowing continued water permeation and gas exchange between the rooting environment and atmosphere.

Cellweb® spreads point loads, minimising increases in soil compaction within the rooting environment. This maintains an open graded soil structure allowing continued root growth, water, gas and nutrient migration.

The Cellweb® TRP system comprises the following three components

Treetex™ Geotextile. Following minimal ground preparation the Treetex™ is laid onto the existing ground and top soil. This acts as a separation layer, separating the system above from the soil and rooting environment below. Treetex™ performs as a hydrocarbon pollution control measure in accordance with BS5837, holding 1.7lt of oil per square meter.

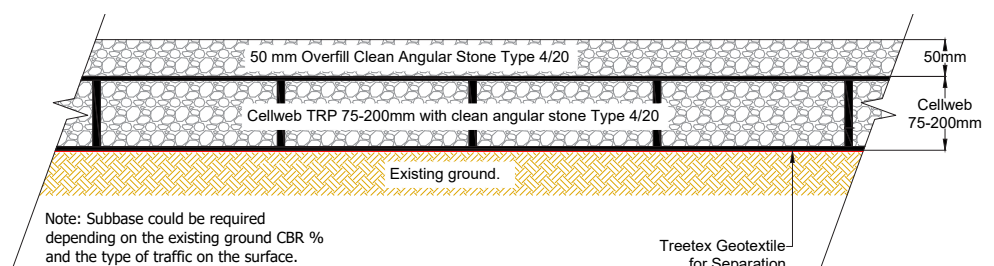
Cellweb® 3D Cellular Confinement. The Cellweb® is installed on top of the Treetex™ layer. This is fixed to the ground using ten steel J pins per panel. The panels can be cut to the required shape and adjoining panels can be connected using heavy duty staples or cell ties.

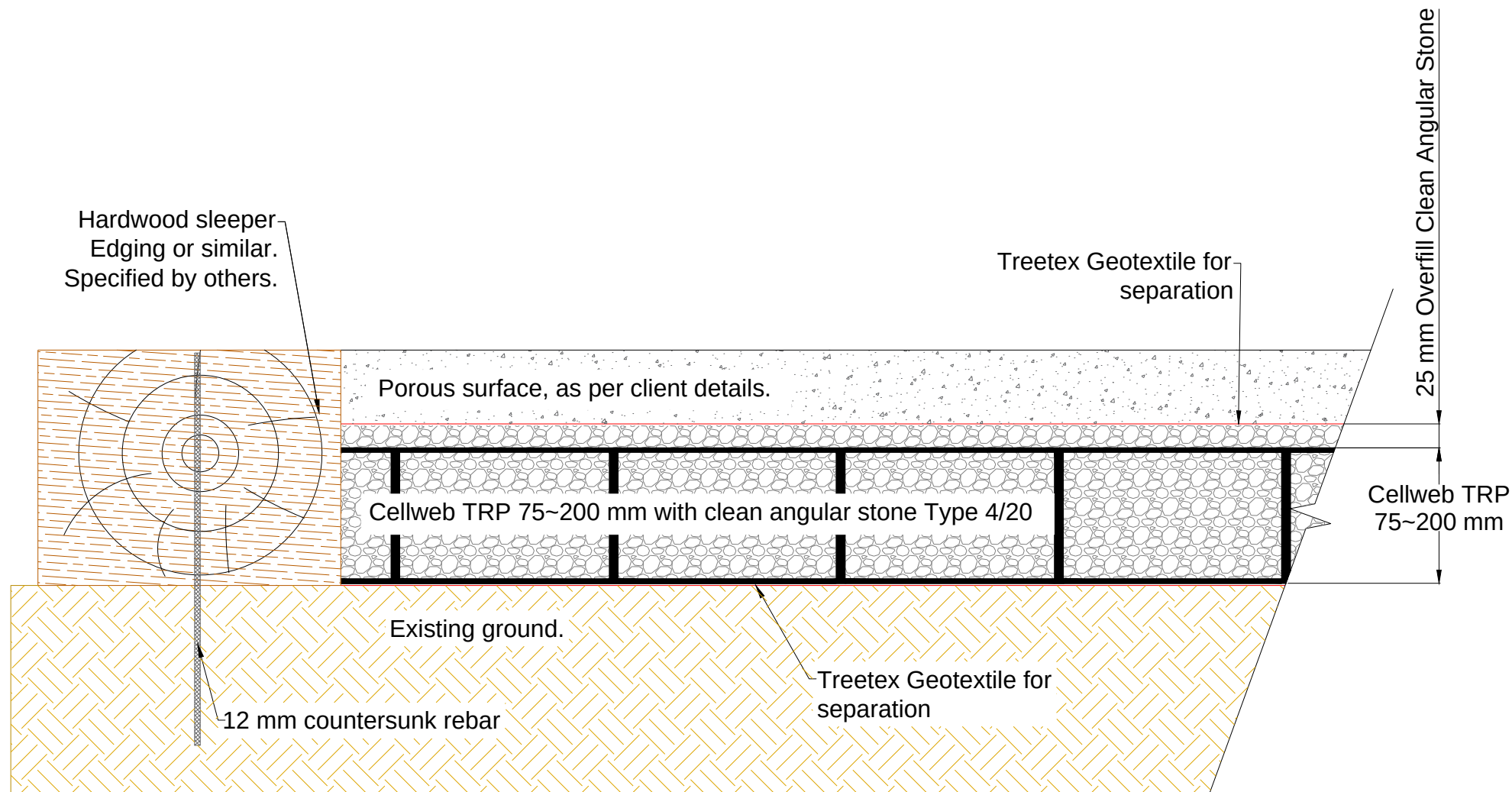
4-20mm Clean Angular Stone. The expanded Cellweb® is infilled with a 4-20mm clean angular stone. The confined angular stone locks together to produce a rigid stone mattress, while maintaining air pockets for continued water permeation and gas exchange. The low fines content of the stone prevents the Treetex™ layer from becoming blocked over time.

Which depth of Cellweb® TRP?

The Cellweb® System is provided in four different depths; 200mm, 150mm, 100mm and 75mm. The depth required is determined by the proposed traffic loadings and the site ground conditions. Geosynthetics in house engineering department can provide a free site specific technical recommendation. For free technical and engineering support please contact Geosynthetics Ltd 01455 617139 or the full installation guide can be found on our website www.geosyn.co.uk.

Indicative Cellweb with overfill





Note: Subbase could be required depending on the existing ground CBR % and the type of traffic on the surface.



Geosynthetics Ltd
Fleming Road, Harrowbrook Industrial Estate,
Hinckley, Leicestershire, LE10 3DU
Tel: 01455 617139 Fax: 01455 617140 www.geosyn.co.uk

Project: Cellweb 75~200mm Hardwood
sleeper Standard details

Description:

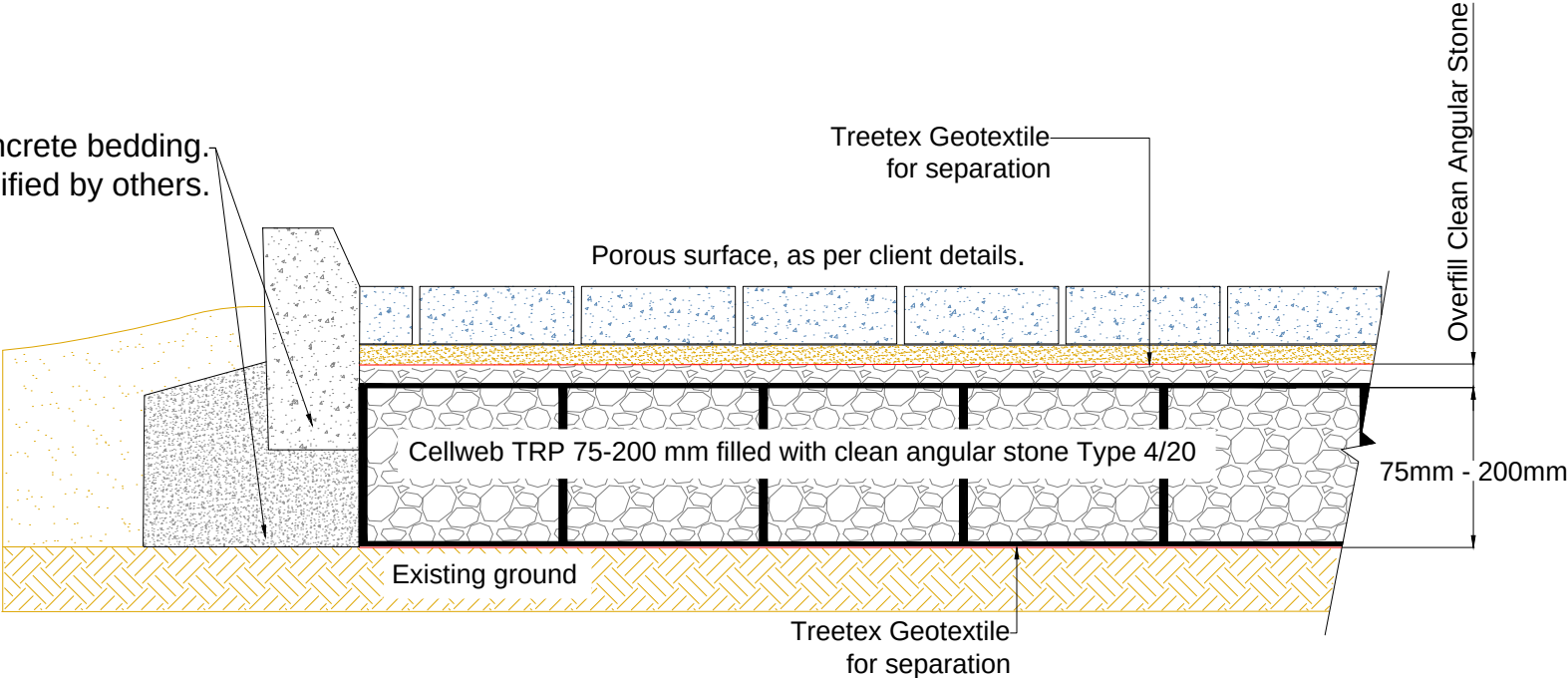
Drawn By:
DM
Ref:

Scale:
NTS
Version:
V1

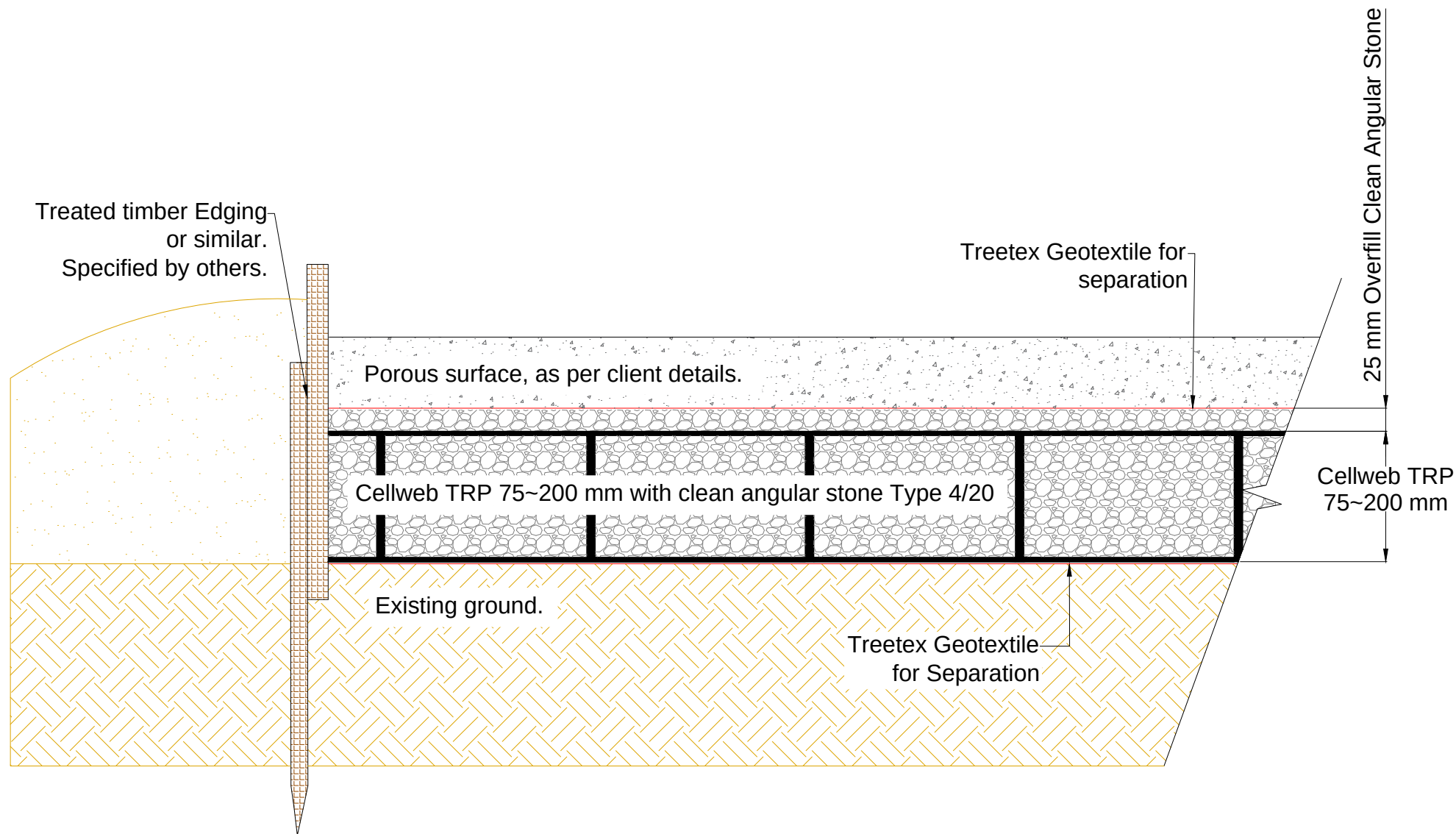
Date:
26/07/2016
Sheet:
Hardwood Sleeper

Checked By:

Standard HB Kerb with concrete bedding.
Specified by others.



Note: Subbase could be required depending on the existing ground CBR %
and the type of traffic on the surface.



Note: Subbase could be required depending on the existing ground CBR % and the type of traffic on the surface.



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