



Landscape
Architecture



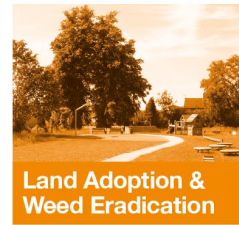
Landscape
Planning



Arboriculture
& Tree Works



Ecology & Habitat
Management



Land Adoption &
Weed Eradication



Urban
Design

JAMES BLAKE

A S S O C I A T E S

Arboricultural Method Statement

Harefield Grove, Rickmansworth Road, Harefield

On behalf of

Comer Homes

16 August 2023

JBA 20/027 AR02 Issue D

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Project	Harefield Grove, Rickmansworth Road, Harefield
Report	Arboricultural Method Statement
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SUMMARY

This Arboricultural Method Statement (AMS) has been commissioned by Comer Homes to ensure retained trees and vegetation are adequately protected during the enabling, demolition and construction activities.

This report has been prepared in accordance with British Standard 5837: Trees in relation to design, demolition and construction – Recommendations (2012) and The National Joint Utilities Group (NJUG) Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees Volume 4 Issue 2 (2007). These documents provide best practice advice, assessment and guidance to ensure the protection of trees and significant vegetation on development sites.

In order to successfully work in close proximity to trees, the methods described within this document should only be carried out in conjunction with the direct appointment of a qualified arboricultural consultant. Failure to implement the approved tree protection measures and procedures could lead to enforcement action, the destabilisation of trees and/or the ultimate death of the trees.

Definitions

Construction Exclusion Zone (CEZ) – a fenced off area based upon the root protection area that is prohibited for the duration of a project (unless subject to supervised works)

Root Protection Area (RPA) – a layout design tool indicating the minimum area around a tree containing sufficient roots to maintain a trees viability.

Supervised works – demolition or construction works that require specific arboricultural advice and supervision to prevent damage from occurring.

Scope

This method statement addresses the following;

Tree removals and surgery works

Tree protection specifications and requirements

Supervision requirements

Demolition procedures

Construction methodologies

Landscaping works

LIMITATIONS

Trees are dynamic, living organisms whose health and condition can change quickly. Any changes to a tree, or to trees and the land surrounding it, may affect the tree's condition and/or stability. If any such changes occur further examination would be required and may affect the validity of this report.

The survey is not intended to be a detailed tree hazard assessment. Where significant faults that pose an immediate risk to persons or property are observed recommendations will be made; however the lack of any management recommendations within the survey schedule does not infer that a detailed health and safety assessment has been made and it is recommended that a formal management and inspection plan is considered.

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GENERAL TREE PROTECTION MEASURES

No fires will be permitted within 20m of the crown of any tree.

No alterations in soil levels other than those already agreed, will occur within the Construction Exclusion Zone (CEZ) without prior agreement from the appointed arboricultural consultant.

No materials, vehicles, plant or personnel will be permitted into the CEZ at any time without prior consent from the arboricultural consultant.

Any liquid materials spilled on site will be immediately cleared up and removed from the site. If liquid fuel or cement products are spilled within 2m of the tree protection zone, the contractor will report the incident to the arboricultural consultant immediately.

The contractor will report any damage to trees or shrubs, whether caused by construction activities or from any other cause, to the arboricultural consultant immediately.

TREE WORKS

A list of all approved and recommended tree removals and surgery works can be found below and in JBA 20-027 Tree Works Schedule TS02 Rev A at Appendix 1; and are shown on the tree removal plan reference JBA 20/027 TR01-03 Rev D at Appendix 2.

All tree surgery works necessary for the development will be carried out prior to the commencement of site operations unless otherwise agreed.

Only tree works specified within this document or that have consent from the Local Planning Authority will be carried out. Any uncertainty regarding tree surgery or removal works will require confirmation from the appointed arboricultural consultant and local authority tree officer.

All tree works will be carried out in accordance with the recommendations made within the current BS3998 (2010).

Wildlife and habitat legislation

All tree work will be carried out in accordance with the Wildlife and Countryside Act 1981 (as amended) and the Habitat Regulations 2010.

These regulations make it an offence to;

- intentionally or deliberately kill, injure or capture protected species;
- deliberately disturb protected species;
- damage, destroy or obstruct access to a structure used for shelter or protection by a protected species;
- take, damage, disturb or destroy the nest of any wild bird while it is in use or being built;
- take or destroy the egg of any wild bird; or
- damage, destroy or obstruct access to bat roosts whether or not bats are using roosts at the time.

Prior to the commencement of works the tree surgery contractor has a legal duty to ensure no protected species or habitats are present. If any species or habitats are discovered then works will cease and a suitably qualified ecologist will be employed to carry out more detailed surveys and to provide advice.

TREE PROTECTION

Protective fencing specification

Protective fencing will be installed prior to any enabling works, demolition or construction activity commences.

The position of protective fencing is shown on drawings JBA 20/027 TP01-03 Rev D at **Appendix 2**.

Protective fencing will be constructed of weld mesh panels securely fixed to a static framework fit for the purpose of excluding construction traffic.

Alternative specifications to those shown must be agreed prior to installation by the local authority and arboricultural consultant.

All weather signage will be securely fixed to panels at regular intervals stating the purpose of the fencing and contact details of the arboricultural consultant. A suggested sign can be found at **Appendix 3** and may be copied for use on site.

Upon completion of tree protection, the site manager will invite the arboricultural consultant to inspect and sign off the specification and position of all tree protection.

Once installed, protective fencing will remain in position for the duration of the project or until it requires removal to a specified alternative position to allow for works.

SUPERVISION REQUIREMENTS

The arboricultural consultant will be available for ongoing advice and design input to ensure works close to trees is avoided or correctly specified.

Any works that could impact upon retained trees will be supervised and monitored by the arboricultural consultant. It is suggested that as a minimum supervision visits will occur as follows;

- Pre-commencement site meeting with project manager to discuss tree protection, tree works and programme.
- Meeting with tree contractor to specify and agree on works
- Inspection of protective fencing prior to the demolition and construction phases
- Excavation works within root protection areas including breaking out of tarmac surfaces, no dig construction of driveways and parking spaces, reinstatement of kitchen garden wall, paths reinstatement/construction and landscaping

CONSTRUCTION

Manual excavation within RPAs

This section applies to the driveway and path construction as well as any additional works that may require excavation within RPAs at any time during construction e.g. service trenches, wall construction.

All works within Root Protection Areas (RPAs) will be carried out under the direct supervision of the appointed arboricultural consultant (JBA).

No site personnel will enter these areas until a representative from JBA is present.

A section of protective fencing will be temporarily removed to provide access to the required area.

Where necessary, the appointed arboricultural consultant will specify the location of temporary ground protection and the level of protection required.

Excavations will be carried out manually using appropriate hand tools OR using an air lance to expose tree roots.

No machinery will be permitted into the working area unless agreed by the arboricultural consultant.

All excavated spoil will be manually removed from the area or placed on temporary ground protection to be used for back filling upon completion.

All roots in excess of 25mm in diameter and all clumps of fibrous roots greater than 25mm in diameter will be retained and wrapped in dry hessian during the works to prevent desiccation.

Roots less than 25mm may be pruned by the arboricultural consultant where deemed essential to complete works.

Root pruning will only be carried out by the arboricultural consultant, using sharp, sterile tools suitable to the size of the root to be cut. Where possible roots will be pruned cleanly back to a side branch.

Prior to backfilling any hessian wrapping will be removed from retained roots.

The roots will then be surrounded with topsoil, sharp sand (builders' sand will not be used due to its high salt content) or other loose inert granular fill, before soil or other medium is replaced. This material should be uncontaminated and free from injurious objects.

Temporary ground protection will be removed in a backwards direction away from the tree so as always to be positioned on protection and not on unprotected ground.

Once the work area is cleared of ground protection the recently backfilled spoil will be watered and the removed section of protective fencing reinstalled.

No dig construction of access roads, driveways, and parking spaces

Specialised construction will be required for the following:

- Main driveway construction extending from the site entrance adjacent T190, as semi mature copper beech to adjacent to T135, a mature sweet chestnut.

Specified product

Cellweb Tree Root Protection System www.geosyn.co.uk

The aforementioned driveways will be constructed using a no dig cellular confinement system such as that shown in **Appendix 5**.

Prior to installation all existing vegetation within the areas of the new driveways will be sprayed using a suitable herbicide in accordance with the manufacturers' recommendations.

The area will then be left for the specified period to allow the vegetation to die off completely. Once the vegetation has completely died off the area will be raked to remove any loose debris and to achieve a clear level base.

If time constraints prevent using herbicide, the turf layer within the areas of the new driveways will be scraped using the front blade of the mini digger.

The mini digger will work backwards and travel over temporary ground protection capable of supporting the digger. The mini digger must not be used or parked on open ground within RPAs.

Fill any hollows in the exposed ground with sharp sand or 4/20mm or 40/20mm clean angular stone.

A geotextile membrane will then be laid over the area and the cellular system placed onto this as prescribed below.

- Lay a geotextile membrane (Treetex T-300, Permatex 300 or similar approved) over the ground, between pegged timber edging if used, and overlapping membrane joints

by a minimum 300mm. Keep the membrane in place temporarily using stakes or weights.

- Place the collapsed panel on the geotextile and insert staking pins provided through three cells across the width of the panel end at the start of the driveway.
- Expand the panel to its full length to ensure the cells have been expanded to their full dimension and pin across the opposite panel end using staking pins provided.
- Pin along the length of the panel with two pins on each side using staking pins provided.
- Staple any adjacent panels together using the provided stapler and staples.
- If full panels are not being used, then ensure the cells have been expanded to their full dimension.
- Cut panels with a heavy-duty Stanley knife to shape, or remove excess sections, if required.
- Use a mini digger under the supervision of a qualified and competent arboriculturist. The mini digger can travel over infilled panels, but it must not be used or parked on open ground within RPAs.
- Infill each cell with 4-20mm or 40-20mm clean angular stone to BS EN 13242 and 12620 (depending on cell depth being used).
- Allow for any settlement of the stone in the cells and top up if necessary.
- Add extra stone up to 50mm depth over the panels if the area is to be trafficked immediately.

When the area is complete the agreed finishing surface can be applied.

LANDSCAPING

Prior to works commencing the appointed arboriculturist will meet with the landscape contractor to discuss and agree the appropriate methodology to be used.

The Landscape contractor will provide a detailed method statement for the arboriculturist's approval before works start. This method statement will detail the following;

- Tree Protection
- Cultivation within RPAs
- Planting methodology
- Soil levels
- Machinery and tools
- Delivery of materials
- Ground protection requirements
- Hard landscape implementation

Principles of landscaping beneath trees

Landscaping beneath retained trees will be carried out by hand wherever possible, and will not involve the use of heavy machinery.

Soil levels will not be altered without prior approval from the appointed arboriculturist or planning authority.

Cultivation of areas beneath trees will be carried out manually only preparing the top 100mm of soil.

Where larger planting pits and greater depths are required these will be individually excavated retaining all roots greater than 25mm in diameter. Any retained roots will be wrapped in dry hessian until the pit is back filled.

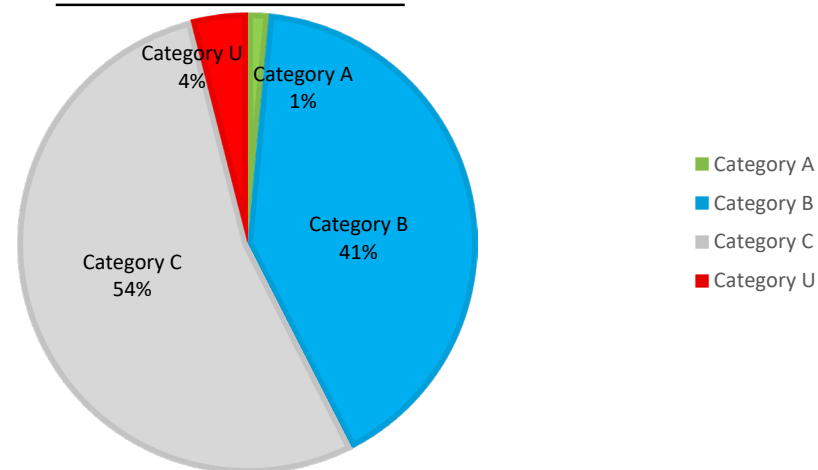
APPENDIX 1: TREE WORKS SCHEDULE

Tree Survey Schedule - Key

Life Stage	Description	Key	Description	BS Category	Description
NP	Newly planted	Stem Ø (mm) at 1.5m	Diameter of stem(s) in millimetres measured at 1.5m above ground level in accordance with BS 5837:2012.	A	Tree(s) of high quality with an estimated remaining life expectancy of at least 40 years.
Y: Young	An establishing tree that could be easily transplanted.	Stems	Numbers of stems or M/S = Multi-Stemmed.	B	Tree(s) of moderate quality with an estimated remaining life expectancy of at least 20 years.
SM: Semi Mature	An established tree still to reach its ultimate height and spread and with considerable growth potential.	Height of (FSB)	Height of first significant branch above ground level.	C	Tree(s) of low quality and value with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm.
EM: Early Mature	A tree reaching its ultimate height and whose growth is slowing however it will still increase in stem diameter and crown spread.	Crown Spread	Crown spread at the four cardinal points, North, South, East and West.	U	Unsuitable for retention. 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.
M: Mature	A tree with limited potential for further significant increase in size although is likely to have a long safe useful life expectancy.	Condition	Assessment of the physiological and structural condition of the tree observed at the time of surveying.	RPA radius (m) Radius of Root Protection Area (RPA) in metres based on relevant calculation in BS5837:2012 section 4.6.	
OM: Over Mature	A senescent or moribund tree with a limited useful life expectancy.	Est Remaining Contribution (Years)	Estimated Remaining Contribution in Years (<10, 10+, 20+, 40+)	RPA Area (m2)	A layout design tool indicating the minimum area surrounding the tree that contains sufficient rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority. Size and shape based on calculations and constraints noted in BS5837:2012 section 4.6.
V: Veteran	A tree older than typical for its species and of significant ecological, cultural or aesthetic value.				

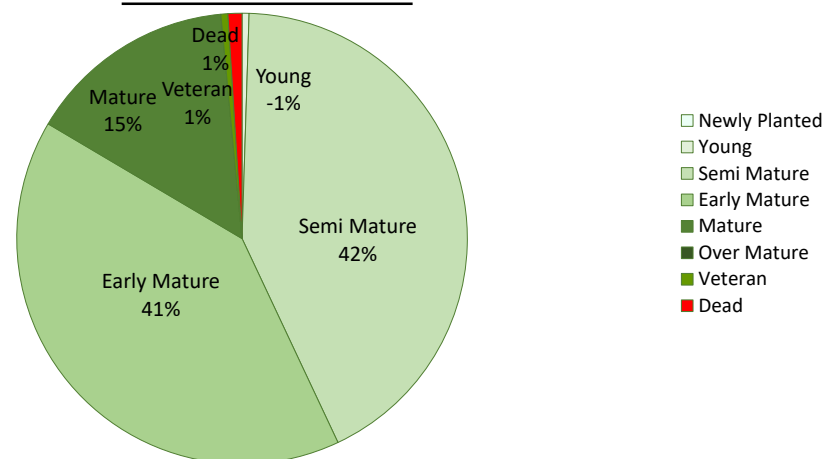
BS Category	Total
Category A	3
Category B	82
Category C	107
Category U	8
	200

BS CATEGORY CHART



Age Class	Total
Newly Planted	0
Young	1
Semi Mature	85
Early Mature	81
Mature	30
Over Mature	0
Veteran	1
Dead	2
	200

AGE CLASS CHART



Tree Survey Schedule

Site name: Harefield Grove, Rickmansworth Road, Harefield
Client: Comer Homes
Job Number: 20/027

Survey Date: 9 and 10 July 2020
Surveyor: Simon Smith

Tree No.	Tree Species	Life Stage	Stem Ø (mm) at 1.5m	Height (crown height) (m)	Height of (FSB)	Crown Spread				Condition	Comments	Tree Management Recommendations	Est Remaining Contribution (Years)	BS Cat	RPA Radius (m)	RPA area (m2)
						N	E	S	W							
G1	Chamaecyparis lawsoniana (Lawson Cypress),x Cupressocyparis leylandii (Leyland Cypress),Acer pseudoplatanus (Sycamore),Sorbus aucuparia (Rowan),Prunus laurocerasus (Cherry Laurel),Fraxinus excelsior (Common Ash)	SM	173	5(0.5)		1.5	1	0.5	1	Good	Unable to fully inspect - vegetation. Stem diameter estimated. Mixed group of ornamental conifers, shrubs and self-set trees.	Remove.	10+	C2	2.1	14
T2	Pyrus calleryana "Chanticleer" (Chanticleer Pear)	SM	200	8(2)	2	3	2	2	2	Poor	Unable to fully inspect - vegetation. Stem diameter estimated. Low vigour. Sparse crown.	Remove.	10+	C1	2.4	18
T3	Pyrus calleryana "Chanticleer" (Chanticleer Pear)	SM	140	6(1.5)	2	1.5	1.5	1.5	1.5	Poor	Sparse crown.	Remove.	10+	C2	1.7	9
T4	Pyrus calleryana "Chanticleer" (Chanticleer Pear)	SM	100	3.5(1.5)	1.5SW	1.5	1	1.5	1.5	Poor	Scattered dieback in crown.	Remove.	10+	C2	1.2	5
T5	Pyrus calleryana "Chanticleer" (Chanticleer Pear)	SM	110	4(1.5)	1.5N	1.5	1	1.5	1.5	Fair	Basal and stem epicormic growth.	Remove.	10+	C2	1.3	5
T6	Pyrus calleryana "Chanticleer" (Chanticleer Pear)	SM	120	4.5(1.5)	1.5NW	2.5	1.5	2	1.5	Fair	Basal and stem epicormic growth.	Remove.	10+	C2	1.4	7
T7	Pyrus calleryana "Chanticleer" (Chanticleer Pear)	SM	110	4.5(1.5)	1.5NW	2	1.5	1.5	2	Fair	Basal and stem epicormic growth.	Remove.	10+	C2	1.3	5

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Tree No.	Tree Species	Life Stage	Stem Ø (mm) at 1.5m	Height (crown height) (m)	Height of (FSB)	Crown Spread				Condition	Comments	Tree Management Recommendations	Est Remaining Contribution (Years)	BS Cat	RPA Radius (m)	RPA area (m2)
						N	E	S	W							
T8	Pyrus calleryana "Chanticleer" (Chanticleer Pear)	SM	120	4.5(2)	2	2	2	2.5	2	Poor	Scattered dieback in crown. Basal and stem epicormic growth.	Remove.	10+	C2	1.4	7
T9	Pyrus calleryana "Chanticleer" (Chanticleer Pear)	SM	100	3.5(1.5)	1.5N	1.5	2	1.5	1.5	Poor	Scattered dieback in crown. Basal and stem epicormic growth.	Remove.	10+	C2	1.2	5
T10	Pyrus calleryana "Chanticleer" (Chanticleer Pear)	SM	100	4(1.5)	1.5N	1	2	1.5	1	Poor	Scattered dieback in crown. Basal and stem epicormic growth.	Remove.	10+	C2	1.2	5
T11	Pyrus calleryana "Chanticleer" (Chanticleer Pear)	SM	100	4.5(1.5)	1.5	1	2	1	2	Poor	Scattered dieback in crown. Basal and stem epicormic growth.	Remove.	10+	C2	1.2	5
T12	Pyrus calleryana "Chanticleer" (Chanticleer Pear)	SM	150	6(1.5)	2	2.5	2.5	2.5	1	Poor	Low vigour. Basal and stem epicormic growth.	Remove.	10+	C2	1.8	10
T13	Pyrus calleryana "Chanticleer" (Chanticleer Pear)	SM	200	7(2.5)	2	1.5	1.5	2	2	Fair	Unable to fully inspect - ivy and vegetation. Stem diameter estimated. Low vigour.	Remove.	10+	C2	2.4	18
T14	Betula pendula (Silver Birch)	EM	340	11(1.5)	2E	4	5	3	4	Good	Unable to fully inspect - ivy.	Remove.	20+	B1	4.1	52
T15	Betula pendula (Silver Birch)	SM	220	9(1)	3NE	4	4	5	4	Fair	Upper crown dieback.		10+	C1	2.6	22
T16	Sorbus aucuparia (Rowan)	SM	100	4(2)	2	1.5	2	2	1	Fair	Swedish whitebeam basal sucker growth, forming secondary stems.	Remove.	10+	C1	1.2	5

Tree No.	Tree Species	Life Stage	Stem Ø (mm) at 1.5m	Height (crown height) (m)	Height of (FSB)	Crown Spread				Condition	Comments	Tree Management Recommendations	Est Remaining Contribution (Years)	BS Cat	RPA Radius (m)	RPA area (m2)
						N	E	S	W							
T17	Prunus padus (Bird Cherry)	EM	390	8(2)	1.5W	4.5	4.5	5.5	5.5	Fair	Unable to fully inspect - ivy. Broken branches in crown.	Remove.	10+	C1	4.7	69
T18	Sorbus aucuparia (Rowan)	SM	100	6(3)		1.5	1.5	1.5	1.5	Good	Not identified on topographical survey. Unable to fully inspect - vegetation. Stem diameter estimated.	Remove.	10+	C1	1.2	5
T19	Betula pendula (Silver Birch)	SM	200	9(2.5)	2.5N	3.5	3	2.5	3	Fair	Not identified on topographical survey. Unable to fully inspect - ivy and vegetation. Stem diameter estimated. Upper crown dieback.	Remove.	10+	C1	2.4	18
T20	Betula pendula (Silver Birch)	EM	320	11(2)	3NE	4	4	4	4	Poor	Unable to fully inspect - ivy and vegetation. Low vigour. Minor dead wood.	Remove.	10+	C1	3.8	46
T21	Sorbus aria (Whitebeam)	SM	180	5.5(2.5)	2.5	2.5	2.5	2.5	2.5	Fair	Unable to fully inspect - ivy. Established basal sucker growth, forming secondary stems.	Remove.	10+	C1	2.2	15
T22	Sorbus aria (Whitebeam)	SM	190	5(2.5)	2	2.5	2.5	2.5	2.5	Fair	Unable to fully inspect - ivy. Established basal sucker growth, forming secondary stems.	Remove.	10+	C1	2.3	16
T23	Sorbus aria (Whitebeam)	SM	100	4(2.5)	2.5	1.5	1	1.5	1.5	Fair	Low vigour.	Remove.	10+	C1	1.2	5
T24	Betula pendula (Silver Birch)	EM	250	12(1)	2E	3	3	3.5	5	Good	Unable to fully inspect - ivy. Branch tearout.	Remove.	20+	B2	3.0	28
T25	Betula pendula (Silver Birch)	EM	250	12(2)		2	2	2	2.5	Fair	Not identified on topographical survey. Unable to fully inspect - ivy and vegetation. Stem diameter estimated. Sparse crown.	Remove.	10+	C1	3.0	28

Tree No.	Tree Species	Life Stage	Stem Ø (mm) at 1.5m	Height (crown height) (m)	Height of (FSB)	Crown Spread				Condition	Comments	Tree Management Recommendations	Est Remaining Contribution (Years)	BS Cat	RPA Radius (m)	RPA area (m2)
						N	E	S	W							
T26	Betula utilis (Himalayan Birch)	EM	300	8(1.5)	1.5NE	4.5	5	5	5	Good		Remove.	20+	B1	3.6	41
T27	Sorbus aucuparia (Rowan)	D	150	6(3.5)		2	3	3	4	Dead	Unable to fully inspect - vegetation. Stem diameter estimated. Fireblight.	Remove.	<10	U	1.8	10
G28	Chamaecyparis lawsoniana (Lawson Cypress),Acer pseudoplatanus (Sycamore),Alnus cordata (Italian Alder),Cupressus macrocarpa (Monterey Cypress)	SM	100	6(1)		1	1	1	1	Good	Group of evergreen shrubs with self-set trees.	Remove.	10+	C2	1.2	5
G29	Betula pendula (Silver Birch),Salix caprea (Goat Willow)	EM	229	13(2)		2	3	3	3	Good	Unable to fully inspect - ivy and vegetation. Stem diameter estimated. Largest stem diameter recorded.	Remove.	20+	B2	2.7	24
G30	Taxus baccata (Common Yew)	SM	150	7(1)		1.5	1.5	1.5	1.5	Fair	Unable to fully inspect - ivy and vegetation. Stem diameter estimated. Scattered dieback in crown.	Remove.	10+	C2	1.8	10
T31	Betula pendula (Silver Birch)	SM	230	11(2)	3.5N	3	3.5	3	5	Fair	Stem leans to south-west. Sparse crown. Branch growing over top of lamp column.		10+	C1	2.8	24
T32	Sorbus aucuparia (Rowan)	D	150	6(3)		2.5	2	2.5	1.5	Dead	Unable to fully inspect - vegetation. Stem diameter estimated.	Remove.	<10	U	1.8	10
T33	Sorbus aria (Whitebeam)	SM	150	6(2)	2	4	3.5	3.5	3	Good	Unable to fully inspect - ivy and vegetation. Stem diameter estimated.		10+	C1	1.8	10

Tree No.	Tree Species	Life Stage	Stem Ø (mm) at 1.5m	Height (crown height) (m)	Height of (FSB)	Crown Spread				Condition	Comments	Tree Management Recommendations	Est Remaining Contribution (Years)	BS Cat	RPA Radius (m)	RPA area (m2)
						N	E	S	W							
T34	Chamaecyparis lawsoniana (Lawson Cypress)	EM	450	13(0.5)		2	2.5	2	1.5	Good		Remove.	20+	B1	5.4	92
G35	Chamaecyparis lawsoniana (Lawson Cypress)	SM	150	12(0.5)	2	2	1	2	2	Good		Remove.	10+	C2	5.4	92
T36	Salix caprea (Goat Willow)	M	660	8(1.5)	2S	4	8	7	8.5	Good	Minor dead wood. Branch pruning wounds.	Remove.	10+	C1	7.9	197
T37	Sorbus aucuparia (Rowan)	SM	160	7(1.5)	1.5NW	2.5	2.5	2.5	2.5	Good		Remove.	10+	C1	1.9	12
T38	Sorbus aucuparia (Rowan)	EM	250	8(2)	2.5	2	2.5	3.5	2.5	Fair	Minor dead wood. Stem pruning wounds. Stem wounds. Branch tearout. Fireblight.	Remove.	10+	C1	3.0	28
T39	Chamaecyparis lawsoniana (Lawson Cypress)	SM	300	12(0)		2	3	3.5	3.5	Good	Unable to fully inspect - vegetation. Stem diameter estimated. Close to building.	Remove.	10+	C1	3.6	41
T40	Chamaecyparis pisifera (Sawara Cypress)	SM	191	6(0.5)		1	2	2	1	Good	Stem diameter estimated. Multi-stemmed from base.	Remove.	10+	C1	2.3	16
G41	Chamaecyparis lawsoniana (Lawson Cypress)	EM	424	13(0.5)		2.5	2	2.5	2	Good	Unable to fully inspect - vegetation. Stem diameter estimated. Largest stem diameter recorded.	Remove.	20+	B2	5.1	81
T42	Ilex aquifolium (Common Holly)	SM	210	8(1)	3	2.5	2.5	2.5	2.5	Poor	Upper crown dieback.	Remove.	<10	U	2.5	20

Tree No.	Tree Species	Life Stage	Stem Ø (mm) at 1.5m	Height (crown height) (m)	Height of (FSB)	Crown Spread				Condition	Comments	Tree Management Recommendations	Est Remaining Contribution (Years)	BS Cat	RPA Radius (m)	RPA area (m2)
						N	E	S	W							
T43	Taxus baccata (Common Yew)	SM	350	7(1)	0.5	3.5	3.5	3.5	3.5	Fair	Unable to fully inspect - vegetation. Stem diameter estimated. Stem pruning wounds. Sparse crown. Fruiting bodies on stem. Laetiporus sulphureus (Chicken of the Woods).	Remove.	10+	C1	4.2	55
T44	Picea abies (Norway Spruce)	M	850	22.5(1.5)	7	3	2.5	4.5	3.5	Good	Unable to fully inspect - ivy. Mower damage to surface roots.		20+	B1	10.2	327
T45	Picea abies (Norway Spruce)	EM	480	21(3)	7	3	3.5	3.5	2	Fair	Sparse crown.		10+	C1	5.8	104
T46	Taxus baccata (Common Yew)	SM	200	4(0.5)		3.5	3.5	3.5	3.5	Poor	Unable to fully inspect - vegetation. Stem diameter estimated. Multi-stemmed from base. Upper crown dieback.		10+	C1	2.4	18
T47	x Cupressocyparis leylandii (Leyland Cypress)	EM	450	13(1)	0.5	5	5	5	5	Good	Unable to fully inspect - vegetation. Stem diameter estimated.		20+	B1	5.4	92
T48	Aesculus hippocastanum (Horse Chestnut)	M	740	17(8)	11	4.5	2.5	4	7	Fair	Historic crown lift. Codominant leaders. Tag 0405.	Remove.	10+	C1	8.9	248
G49	Taxus baccata (Common Yew), Prunus laurocerasus (Cherry Laurel), Thuja plicata (Western Red Cedar), Acer pseudoplatanus (Sycamore), Pinus sylvestris (Scots Pine), Quercus robur (Common Oak), Chamaecyparis lawsoniana (Lawson Cypress), Quercus rubra (Red Oak)	EM	450	17(0.5)		3	4	3	3	Good	Stem diameter estimated. Largest stem diameter recorded. Occasional tree with upper crown dieback.	Eastern side of group: prune back understorey vegetation to clear driveway by a maximum 1m. Crown lift trees overhanging the driveway where necessary to achieve a height clearance from 4m from ground level.	20+	B2	5.4	92

Tree No.	Tree Species	Life Stage	Stem Ø (mm) at 1.5m	Height (crown height) (m)	Height of (FSB)	Crown Spread				Condition	Comments	Tree Management Recommendations	Est Remaining Contribution (Years)	BS Cat	RPA Radius (m)	RPA area (m2)
						N	E	S	W							
T50	Thuja plicata (Western Red Cedar)	EM	780	17(0.5)	4	4.5	4.5	4.5	5	Good		Remove.	20+	B1	9.4	275
T51	Salix caprea (Goat Willow)	EM	512	8(0)		7	6.5	4	7	Good		Remove.	20+	B1	6.1	118
T52	Betula pendula (Silver Birch)	EM	270	15(2)	3SW	3.5	3.5	1	4	Good	Historic crown lift.	Remove.	20+	B2	3.2	33
T53	Betula pendula (Silver Birch)	EM	230	11(2)	3NW	3.5	2	2.5	3	Good	Unable to fully inspect - ivy.	Remove.	20+	B2	2.8	24
T54	Betula pendula (Silver Birch)	EM	270	13(5)	5S	4	4.5	2	3.5	Good	Historic crown lift.	Remove.	20+	B2	3.2	33
T55	Betula pendula (Silver Birch)	EM	310	15(10)	6W	3.5	3.5	2	3	Good	Historic crown lift.	Remove.	20+	B2	3.7	43
T56	Betula pendula (Silver Birch)	EM	320	15(8)	7SW	3	3.5	5	5	Good	Historic crown lift.	Remove.	20+	B2	3.8	46
T57	Chamaecyparis lawsoniana (Lawson Cypress)	EM	1077	11(0)	0.5	6	4	1.5	4	Good	Branch tearout.		20+	B2	12.9	524
T58	Pinus sylvestris (Scots Pine)	M	800	19(4)	9W	3	6	6	8	Good	Unable to fully inspect - vegetation. Stem diameter estimated. Branch tearout.		20+	B1,B2	9.6	290
T59	Quercus robur (Common Oak)	V	1200	8(1)	3N	7	7.5	5.5	6	Good	Minor dead wood. Potential bat roost features. Pollard, lapsed management. Branch tearout. Branch socket cavities.		40+	A3	14.4	652

Tree No.	Tree Species	Life Stage	Stem Ø (mm) at 1.5m	Height (crown height) (m)	Height of (FSB)	Crown Spread				Condition	Comments	Tree Management Recommendations	Est Remaining Contribution (Years)	BS Cat	RPA Radius (m)	RPA area (m2)
						N	E	S	W							
T60	Prunus avium (Wild Cherry)	SM	280	7(1)	3.5S	4.5	3.5	4.5	4.5	Good	Mower damage to surface roots.		10+	C1	3.4	35
T61	Catalpa bignonioides (Indian Bean Tree)	SM	350	8(1.5)	2	3	5.5	4.5	4	Fair	Minor dead wood. Stem pruning wounds. Historic crown lift.		10+	C1	4.2	55
T62	Liriodendron tulipifera (Tulip Tree)	SM	431	8(1)	2	5	5	5.5	5	Fair	Tight forks between stems. Codominant leaders.		10+	C1	5.2	84
T63	Davidia involucrata (Dove Tree)	SM	198	6.5(1.5)	0.5	4.5	4	4	3	Fair	Minor dead wood. Stem pruning wounds. Historic crown lift.		10+	C1	2.4	18
T64	Quercus rubra (Red Oak)	EM	620	12(0.5)	3E	9	7	10.5	8	Good	Minor dead wood.	Crown lift where necessary to achieve a height clearance of 2.5m over proposed path route.	20+	B1	7.4	174

Tree No.	Tree Species	Life Stage	Stem Ø (mm) at 1.5m	Height (crown height) (m)	Height of (FSB)	Crown Spread				Condition	Comments	Tree Management Recommendations	Est Remaining Contribution (Years)	BS Cat	RPA Radius (m)	RPA area (m2)
						N	E	S	W							
T65	Chamaecyparis lawsoniana (Lawson Cypress)	M	920	20(0)	2W	0	1	6	5	Poor	Main leaders dead, all live growth from low layering branches.	Section fell to ground level.	<10	U	11.0	383
T66	Chamaecyparis lawsoniana (Lawson Cypress)	EM	640	22(1.5)	4N	4	4	5.5	2	Fair	Tag 082.	Remove.	10+	C1	7.7	185
T67	Sequoiadendron giganteum (Giant Sequoia)	M	2100	30(0)	9	7.5	7.5	7.5	7.5	Good			40+	A1	15.0	707
T68	Cedrus deodora "Aurea" (Deodar)	EM	530	14(0.5)	1.5W	5.5	5.5	6.5	6	Fair	Minor dead wood.		10+	C1	6.4	127
T69	Fagus sylvatica f. purpurea (Copper Beech)	SM	220	8(0.5)	1	4.5	4.5	4.5	4.5	Good	Stem diameter estimated. Typical crown form with no major defects.		20+	B1	2.6	22
T70	Pyrus calleryana "Chanticleer" (Chanticleer Pear)	EM	340	10(1)	3.5SW	5	3	3	5	Fair			10+	C1	4.1	52
T71	Pyrus calleryana "Chanticleer" (Chanticleer Pear)	EM	310	9(1)	3E	3	3	3	4.5	Fair			10+	C1	3.7	43
T72	Pyrus calleryana "Chanticleer" (Chanticleer Pear)	EM	280	7(2)	3.5S	3	2.5	2.5	2.5	Fair	Historic upper stem fracture.		10+	C1	3.4	35
G73	Chamaecyparis lawsoniana (Lawson Cypress), Betula pendula (Silver Birch)	SM	170	7(0)		2.5	2.5	2.5	2.5	Good	Planted group of ornamental conifers with a birch in centre.		10+	C2	2.0	13
T74	Cedrus deodora (Deodar)	M	1530	23(2.5)	4	11.5	10	12	11.5	Fair	Stem pruning wounds. Historic crown lift. Old fruiting bodies on ground. Phaeolus schweinitzii (Dyer's Maze Gill).	Monitor; potential stem failure from fungus.	10+	C1	15.0	707

Tree No.	Tree Species	Life Stage	Stem Ø (mm) at 1.5m	Height (crown height) (m)	Height of (FSB)	Crown Spread				Condition	Comments	Tree Management Recommendations	Est Remaining Contribution (Years)	BS Cat	RPA Radius (m)	RPA area (m2)
						N	E	S	W							
T75	Quercus robur (Common Oak)	SM	500	10(1)	2.5E	6	5	7.5	7	Good			20+	B1	6.0	113
T76	Quercus robur (Common Oak)	EM	360	10(1)	2.5E	6.5	6.5	6.5	4	Fair	Large stem wound from limb tearout.		10+	C1	4.3	59
T77	Fagus sylvatica (Common Beech)	EM	690	11(0.5)	2NE	8	8	10	6.5	Good			20+	B1	8.3	215
T78	Larix decidua (European Larch)	SM	290	12(0.5)	2	4	5	4	4.5	Good	Typical crown form with no major defects.		20+	B1	3.5	38
T79	Fagus sylvatica (Common Beech)	SM	290	8(2)	1.5W	4.5	4.5	5	4.5	Good	Stem pruning wounds. Historic crown lift.		20+	B2	3.5	38
T80	Acer platanoides (Norway Maple)	EM	340	7(1)	2.5SE	6.5	6.5	6	6	Fair	Stem pruning wounds. Stem wounds. Historic crown lift. Historic loss of leader at 5m.		10+	C1	4.1	52
T81	Sorbus aucuparia (Rowan)	SM	130	5(2)	2	3	3	3.5	2	Good			10+	C1	1.6	8
T82	Tilia x europaea (Common Lime)	EM	707	17(0)	5	6	6	6	6	Good	Unable to fully inspect - vegetation. Stem diameter estimated. Minor dead wood. Codominant leaders.	Remove.	20+	B1,B2	8.5	226
T83	Corylus avellana "Contorta" (Corkscrew Hazel)	SM	173	6(0.5)		3.5	3	3.5	3	Good		Remove.	10+	C1	2.1	14
T84	Tilia x europaea (Common Lime)	EM	487	13(0)		4.5	5.5	5	6	Fair	Unable to fully inspect - vegetation. Stem diameter estimated. Multi-stemmed from base. Regrowth around remnant of parent stem.		10+	C1	5.8	107

Tree No.	Tree Species	Life Stage	Stem Ø (mm) at 1.5m	Height (crown height) (m)	Height of (FSB)	Crown Spread				Condition	Comments	Tree Management Recommendations	Est Remaining Contribution (Years)	BS Cat	RPA Radius (m)	RPA area (m2)
						N	E	S	W							
T85	Tilia x europaea (Common Lime)	EM	700	17(0)	6SW	5	5	4	5	Good	Unable to fully inspect - vegetation. Stem diameter estimated. Typical crown form with no major defects.		20+	B2	8.4	222
T86	Tilia x europaea (Common Lime)	EM	650	13(0)	5N	4	4.5	3	4	Good	Unable to fully inspect - vegetation. Stem diameter estimated.		20+	B2	7.8	191
T87	Alnus cordata (Italian Alder)	SM	380	14(1)	2	4.5	4	3.5	5	Good	Stem pruning wounds. Historic crown lift.		20+	B1	4.6	65
T88	Aesculus hippocastanum (Horse Chestnut)	SM	280	8(1)	2	6	5	5	5.5	Fair	Basal wounds. Stem pruning wounds. Horse Chestnut Leaf Miner.		10+	C1	3.4	35
T89	Tilia x europaea (Common Lime)	EM	700	24(0.5)	4SW	5.5	6	5	5	Good	Branch pruning wounds. Bird box on stem.		20+	B1,B2	8.4	222
T90	Quercus robur (Common Oak)	M	950	25(3)	7N	4	5.5	11.5	7	Fair	Basal wounds. Stem pruning wounds. Historic crown lift.		20+	B2	11.4	408
T91	Ilex aquifolium (Common Holly)	EM	350	15(0.5)	3	4	4	5	3	Good	Stem pruning wounds. Historic crown lift.	Crown lift where necessary to achieve a height clearance of 2.5m over proposed path route.	20+	B2	4.2	55
T92	Quercus robur (Common Oak)	M	1090	20(1.5)	5	6	4.5	9	9	Fair	Basal wounds. Stem pruning wounds. Stem cavity. Burring around base and on stem. Historic removal of large laterals at 5m.	Crown lift where necessary to achieve a height clearance of 2.5m over proposed path route.	20+	B2	13.1	538

Tree No.	Tree Species	Life Stage	Stem Ø (mm) at 1.5m	Height (crown height) (m)	Height of (FSB)	Crown Spread				Condition	Comments	Tree Management Recommendations	Est Remaining Contribution (Years)	BS Cat	RPA Radius (m)	RPA area (m2)
						N	E	S	W							
T93	Quercus robur (Common Oak)	M	880	22(4)	4	6	5	14	4.5	Fair	Basal wounds. Stem pruning wounds. Branch pruning wounds. Historic crown lift. Sparse crown. Fruiting bodies on stem. Inonotus dryadeus (Eiffel Tower Bracket).		10+	C1	10.6	350
T94	Tilia x europaea (Common Lime)	M	850	23(1)	5SW	6	3	5	6	Good	Stem pruning wounds. Branch pruning wounds.	Crown lift where necessary to achieve a height clearance of 2.5m over proposed path route.	20+	B2	10.2	327

Tree No.	Tree Species	Life Stage	Stem Ø (mm) at 1.5m	Height (crown height) (m)	Height of (FSB)	Crown Spread				Condition	Comments	Tree Management Recommendations	Est Remaining Contribution (Years)	BS Cat	RPA Radius (m)	RPA area (m2)
						N	E	S	W							
T95	Acer platanoides (Norway Maple)	EM	440	12(1.5)	3NW	8	9	5	8	Fair	Minor dead wood. Root girdling. Stem pruning wounds. Branch stubs.	Crown lift where necessary to achieve a height clearance of 2.5m over proposed path route.	10+	C1	5.3	88
G96	Acer pseudoplatanus (Sycamore)	SM	439	13(2)	7E	5	5	5	6	Fair	Largest stem diameter recorded. Self-set. Three trees close together.		10+	C1	5.3	87
G97	x Cupressocyparis leylandii (Leyland Cypress)	SM	300	13(2.5)		3	3	4	3	Good	Stem diameter estimated. Largest stem diameter recorded. Planted as screen. Historic pruning of lower canopy.		10+	C2	3.6	41
T98	Betula pendula (Silver Birch)	EM	410	17(1)	4SW	5	6	4	8	Good	Unable to fully inspect - ivy and vegetation.	Remove.	20+	B2	4.9	76
T99	Betula pendula (Silver Birch)	EM	510	17(2)	4	7	5	4	6	Good	Unable to fully inspect - ivy.	Remove.	20+	B2	6.1	118
G100	Taxus baccata (Common Yew)	EM	415	8(1)		6.5	3	6.5	2	Good	Stem diameter estimated. Largest stem diameter recorded. Historic crown lift.	Remove Section.	20+	B2	5.0	78
T101	Acer pseudoplatanus (Sycamore)	EM	771	15(4)	5	6.5	5	7	8	Good	Stem diameter estimated. Multi-stemmed from base.		20+	B1	9.3	269
G102	Taxus baccata (Common Yew)	SM	200	6(1)		5	2	3	2	Good			10+	C2	2.4	18
T103	Acer pseudoplatanus (Sycamore)	SM	335	8(3)	0.5W	5.5	6	3	4	Fair	Self-set.		10+	C1	4.0	51

Tree No.	Tree Species	Life Stage	Stem Ø (mm) at 1.5m	Height (crown height) (m)	Height of (FSB)	Crown Spread				Condition	Comments	Tree Management Recommendations	Est Remaining Contribution (Years)	BS Cat	RPA Radius (m)	RPA area (m2)
						N	E	S	W							
T104	Acer pseudoplatanus (Sycamore)	EM	520	12(1.5)	4S	0	3	12.5	8.5	Fair	Poor shape & form. Stem leans to south-west.		10+	C1	6.2	122
T105	Acer pseudoplatanus (Sycamore)	SM	300	10(1)	5S	3	4	7	4	Good	Unable to fully inspect - ivy. Stem diameter estimated. Self-set.		10+	C1	3.6	41

Tree No.	Tree Species	Life Stage	Stem Ø (mm) at 1.5m	Height (crown height) (m)	Height of (FSB)	Crown Spread				Condition	Comments	Tree Management Recommendations	Est Remaining Contribution (Years)	BS Cat	RPA Radius (m)	RPA area (m2)
						N	E	S	W							
G106	Taxus baccata (Common Yew)	SM	200	5(1)		4	2	4	2	Good	Stem diameter estimated.	Remove.	10+	C2	2.4	18
G107	Taxus baccata (Common Yew)	SM	173	5(1)		3	1.5	2	2	Good		Remove.	10+	C2	2.1	14
T108	Fraxinus excelsior (Common Ash)	Y	100	7(3.5)	5	1.5	1.5	1.5	1.5	Good			10+	C1	1.2	4
G109	Prunus laurocerasus (Cherry Laurel)	SM	200	4.5(0)		2	2	2	2	Good	Stem diameter estimated.		10+	C2	2.4	5
G110	Prunus laurocerasus (Cherry Laurel)	SM	200	6(0)		2	2	2	2	Good	Stem diameter estimated.	Remove.	10+	C2	2.4	18
T111	Chamaecyparis lawsoniana (Lawson Cypress)	SM	302	10(0)	0.5	3	3.5	3.5	2	Good	Stem diameter estimated. Suppressed form.		10+	C1	3.6	41
T112	Chamaecyparis lawsoniana (Lawson Cypress)	SM	230	8(2)	1.5N	3	2	1	2.5	Good			10+	C1	2.8	24
T113	Tilia x europaea (Common Lime)	EM	700	12(1.5)	3	5	6	6	6	Good	Unable to fully inspect - vegetation. Stem diameter estimated. Multi-stemmed from base.		20+	B1	8.4	222
T114	Malus domestica (Orchard Apple)	M	552	8.5(2)	2	4	6	5	4	Good	Stem wounds. Historic crown lift. Branch stubs.		10+	C3	6.6	138
T115	Pyrus communis (Common Pear)	SM	250	7(1.5)	1NW	2.5	2.5	4	2.5	Fair			10+	C1	3.0	28

Tree No.	Tree Species	Life Stage	Stem Ø (mm) at 1.5m	Height (crown height) (m)	Height of (FSB)	Crown Spread				Condition	Comments	Tree Management Recommendations	Est Remaining Contribution (Years)	BS Cat	RPA Radius (m)	RPA area (m2)
						N	E	S	W							
T116	Malus domestica (Orchard Apple)	SM	230	5(0.5)	3	2.5	3.5	5	1	Fair	Basal wound and cavity. Stem leans to south. Branch pruning wounds. Branch stubs.		10+	C1	2.8	24
T117	Malus domestica (Orchard Apple)	SM	178	4(1.5)	1.5	3	3	1	1.5	Poor	Stem leans to west. Scattered dieback in crown.		10+	C1	2.1	14
T118	Pyrus communis (Common Pear)	EM	210	8(4.5)	2	3	2	2.5	1	Fair		Section fell to ground level.	10+	C1	2.5	20
T119	Malus domestica (Orchard Apple)	M	524	9(0.5)	0.5W	6	5	4	5.5	Fair	Stem pruning wounds. Stem cavity. Branch pruning wounds. Branch stubs.	Remove.	10+	C3	6.3	124
T120	Pyrus communis (Common Pear)	EM	240	10(1.5)	3E	1.5	3	3	1	Good	Stem pruning wounds.		10+	C1	2.9	26
T121	Malus domestica (Orchard Apple)	EM	226	7(1)	1.5N	0.5	3	5	2	Poor	Tight forks between stems. Stem cavity.		10+	C1	2.7	23
G122	Quercus robur (Common Oak), Fraxinus excelsior (Common Ash)	EM	650	15(1.5)		3	6	6	4	Good	Unable to fully inspect - ivy and vegetation. Stem diameter estimated. Largest stem diameter recorded.		20+	B2	7.8	191
T123	Acer pseudoplatanus (Sycamore)	SM	350	10(2)	3.5N	7	5	3	4	Good	Unable to fully inspect - vegetation. Stem diameter estimated. Self-set.		10+	C1	4.2	55
T124	Quercus robur (Common Oak)	SM	320	8(2)	1.5SW	3	5	6	7	Fair	Poor shape & form.		10+	C1	3.8	46
T125	Malus domestica (Orchard Apple)	SM	308	6(1.5)	0.5	6	4	0	3	Poor	In terminal decline. Scattered dieback in crown.		<10	U	3.7	43

Tree No.	Tree Species	Life Stage	Stem Ø (mm) at 1.5m	Height (crown height) (m)	Height of (FSB)	Crown Spread				Condition	Comments	Tree Management Recommendations	Est Remaining Contribution (Years)	BS Cat	RPA Radius (m)	RPA area (m2)
						N	E	S	W							
T126	Populus nigra 'Italica' (Lombardy Poplar)	M	1320	20(7)	6	2.5	4	5	4	Fair	Stem wounds. Possible vertical internal crack east.	Remove.	10+	C1	15.0	707
T127	Taxus baccata (Common Yew)	EM	480	13(2)	0.5E	5	6.5	2	5	Fair	Minor dead wood. Sparse crown.	Section fell to ground level.	10+	C1	5.8	104
T128	Taxus baccata (Common Yew)	EM	573	13(2)	2.5E	4	5	3	6	Fair	Minor dead wood. Scattered browning foliage.	Section fell to ground level.	10+	C1	6.9	149

Tree No.	Tree Species	Life Stage	Stem Ø (mm) at 1.5m	Height (crown height) (m)	Height of (FSB)	Crown Spread				Condition	Comments	Tree Management Recommendations	Est Remaining Contribution (Years)	BS Cat	RPA Radius (m)	RPA area (m2)
						N	E	S	W							
T129	Pinus sylvestris (Scots Pine)	EM	400	14(7)	7	3	2	3	4	Good		Remove.	20+	B2	4.8	72
G130	Quercus robur (Common Oak),Tilia x euchlora (Crimean Lime),Fagus sylvatica (Common Beech),Ilex aquifolium (Common Holly),Prunus laurocerasus (Cherry Laurel),Chamaecyparis lawsoniana (Lawson Cypress),Quercus rubra (Red Oak),Pinus sylvestris (Scots Pine)	EM	400	15(1)		4	4	6	8	Good	Stem diameter estimated.	Remove cherry laurel within building footprint of Garden House. Section fell the three northernmost trees in the group. Grind stumps to a maximum depth of 250mm. Crown lift where necessary to achieve a height clearance of 2.5m over proposed path route.	20+	B2	4.8	72
G131	Taxus baccata (Common Yew),Ilex aquifolium (Common Holly),Pinus sylvestris (Scots Pine),Robinia pseudoacacia (False Acacia),Prunus laurocerasus (Cherry Laurel),Fagus sylvatica f. purpurea (Copper Beech),Acer negundo (Ash-leaved Maple),Acer palmatum (Japanese Maple),Acer cappadocicum (Cappadocian Maple),Ginkgo biloba (Maidenhair Tree)	M	750	18(0.5)		4	4	5	5	Good			20+	B2	9.0	255

Tree No.	Tree Species	Life Stage	Stem Ø (mm) at 1.5m	Height (crown height) (m)	Height of (FSB)	Crown Spread				Condition	Comments	Tree Management Recommendations	Est Remaining Contribution (Years)	BS Cat	RPA Radius (m)	RPA area (m2)
						N	E	S	W							
T132	Taxus baccata (Common Yew)	SM	283	6(0.5)	0.5	4	4.5	4	5	Good	Stem diameter estimated. Multi-stemmed from base.		10+	C1	3.4	36
T133	Castanea sativa (Sweet Chestnut)	M	930	13(6)	3	4.5	3.5	8	2	Fair	Potential bat roost features. Stem wounds. Branch tearout. Woodpecker hole. Historic failure of large lateral.		20+	B3	11.2	391
T134	Pinus strobus (Weymouth Pine)	M	800	25(3)	6NE	6	6	6	6	Poor	In terminal decline. Sparse crown.	Section fell to ground level.	<10	U	9.6	290
T135	Castanea sativa (Sweet Chestnut)	M	640	8(3)	2.5N	4	3	3.5	3.5	Fair	Potential bat roost features. Historic stem fracture, exposed dead heartwood down to 2.5m. Loose bark.		10+	C3	7.7	185
T136	Quercus robur (Common Oak)	SM	230	14(5)	4E	4	6	4	2	Good	Minor dead wood.		10+	C1	2.8	24
T137	Aesculus hippocastanum (Horse Chestnut)	EM	570	15(7)	7NE	5	3	6	6	Fair	Stem pruning wounds. Historic crown lift. Horse Chestnut Leaf Miner.		10+	C1	6.8	147
T138	Tilia x europaea (Common Lime)	EM	630	20(4)	5N	8	6	5	5	Good	Stem pruning wounds. Historic crown lift.		20+	B2	7.6	180
T139	Tilia x europaea (Common Lime)	M	800	20(4)	5S	7	4	5	6	Good	Stem pruning wounds. Historic crown lift.		20+	B2	9.6	290
T140	Acer pseudoplatanus (Sycamore)	SM	270	9(4)	3.5	5	5.5	4	4	Good	Self-set.		10+	C1	3.2	33
T141	Ilex aquifolium (Common Holly)	EM	549	7(3.5)	3SW	5	4.5	6.5	5	Fair	Poor pruning wounds. Multi-stemmed from base. Historic crown lift.		10+	C1	6.6	136

Tree No.	Tree Species	Life Stage	Stem Ø (mm) at 1.5m	Height (crown height) (m)	Height of (FSB)	Crown Spread				Condition	Comments	Tree Management Recommendations	Est Remaining Contribution (Years)	BS Cat	RPA Radius (m)	RPA area (m2)
						N	E	S	W							
T142	Quercus robur (Common Oak)	SM	510	14(7)	4SW	7	6.5	6.5	9	Fair	Poor pruning wounds. Minor dead wood. Branch stubs. Adventitious growth on branches.		10+	C1	6.1	118
T143	Quercus robur (Common Oak)	SM	440	14(6)	6SW	5	6.5	5.5	5	Good			20+	B2	5.3	88
T144	Tilia x euchlora (Crimean Lime)	SM	260	13(3.5)	3.5	4	4	4	4	Good			20+	B2	3.1	31
G145	Aesculus hippocastanum (Horse Chestnut), Chamaecyparis lawsoniana (Lawson Cypress), Tilia x europaea (Common Lime), Rhododendron ponticum (Rhododendron)	SM	210	10(3)		3	3	3.5	3	Good			20+	C2	2.5	20
T146	Tilia x europaea (Common Lime)	EM	650	16(4.5)	4SE	5	5	6.5	5	Good	Unable to fully inspect - vegetation. Stem diameter estimated.		20+	B2	7.8	191
T147	Aesculus hippocastanum (Horse Chestnut)	M	550	15(4)	7NE	5	7	4	3	Poor	Unable to fully inspect - vegetation. Stem diameter estimated. In terminal decline. Historic crown reduction. Sparse crown. Horse Chestnut Leaf Miner.		<10	U	6.6	137
T148	Tilia x europaea (Common Lime)	EM	600	17(7)	9	5	5	5	5	Good	Unable to fully inspect - vegetation. Stem diameter estimated.		20+	B2	7.2	163
T149	Quercus robur (Common Oak)	EM	640	16(4)	5S	5.5	8	8.5	8	Good	Minor dead wood.		20+	B2	7.7	185
T150	Tilia x euchlora (Crimean Lime)	SM	300	11(3)	3NE	5	5	5	5	Good			20+	B2	3.6	41

Tree No.	Tree Species	Life Stage	Stem Ø (mm) at 1.5m	Height (crown height) (m)	Height of (FSB)	Crown Spread				Condition	Comments	Tree Management Recommendations	Est Remaining Contribution (Years)	BS Cat	RPA Radius (m)	RPA area (m2)
						N	E	S	W							
T151	Quercus robur (Common Oak)	EM	590	22(8)	6SW	5	9	11	6	Fair	Minor dead wood. Adventitious growth on branches.		10+	C1	7.1	158
T152	Sequoiadendron giganteum (Giant Sequoia)	M	1530	30(4)	8SW	5	5.5	7	7	Fair	Sparse crown.		20+	B1,B2	15.0	707
T153	Sequoiadendron giganteum (Giant Sequoia)	M	1700	30(2)	7	5.5	5.5	7	5.5	Good	Stem diameter estimated.		40+	A1,A2	15.0	707
T154	Fagus sylvatica (Common Beech)	EM	550	13(2)	2SW	5	6	6	8	Good	Stem pruning wounds. Branch pruning wounds. Branch stubs.		20+	B2	6.6	137
T155	Quercus robur (Common Oak)	EM	640	17(1)	5SE	5	8	8	7	Good	Historic crown lift.		20+	B2	7.7	185
T156	Tilia x euchlora (Crimean Lime)	SM	330	9(2)	2SW	5	5.5	5.5	5.5	Good	Poor pruning wounds. Historic crown lift.		20+	B2	4.0	49
T157	Tilia x euchlora (Crimean Lime)	SM	340	10(2.5)	2SE	5	6	6	7	Good	Poor pruning wounds. Historic crown lift.		20+	B2	4.1	52
T158	Tilia x europaea (Common Lime)	M	760	20(4)	5	5	3.5	5	5	Good	Historic crown lift.		20+	B2	9.1	261
T159	Aesculus hippocastanum (Horse Chestnut)	M	770	20(3)	2.5	7	7.5	8	5	Good	Stem pruning wounds. Horse Chestnut Leaf Miner.		10+	C1	9.2	268
T160	Fagus sylvatica f. purpurea (Copper Beech)	SM	250	13(2.5)	2S	5	5	5	5	Good			20+	B2	3.0	28

Tree No.	Tree Species	Life Stage	Stem Ø (mm) at 1.5m	Height (crown height) (m)	Height of (FSB)	Crown Spread				Condition	Comments	Tree Management Recommendations	Est Remaining Contribution (Years)	BS Cat	RPA Radius (m)	RPA area (m2)
						N	E	S	W							
T161	Tilia x europaea (Common Lime)	EM	420	15(2.5)	2S	5	5	6	6	Good			20+	B2	5.0	80
T162	Tilia x europaea (Common Lime)	SM	280	12(2.5)	3.5SW	3	5	5	3	Fair	Suppressed form.		10+	C1	3.4	35
T163	Tilia x europaea (Common Lime)	M	660	17(4)	4SW	5	5.5	6	5	Good	Minor dead wood.		20+	B2	7.9	197
T164	Betula pendula (Silver Birch)	SM	262	10(5)	5	4	5	3	4.5	Good	Unable to fully inspect - vegetation. Stem diameter estimated. Multi-stemmed from base.		20+	B2	3.1	31
T165	Fagus sylvatica (Common Beech)	EM	410	14(3)	4SW	3.5	3.5	5	5.5	Good			20+	B2	4.9	76
T166	Fagus sylvatica (Common Beech)	EM	360	16(5)	4.5S	4.5	5	5	5	Good			20+	B2	4.3	59
T167	Fagus sylvatica (Common Beech)	SM	300	16(5)	6NE	5.5	5	5	4	Good			20+	B2	3.6	41
G168	Tilia x europaea (Common Lime), Chamaecyparis lawsoniana (Lawson Cypress), Taxus baccata (Common Yew), Betula pendula (Silver Birch), Castanea sativa (Sweet Chestnut), Prunus laurocerasus (Cherry Laurel)	M	400	18(1)		3	3	3	3	Good			20+	B2	4.8	72

Tree No.	Tree Species	Life Stage	Stem Ø (mm) at 1.5m	Height (crown height) (m)	Height of (FSB)	Crown Spread				Condition	Comments	Tree Management Recommendations	Est Remaining Contribution (Years)	BS Cat	RPA Radius (m)	RPA area (m2)
						N	E	S	W							
G169	Acer pseudoplatanus (Sycamore), Platanus x hispanica (London Plane), Fagus sylvatica (Common Beech), Pinus sylvestris (Scots Pine)	EM	300	15(1)	1	3	2	3	3	Good		Crown lift where necessary to achieve a height clearance of 2.5m over proposed path route.	20+	B2	3.6	41
T170	Salix x sepulcralis "Chrysocoma" (Weeping Willow)	M	770	6(0)	3	5	7	4	4	Poor	Stem leans to north-east. Historic branch fracture, large stem wounds. Tag 0625.		10+	C1	9.2	268
T171	Fraxinus excelsior (Common Ash)	EM	566	18(1)	6SW	6	7	8	6	Fair	Stem diameter estimated. Minor dead wood. Situated on edge of pond.		10+	C1	6.8	145
T172	Catalpa bignonioides (Indian Bean Tree)	EM	570	10(0)	1.5E	8	7.5	10	6.5	Good	Minor dead wood.		20+	B1	6.8	147
G173	Picea abies (Norway Spruce)	SM	280	15(1)		4	4	4	4	Good	Stem diameter estimated. Trees situated west of watercourse.		20+	B2	3.4	35
T174	Quercus robur (Common Oak)	EM	780	14(0.5)	5SE	6	7	9	8	Good		Crown lift where necessary to achieve a height clearance of 2.5m over proposed path route.	20+	B2	9.4	275
T175	Fagus sylvatica (Common Beech)	EM	710	17(2)	7	6	7	10	7	Good		Crown lift where necessary to achieve a height clearance of 2.5m over proposed path route.	20+	B2	8.5	228

Tree No.	Tree Species	Life Stage	Stem Ø (mm) at 1.5m	Height (crown height) (m)	Height of (FSB)	Crown Spread				Condition	Comments	Tree Management Recommendations	Est Remaining Contribution (Years)	BS Cat	RPA Radius (m)	RPA area (m2)
						N	E	S	W							
T176	Acer platanoides (Norway Maple)	SM	280	7(1)	1N	3	6	7	5	Fair	Squirrel damage in crown. Suppressed form.		10+	C1	3.4	35
T177	Prunus sp. (Japanese Cherry)	M	520	6(1)	1.5	5.5	6	6	6	Fair	Root girdling. Mower damage to surface roots. Fruiting bodies on stem. Ganoderma australe (Southern Bracket).	Remove.	<10	U	6.2	122
T178	Laburnum anagyroides (Common Laburnum)	EM	348	7.5(1)	1.5	4	6.5	5	6.5	Fair	Multi-stemmed from base. Stem wounds. Stem cavity.		10+	C1	4.2	55
T179	Malus sp. (Apple)	EM	210	2.5(0.5)	1.5	2	3.5	3	1.5	Fair	Minor dead wood. Stem wounds. Suppressed. Weeping form.		10+	C1	2.5	20
T180	Laburnum anagyroides (Common Laburnum)	EM	293	5(1)	0.5	3	5	3	1	Fair	Stem diameter estimated. Suppressed form. Historic uprooting, vertical stem to east.		10+	C1	3.5	39
G181	Fagus sylvatica (Common Beech), Taxus baccata (Common Yew), Chamaecyparis lawsoniana (Lawson Cypress)	EM	600	15(1)		5	5	5	5	Good	Unable to fully inspect - vegetation. Stem diameter estimated. Largest stem diameter recorded.		20+	B2	7.2	163

Tree No.	Tree Species	Life Stage	Stem Ø (mm) at 1.5m	Height (crown height) (m)	Height of (FSB)	Crown Spread				Condition	Comments	Tree Management Recommendations	Est Remaining Contribution (Years)	BS Cat	RPA Radius (m)	RPA area (m2)
						N	E	S	W							
T182	Acer platanoides (Norway Maple)	SM	220	6(1.5)	2NW	4	5.5	6.5	5.5	Fair	Branch tearout. Broken branches in crown. Squirrel damage in crown.		10+	C1	2.6	22
T183	Tilia x europaea (Common Lime)	SM	260	8(1)	3	4.5	4.5	4.5	4.5	Good		Crown lift where necessary to achieve a height clearance of 2.5m over proposed path route.	20+	B1	3.1	31
T184	Acer pseudoplatanus (Sycamore)	SM	377	8(1)	3	3	4	4	4	Good	Stem diameter estimated. Self-set. Multi-stemmed from base.	Crown lift where necessary to achieve a height clearance of 2.5m over proposed path route.	10+	C1	4.5	64
T185	Alnus glutinosa (Common Alder)	SM	300	10(2)	2.5	4	4	4	5	Good	Unable to fully inspect - vegetation. Stem diameter estimated.	Crown lift where necessary to achieve a height clearance of 2.5m over proposed path route.	20+	B1	3.6	41
T186	Acer negundo (Ash-leaved Maple)	SM	320	10(2)	2W	5	2	4	7.5	Fair		Crown lift where necessary to achieve a height clearance of 2.5m over proposed path route.	10+	C1	3.8	46
T187	Acer negundo (Ash-leaved Maple)	SM	292	8(1)	2	7	5	3	8	Fair	Multi-stemmed from base. Historic crown lift.	Crown lift where necessary to achieve a height clearance of 2.5m over proposed path route.	10+	C1	3.5	38
T188	Abies nordmanniana (Caucasian Fir)	EM	550	19(11)	12	3.5	4	3.5	3.5	Good	Historic crown lift.		20+	B2	6.6	137
T189	Ilex aquifolium (Common Holly)	SM	406	10(2)	2.5	3.5	4.5	4	4.5	Good	Recent crown lift.		20+	B2	4.9	75

Tree No.	Tree Species	Life Stage	Stem Ø (mm) at 1.5m	Height (crown height) (m)	Height of (FSB)	Crown Spread				Condition	Comments	Tree Management Recommendations	Est Remaining Contribution (Years)	BS Cat	RPA Radius (m)	RPA area (m2)
						N	E	S	W							
T190	Fagus sylvatica f. purpurea (Copper Beech)	SM	230	11(2.5)	3	3	4	3	3	Good	Recent crown lift.		20+	B2	2.8	24

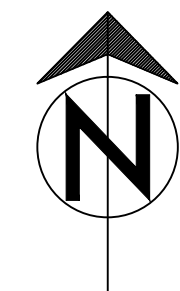
Tree No.	Tree Species	Life Stage	Stem Ø (mm) at 1.5m	Height (crown height) (m)	Height of (FSB)	Crown Spread				Condition	Comments	Tree Management Recommendations	Est Remaining Contribution (Years)	BS Cat	RPA Radius (m)	RPA area (m2)
						N	E	S	W							
T191	Fraxinus excelsior (Common Ash)	EM	380	15(5)		6	6	6	6	Good	Minor dead wood.		20+	B2	4.6	65
T192	Taxus baccata (Common Yew)	EM	370	7(2)	2	4	7	5.5	7	Good	Historic crown lift.		10+	C1	4.4	62
T193	Betula pendula (Silver Birch)	EM	376	8(3.5)	2.5W	4	3	4	5	Good			20+	B2	4.5	64
T194	Betula pendula (Silver Birch)	EM	410	9(2.5)	3	4	4	3	3	Poor	Sparse upper crown, chlorotic foliage.		10+	C1	4.9	76
T195	Betula pendula (Silver Birch)	EM	290	8(1.5)	2W	3	4	2	0	Fair	Poor shape & form.		10+	C1	3.5	38
T196	Aesculus hippocastanum (Horse Chestnut)	M	1110	15(2.5)	3SW	6	6	8	6	Good	Branch pruning wounds. Horse Chestnut Leaf Miner. Recent crown lift.		20+	B1	13.3	557
T197	Quercus robur (Common Oak)	EM	650	13(5)	6	4	4	5	6	Good	Historic crown lift.		20+	B2	7.8	191
T198	Fraxinus excelsior (Common Ash)	EM	438	15(2.5)	2.5E	5	5	5	4	Good	Multi-stemmed from base.		20+	B2	5.3	87
T199	Aesculus hippocastanum (Horse Chestnut)	M	830	13(1)	4E	7.5	8	6	6	Good	Horse Chestnut Leaf Miner.		20+	B2	10.0	312
T200	Quercus robur (Common Oak)	EM	640	12(4)	4	6	3	4	5	Fair	Potential bat roost features. Stem wounds. Stem cavity. Historic crown reduction. Sparse crown.		10+	C3	7.7	185

APPENDIX 2: JBA DRAWINGS

REFER TO SOFT LANDSCAPE
PROPOSAL FOR SURFACE
MATERIAL

KEY

- T1 Existing Tree or Group colour referenced in accordance with BS 5837:2012 as shown below
- G1 Existing hedge or group colour coded as above in accordance with BS 5837.
- Green - Category A tree of high quality and value.
- Blue - Category B tree of moderate quality and value.
- Grey - Category C tree of low quality and value.
- Red - Category U tree in irreversible decline or dead.
- Blue - Cat B Groups/hedges of moderate quality and value.
- Grey - Cat C Groups/hedges of low quality and value.
- Root Protection Area as calculated in accordance with BS 5837:2012
- Approximate line of protective fencing to be erected in accordance with BS 5837 and insert, to be maintained throughout demolition and construction works.
- No dig construction of parking spaces and driveways.
- Area of construction to be supervised by project arboriculturist. Various works within Construction Exclusion Zone (CEZ). Access or work in this area to conform to accompanying report.



GENERAL NOTES
ALL DIMENSIONS IN MILLIMETRES
DO NOT SCALE OFF THIS DRAWING
ALL DIMENSIONS TO BE CHECKED ON SITE
JAMES BLAKE ASSOCIATES LTD 2020

1	20/03/2020	1	10/03/2020	1	10/03/2020	1	10/03/2020	1	10/03/2020
2	20/03/2020	2	10/03/2020	2	10/03/2020	2	10/03/2020	2	10/03/2020
3	20/03/2020	3	10/03/2020	3	10/03/2020	3	10/03/2020	3	10/03/2020
4	20/03/2020	4	10/03/2020	4	10/03/2020	4	10/03/2020	4	10/03/2020
5	20/03/2020	5	10/03/2020	5	10/03/2020	5	10/03/2020	5	10/03/2020
6	20/03/2020	6	10/03/2020	6	10/03/2020	6	10/03/2020	6	10/03/2020
7	20/03/2020	7	10/03/2020	7	10/03/2020	7	10/03/2020	7	10/03/2020
8	20/03/2020	8	10/03/2020	8	10/03/2020	8	10/03/2020	8	10/03/2020
9	20/03/2020	9	10/03/2020	9	10/03/2020	9	10/03/2020	9	10/03/2020
10	20/03/2020	10	10/03/2020	10	10/03/2020	10	10/03/2020	10	10/03/2020
11	20/03/2020	11	10/03/2020	11	10/03/2020	11	10/03/2020	11	10/03/2020
12	20/03/2020	12	10/03/2020	12	10/03/2020	12	10/03/2020	12	10/03/2020
13	20/03/2020	13	10/03/2020	13	10/03/2020	13	10/03/2020	13	10/03/2020
14	20/03/2020	14	10/03/2020	14	10/03/2020	14	10/03/2020	14	10/03/2020
15	20/03/2020	15	10/03/2020	15	10/03/2020	15	10/03/2020	15	10/03/2020
16	20/03/2020	16	10/03/2020	16	10/03/2020	16	10/03/2020	16	10/03/2020
17	20/03/2020	17	10/03/2020	17	10/03/2020	17	10/03/2020	17	10/03/2020
18	20/03/2020	18	10/03/2020	18	10/03/2020	18	10/03/2020	18	10/03/2020
19	20/03/2020	19	10/03/2020	19	10/03/2020	19	10/03/2020	19	10/03/2020
20	20/03/2020	20	10/03/2020	20	10/03/2020	20	10/03/2020	20	10/03/2020
21	20/03/2020	21	10/03/2020	21	10/03/2020	21	10/03/2020	21	10/03/2020
22	20/03/2020	22	10/03/2020	22	10/03/2020	22	10/03/2020	22	10/03/2020
23	20/03/2020	23	10/03/2020	23	10/03/2020	23	10/03/2020	23	10/03/2020
24	20/03/2020	24	10/03/2020	24	10/03/2020	24	10/03/2020	24	10/03/2020
25	20/03/2020	25	10/03/2020	25	10/03/2020	25	10/03/2020	25	10/03/2020
26	20/03/2020	26	10/03/2020	26	10/03/2020	26	10/03/2020	26	10/03/2020
27	20/03/2020	27	10/03/2020	27	10/03/2020	27	10/03/2020	27	10/03/2020
28	20/03/2020	28	10/03/2020	28	10/03/2020	28	10/03/2020	28	10/03/2020
29	20/03/2020	29	10/03/2020	29	10/03/2020	29	10/03/2020	29	10/03/2020
30	20/03/2020	30	10/03/2020	30	10/03/2020	30	10/03/2020	30	10/03/2020
31	20/03/2020	31	10/03/2020	31	10/03/2020	31	10/03/2020	31	10/03/2020
32	20/03/2020	32	10/03/2020	32	10/03/2020	32	10/03/2020	32	10/03/2020
33	20/03/2020	33	10/03/2020	33	10/03/2020	33	10/03/2020	33	10/03/2020
34	20/03/2020	34	10/03/2020	34	10/03/2020	34	10/03/2020	34	10/03/2020
35	20/03/2020	35	10/03/2020	35	10/03/2020	35	10/03/2020	35	10/03/2020
36	20/03/2020	36	10/03/2020	36	10/03/2020	36	10/03/2020	36	10/03/2020
37	20/03/2020	37	10/03/2020	37	10/03/2020	37	10/03/2020	37	10/03/2020
38	20/03/2020	38	10/03/2020	38	10/03/2020	38	10/03/2020	38	10/03/2020
39	20/03/2020	39	10/03/2020	39	10/03/2020	39	10/03/2020	39	10/03/2020
40	20/03/2020	40	10/03/2020	40	10/03/2020	40	10/03/2020	40	10/03/2020
41	20/03/2020	41	10/03/2020	41	10/03/2020	41	10/03/2020	41	10/03/2020
42	20/03/2020	42	10/03/2020	42	10/03/2020	42	10/03/2020	42	10/03/2020
43	20/03/2020	43	10/03/2020	43	10/03/2020	43	10/03/2020	43	10/03/2020
44	20/03/2020	44	10/03/2020	44	10/03/2020	44	10/03/2020	44	10/03/2020
45	20/03/2020	45	10/03/2020	45	10/03/2020	45	10/03/2020	45	10/03/2020
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JAMES BLAKE ASSOCIATES
LANDSCAPE ARCHITECTURE • ARBORICULTURE • ECOLOGY
Head Office: 34-32 Old Wokingham, Bury St Edmunds, Suffolk, IP31 3PA Tel: 01546 335797
Email: james@jamesblake.co.uk www.jamesblake.co.uk

 T1 Existing Tree or Group colour referenced in accordance with
 G1 BS 5837:2012 as shown below

Existing hedge or group colour coded as above in accordance with BS 5837.

 Green - Category A tree of high quality and value.

Blue - Category B tree of moderate quality and value.

Grey - Category C tree of low quality and value.

Red - Category U tree in irreversible decline or dead.

☐ Blue - Cat B Groups/hedges of moderate quality and value.

Grey - Cat C Groups/hedges of low quality and value.

Root Protection Area as calculated in accordance with BS 5837:2012

 Approximate line of protective fencing to be erected in accordance with BS 5837 and insert, to be maintained throughout demolition and construction works.

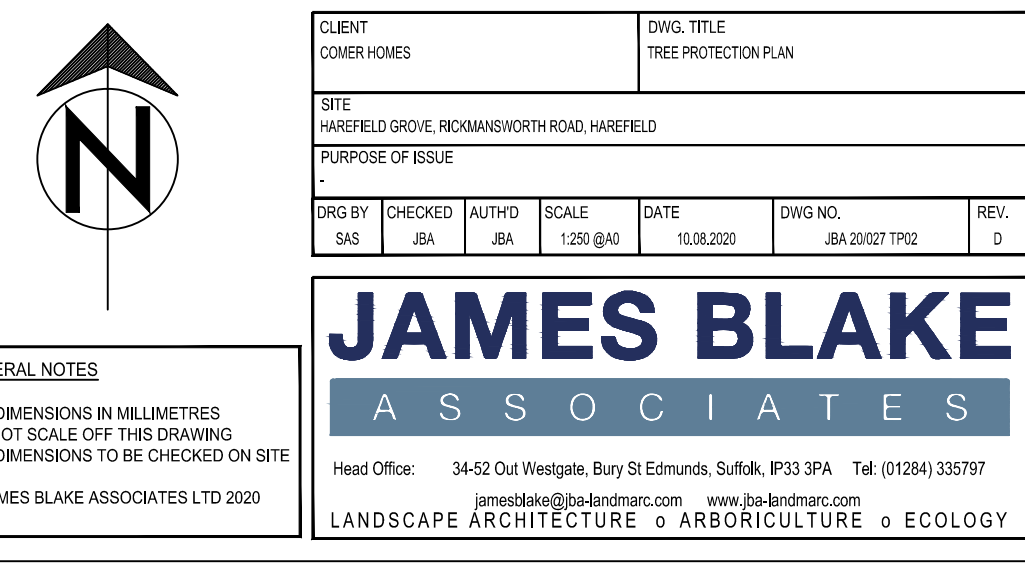
 No dig construction of parking spaces and driveways.

 Area of construction to be supervised by project arboriculturist. Various works within Construction Exclusion Zone (CEZ). Access or work in this area to conform to accompanying report.

[illegible]

KEY	
BT	British Telecom
BOL	Bolton
CB	Control Box
CB	Cover Level
CCTV	Cable Television
CHC	Chronic
EP	Electricity Pole
FSH	Fire Hydrant
HT	Gas Stop Valve
HVC	High Voltage Cable
IL	Insulation Cover
LD	Lamp Post
LI	Light
MKR	Marker
MW	Monitoring Well
OWH	Overhead
G	Ground Gully
PS	Post Box
RNP	Road Name Plate
SK	Seakewalk
SIA	Stay / Strut
ST	Stop Valve (Unidentified)
TW	Telephone Box
TC	Telecom
TH	Trail Hole
TLF	Traffic Light
TP	Telephone Pole
UTL	Underpass in Lark
V	Vent pipe
WM	Water Meter
WSV	Water Stop Valve

FENCES	
BWF	Barbed Wire Fence
CBF	Closed Board Fence
CP	Concrete Post
CPF	Chastnut Piling Fence
CWF	Chicken Wire Fence
IRF	Iron Picket Fence
PKF	Picket Fence
PRF	Post & Rail Fence
RWF	Post & Wire Fence
SCF	Security Fence
SD	Steel Post
WMF	Wire Mesh Fence
WPF	Wood Panel Fence



KEY

- T1 Existing Tree or Group colour referenced in accordance with
 G1 BS 5837:2012 as shown below

 Existing hedge or group colour coded as above in accordance with BS 5837.

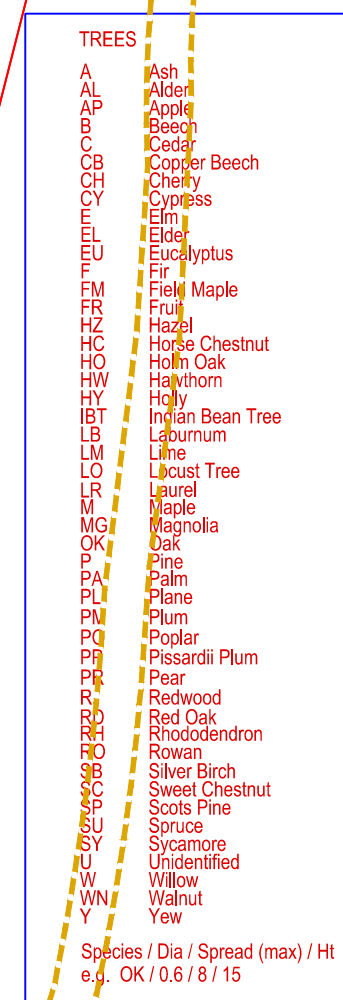
-  Green - Category A tree of high quality and value.
-  Blue - Category B tree of moderate quality and value.
-  Grey - Category C tree of low quality and value.
-  Red - Category U tree in irreversible decline or dead.

☐ Blue - Cat B Groups/hedges of moderate quality and value.

Grey - Cat C Groups/hedges of low quality and value.

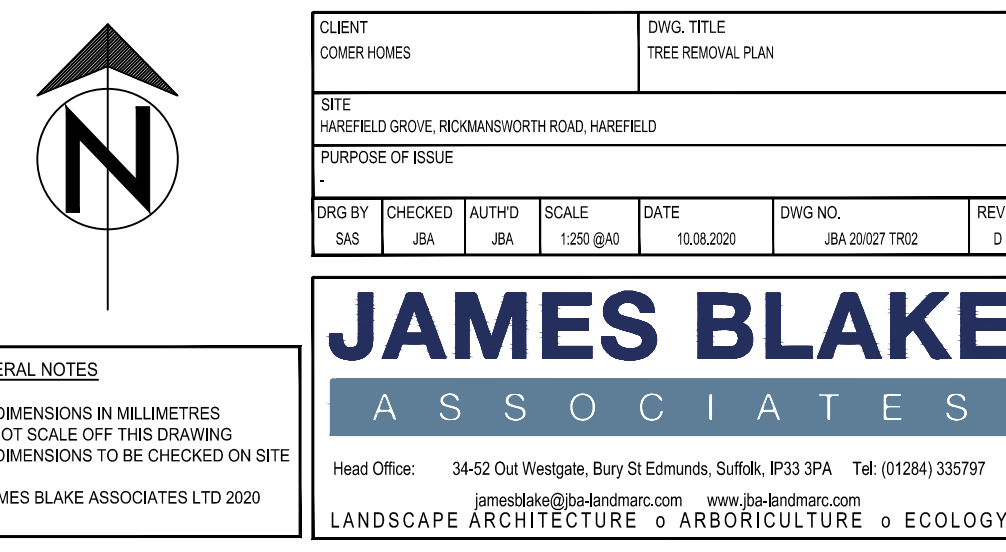
Root Protection Area as calculated in accordance with BS 5837:2012

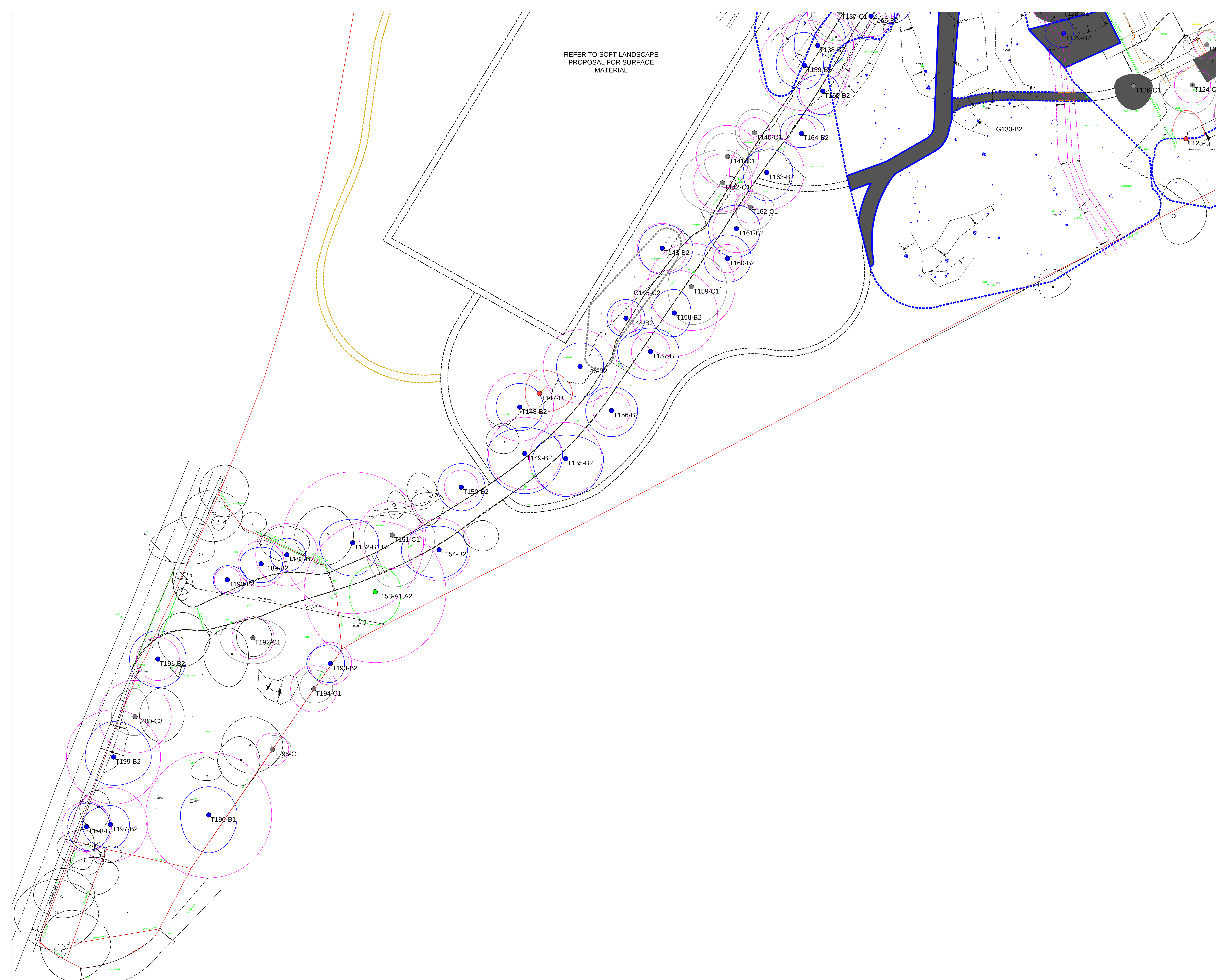
Shaded groups/hedges/trees to be removed



- | KEY | |
|-----|---------------------------|
| BT | British Telecom |
| BSL | Bollard |
| CB | Control Box |
| CL | Cover Level |
| CTV | Cable Television |
| EP | Electric |
| EPF | Electricity Pole |
| FI | Fire Hydrant |
| GSV | Gas Stop Valve |
| HT | Height |
| HVC | High Voltage Cable |
| I | Inspection Cover |
| L | Level |
| LP | Lint Level |
| NH | North Post |
| MS | Man-hole |
| MKR | Marker |
| MMR | Monitoring Wall |
| OH | Overhead |
| P | Road Gully |
| PC | Post Box |
| PR | Pitman Crossing |
| RNP | Road Name Plate |
| RSP | Road Sign |
| SS | Sewerage |
| ST | Stop / Shunt |
| SV | Stop Valve (Unidentified) |
| TB | Telephone Box |
| TC | Telecom |
| TH | Tree Hole |
| TL | Traffic Light |
| TP | Topograph Pole |
| UL | Unclassified to LIT |
| UTV | Vent pipe |
| WM | Water Meter |
| WSV | Water Stop Valve |

- | FENCES | |
|--------|-----------------------|
| BWF | Barbed Wire Fence |
| CBF | Closed Board Fence |
| CP | Concrete Post |
| CPF | Chestnut Paling Fence |
| CWF | Chicken Wire Fence |
| IRF | Iron Rolling Fence |
| PKF | Picket Fence |
| PRF | Post & Rail Fence |
| PWF | Post & Wire Fence |
| SCF | Security Fence |
| SP | Shall Post |
| WMF | Wire Mesh Fence |
| WPF | Wood Panel Fence |





KEY

- | | |
|---|---|
| T1 | Existing Tree or Group colour referenced in accordance with BS 5837:2012 as shown below |
| G1 | |
|  | Existing hedge or group colour coded as above in accordance with BS 5837. |
|  | Green - Category A tree of high quality and value. |
|  | Blue - Category B tree of moderate quality and value. |
|  | Grey - Category C tree of low quality and value. |
|  | Red - Category U tree in irreversible decline or dead. |
|  | Blue - Cat B Groups/hedges of moderate quality and value. |
|  | Grey - Cat C Groups/hedges of low quality and value. |
|  | Root Protection Area as calculated in accordance with BS 5837:2012 |
|  | Shaded groups/hedges/trees to be removed |



GENERAL NOTES
-ALL DIMENSIONS IN MILLIMETERS
-DO NOT SCALE OFF THIS DRAWING
-ALL DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR
(C) JAMES BLAKE ASSOCIATES

[illegible]

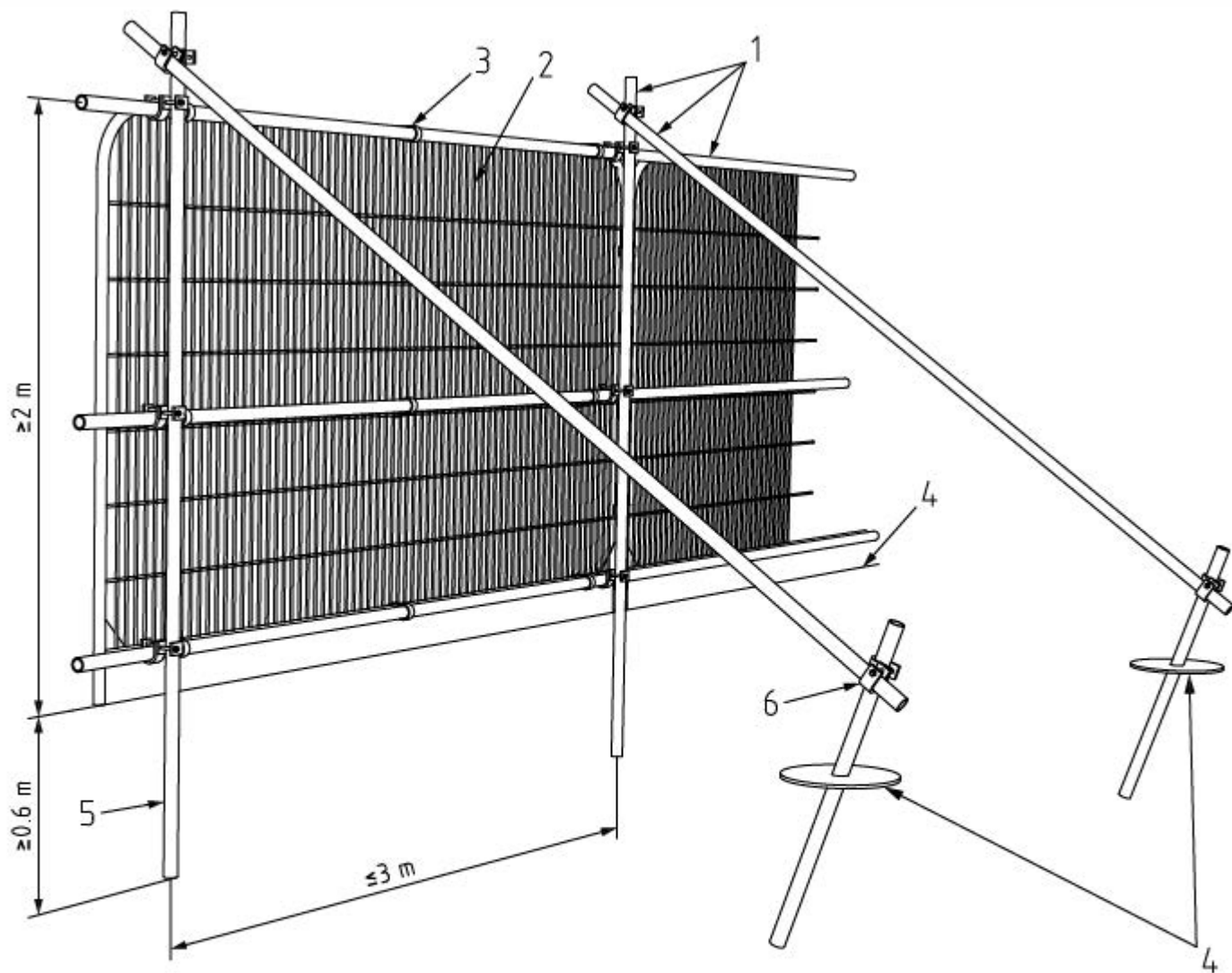
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Head Office: 34-52 Out Westgate, Bury St Edmunds, Suffolk, IP33 3PA Tel: (01284) 335757
james@isa-landscape.com www.isa-landscape.com
 LANDSCAPE ARCHITECTURE • ARBORICULTURE • ECOLOGY

Clarke = 26/05/2015 = K:\BA\Client Projects\Foner, Hones\20 027 Horsefield Grove\Drawings\BA\Master\Arb\IPs\20-027 TPP & Topo.dwg

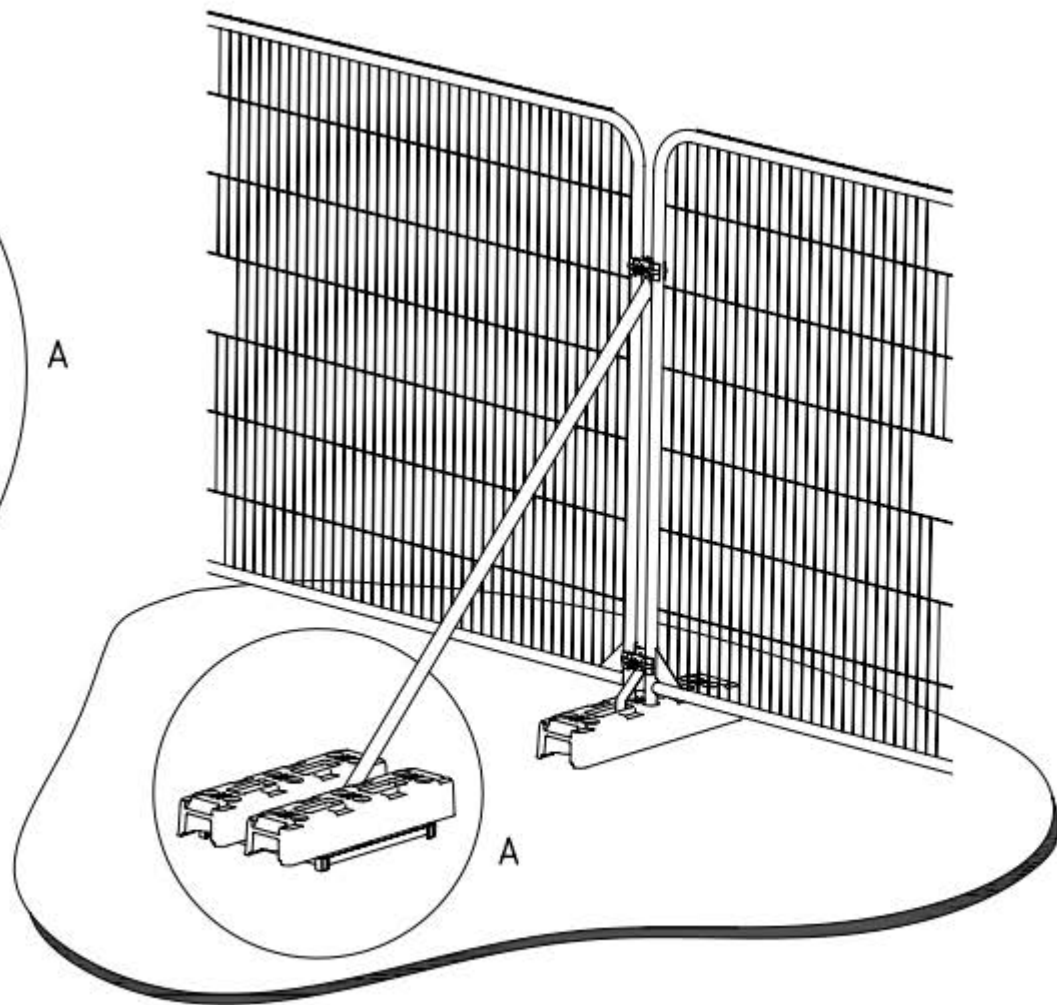
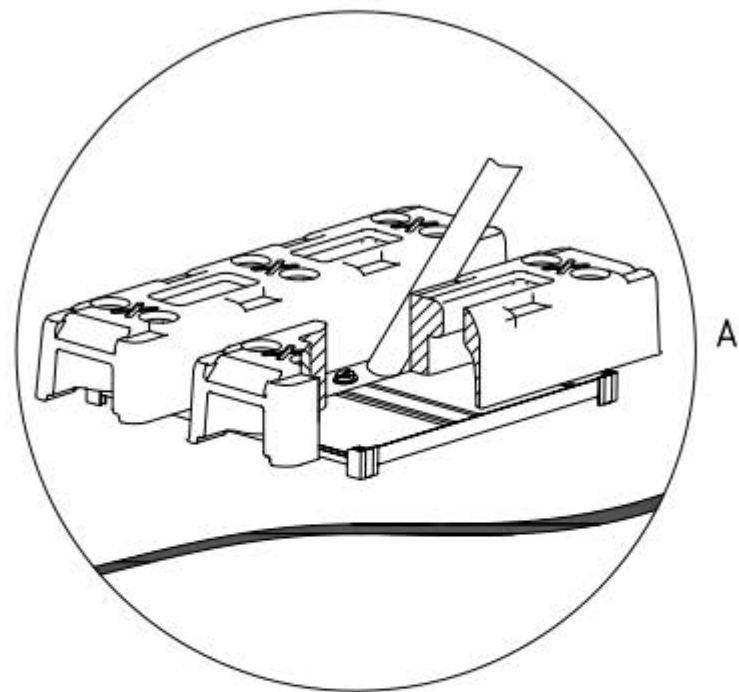
APPENDIX 3: PROTECTIVE FENCING SPECIFICATION

Figure 2 Default specification for protective barrier



Key

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



b) Stabilizer strut mounted on block tray

APPENDIX 4: PROTECTIVE FENCING SIGNAGE



TREE PROTECTION AREA **KEEP OUT!**

**NO WORKS TO BE CARRIED OUT IN THIS AREA WITHOUT PRIOR
AGREEMENT OF THE LOCAL AUTHORITY OR APPOINTED
ARBORICULTURAL CONSULTANT**

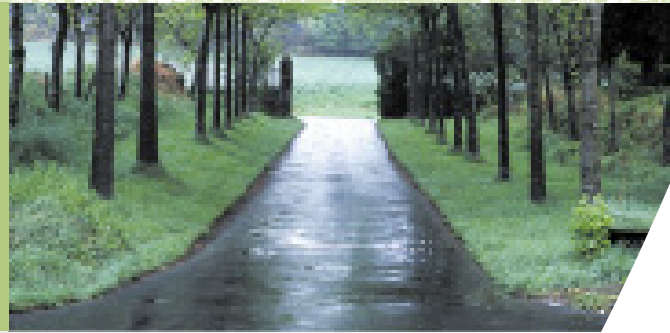
JAMES BLAKE
A S S O C I A T E S

Tel 01284 335797 www.jba-landmarc.com

APPENDIX 5: CELLULAR CONFINEMENT SYSTEM



CellWeb TRP®



Tree Root Protection Guaranteed



Geosynthetic

www.geosyn.co.uk

CellWeb TRP® System

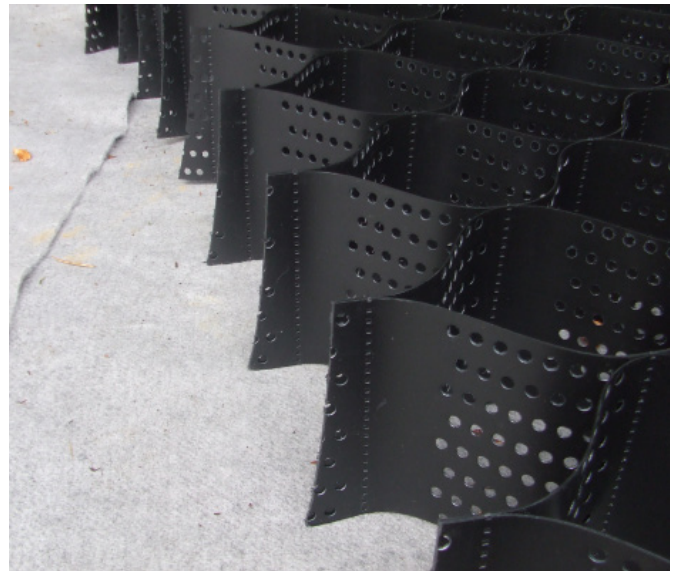
Tree Root Protection System



The Consequences Of Tree Root Damage During Construction

It is an offence to cut down, lop, uproot, top, wilfully damage or destroy a protected tree without authorisation. Trees can be protected under the Town and Country Planning Act 1990 and the Town and Country Planning (Trees) Regulations 1999. Trees are protected when they are the subject of Tree Preservation Orders (T.P.O) or within Conservation Areas, subject to certain exemptions. Retention and protection of trees on development sites is also secured through the use of planning conditions.

On a construction site all trees with a Tree Preservation Orders need to be managed in accordance with BS5837 2012 (Trees in relation to construction); failure to comply with these orders can be a costly affair as many parties have discovered.



Fishponds, Ketton

There are two offences which apply equally to trees protected by Tree Preservation Orders and those within Conservation Areas:

- Firstly, anyone who cuts down, uproots or wilfully destroys a tree, or who lops, tops or wilfully damages it in a way that is likely to destroy it is liable, if convicted in the Magistrates Court, to pay a fine of up to £20,000. If the person is committed for trial in the Crown Court, they are liable on conviction to an unlimited fine. The Courts have held that it is not necessary for a tree to be obliterated for it to be “destroyed” for the purposes of the legislation. It is sufficient for the tree to have been rendered useless as an amenity.
- Secondly, anyone who carries out works on a tree that are not likely to destroy it is liable, if convicted in the Magistrates Court, to a fine of up to £2,500. In addition to directly carrying out unauthorised works on protected trees, it is an offence to cause or permit such works.

Developers and building contractors are often completely unaware that ‘compaction of soils within the Root Protection Area (RPA)’ constitutes wilful damage to the tree. When vehicular or pedestrian access within the RPA is necessary, either for the construction operation or final site access, the effects of this activity must be addressed and the ground must be protected. When tracked or wheeled traffic movements are involved, the ground protection system should be designed by an engineer and take into account the loading involved.



Shelton Road, Shewsbury

The Solution:

Geosynthetics CellWeb TRP® System



The Solution According to BS 5837:2012

“Appropriate sub-base options for new hard surfacing include three-dimensional cellular confinement systems

(BS 5837 2012 section 7.4.2 Note 1)

The CellWeb TRP® Solution

CellWeb TRP® is the market leader in the United Kingdom and Ireland for tree root protection. CellWeb TRP® cellular confinement system protects tree roots from the damaging effects of compaction and desiccation, while creating a stable, load bearing surface for vehicular traffic. CellWeb TRP® complies with BS 5837:2012 and APN 12. It provides a no-dig solution, is tried and tested having been used successfully since 1998. It is the only tree root protection system which has been independently tested and it is the only tree root protection system which is guaranteed for 20 years. See page 6 for the full terms and conditions of the guarantee.



Fishponds, Ketton

Field Trials

Geosynthetics Limited are the only company in the UK and Ireland to carry out live, completely independent field tests on the performance of a 3 dimensional cellular confinement system when used in a no-dig tree root protection system application. The results prove that CellWeb TRP® significantly reduces the compaction of sub-soils within the root growth limiting parameters established by K D Coder, 'Soil damage from compaction'. University of Georgia. July 2000. A copy of the report is available upon request.

CellWeb TRP® Product Guarantee

Geosynthetics Limited prides itself on a providing a reliable, consistent service; including technical advice, on site support and installation guidance. Geosynthetics Limited provides a 20 year guarantee for the CellWeb TRP® tree root protection system. This guarantee gives the client, the tree officer and arboricultural consultant the confidence that the designed system will perform as intended without damaging the health of the tree.

See page 6 for the full terms and conditions of the guarantee.

CellWeb TRP® System

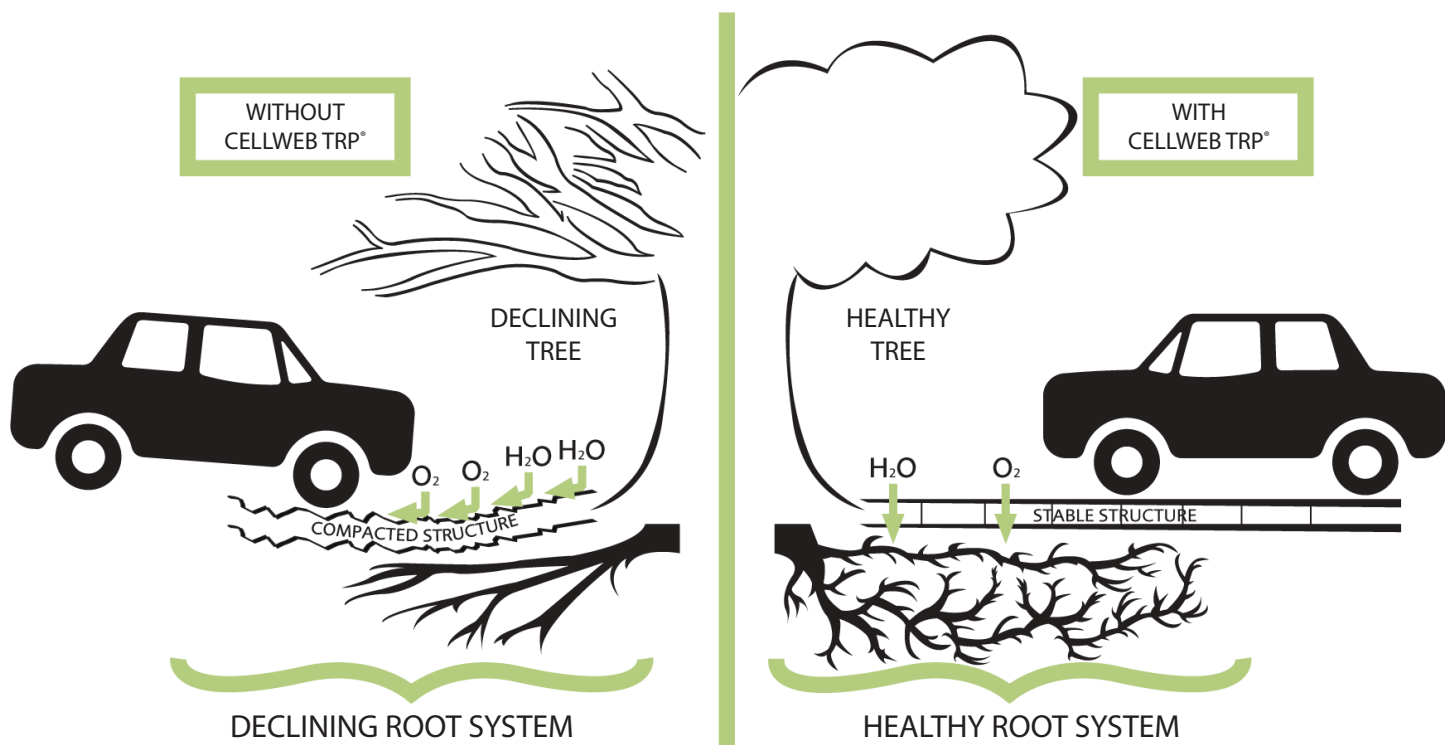
How the System Works



How CellWeb TRP® Works

CellWeb TRP® is a cellular confinement system that confines aggregate materials and makes them stronger, thus increasing the bearing capacity of the sub base materials. Research shows that CellWeb TRP® acts as a stiff raft to distribute wheel loads and reduce their magnitude at the base of the construction, thus maintaining the soil bulk density at levels that are suitable for tree root growth.

CellWeb TRP® is used around the world to provide cost effective hard surface construction over tree roots and is the system of choice for Tree Officers and Arboriculturists. For more information on this subject see CellWeb TRP® Fact Sheet No 1.



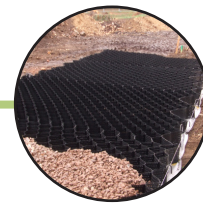
Water and Oxygen Transfer Through the CellWeb TRP® System

The CellWeb TRP® system is constructed using open aggregate infill and CellWeb TRP® has perforated cell walls. The pore spaces between the aggregate particles are greater than 0.1mm in diameter. This open structure is far more permeable than typical soils and allows the free movement of water and oxygen so that supplies to trees are maintained.

For more information on this subject see CellWeb TRP® Fact Sheet No 2.

CellWeb TRP® and Pollution

How CellWeb TRP® Deals With Catastrophic Oil Spills



How CellWeb TRP® Deals With Pollution

Where possible a permeable pavement system should always be constructed above the CellWeb TRP® system. The effective removal of pollution from runoff by permeable pavements is well known. Worldwide research has shown runoff that has passed through permeable pavements has low concentrations of pollutants.

Small spills of oil will be dealt with within the joints between the paving blocks and in the aggregate used within the system. However, large catastrophic spills are a different matter.

For more information on this subject see CellWeb TRP® Fact Sheet No 3.



Castle Gardens



Ambleside Lake District



Harcourt Aboretum

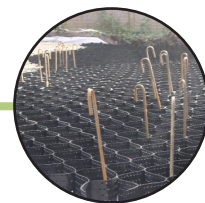
The Treetex® geotextile used in the CellWeb TRP® system has two functions. Treetex® separates the sub base aggregates from the soil beneath and it traps oil within its structure and allows it to degrade aerobically within the pavement construction. The structure, thickness and weight of Treetex® creates the perfect environment for this to happen. Most importantly tests prove that Treetex® will absorb 1.7 litres of oil per square metre, this is 4 times more effective than standard geotextiles.

Treetex® is an intrinsic part of the CellWeb TRP® system; and must be in conjunction with the CellWeb TRP® in order to guarantee the success of the system.

Please see page 6 for full details of the guarantee.

Geosynthetics CellWeb TRP® System:

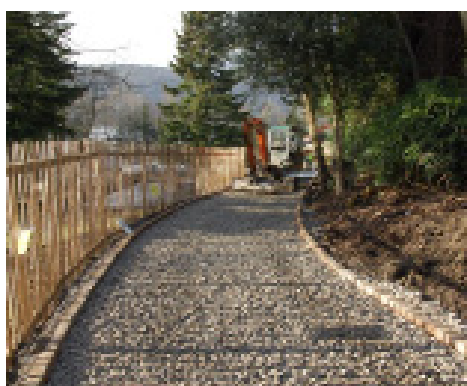
A Proven No Dig Solution



Advice, Design and Product Selection

Geosynthetics Limited has been supplying the CellWeb TRP® system since 1998 and has vast experience in its application. No two contracts are the same and we understand the factors that need to be taken into account to specify the correct CellWeb TRP® product.

We provide a free consultation, design and advisory service to find the solution that is most cost effective and beneficial for your site. Our service includes product selection, engineering calculations, CAD drawings and full instructions to help you from project conception to completion.



*Fallbarrow Park, Windermere:
Prior to CellWeb TRP® Installation*



*Fallbarrow Park, Windermere:
CellWeb TRP® Installation*



*Fallbarrow Park, Windermere:
Completed CellWeb TRP® Installation*

Final Surfacing

The benefits of the CellWeb TRP® system can only be maintained if a suitably porous final surface is selected. An ideal surfacing is the Golpla grass reinforcement and gravel retention system, a visually attractive surface that has the advantage of being fully porous. Alternatives include block paviors, porous asphalts and loose or bonded gravel.

Always Use CellWeb TRP®

The CellWeb TRP® system is the only research backed system of its kind in the UK with a 100% success rate. CellWeb TRP® has been specifically developed for the Tree Root Protection market. The system is supported by 15 years of data and thousands of installations making it the system of choice for the majority of Tree Officers and Arboriculturists in the UK.

CellWeb TRP® is uniquely identifiable. It is manufactured with a bright green panel on each side. When installed the green panels are laid adjacent, creating a green band across the construction.



Woodcock Hall, Yorkshire

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or email sales@geosyn.co.uk for more technical advice.

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