

Arboricultural Impact Assessment (AIA)

August 2021

Hough End Leisure Centre

480 Princess Road

Manchester

M20 1HD

U R B A N
G R E E N

QUALITY MANAGEMENT

Project No.:	UG1192			
Project:	Hough End Leisure Centre			
Location:	Hough End Leisure Centre, Princess Road, Manchester, M20 1HD			
Title:	Arboricultural Impact Assessment			
Document Type:	BS 5837			
Date:	18/08/21			
Prepared By:	Elizabeth Anderson			
Checked By:	Robert Hickey			
Approved By:	Katie Bird			
Revision Status:				
Rev:	Date:	Issue/Purpose/ Comment:	Prepared:	Checked:

CONTENTS

1. Executive Summary	1
2. Introduction	2
2.1. Instructions and references	2
2.2. Scope.....	3
2.3. Documents provided.....	3
2.4. Limitations	3
3. Legislation.....	4
3.1. Tree protection status	4
3.2. Wildlife	4
4. Arboricultural Impact Assessment (AIA)	5
4.1. Summary of the development.....	5
4.2. Tree constraints	5
4.3. Root Protection Areas (RPAs) explained.....	5
4.4. Impacts of development	5
4.5. Tree surgery works	6
4.6. Protective fencing.....	6
4.7. Temporary tree guard.....	6
4.8. Boundary treatments	6
4.9. Demolition and removal of surfaces in the RPA	7
4.10. Temporary site cabins	7
4.11. Utilities	7
4.12. Recommendations	8

Appendix 1 – Tree Data Schedule

Appendix 2 – Tree Schedule Definition of Terms

Appendix 3 – Tree Retention Categories

Appendix 4 – Site Plans

1. Executive Summary

- 1.1.1. Urban Green has been instructed by Ameresco to carry out an Arboricultural Survey to British Standard 5837:2012 guidelines at Hough End Leisure Centre, Princess Road, Manchester, M20 1HD and produce our findings in a report.
- 1.1.2. It is proposed to develop a ground heat source pump to the facility. Full details of the proposed site layout can be seen on the plans included in Appendix 4.
- 1.1.3. The proposed development necessitates the removal of 1 tree within the site boundary.
- 1.1.4. Before any tree works are carried out trees should first be assessed for their suitability for protected species by a suitably qualified and experienced ecologist.
- 1.1.5. Tree protection fencing will need to be installed at the alignment shown on the Tree Protection Plan in Appendix 4 before any construction activity takes place.
- 1.1.6. Information regarding the layout of new utilities and drainage and final site levels should be submitted to the Arboricultural Consultant so that the impact of these on the retained trees can be assessed.

2. Introduction

2.1. Instructions and references

- 2.1.1. We have been instructed by Ameresco to carry out a Arboricultural Impact Assessment (AIA) in accordance with BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations at the site location and produce our findings in a report to be submitted with a detailed planning application.
- 2.1.2. All trees, regardless of their statutory status, are a material consideration in a planning application. BS 5837 recognises the potential conflict between trees and development. The standard sets out to assist those concerned with trees in relation to construction and aid with decision making. This is achieved by providing impartial and balanced information on trees and their potential impacts.
- 2.1.3. Due to the nature of the site, it was decided that the survey methodology would include broadly grouping trees that share very similar characteristics. This method is in line with point 4.4.2.3 of BS 5837:2012 that states ‘Trees forming groups...should be identified and considered as groups where the arboriculturist determines that this is appropriate... It may be appropriate to assess the quality and value of trees as a whole, rather than individuals.’
- 2.1.4. The site is located in the area shown in Figure 1.



Figure 1 – Site Location Plan

2.2. Scope

- 2.2.1. The AIA takes into account any potential impacts on existing trees including the effect of any tree loss required to implement the design and recommendation for the establishment of new trees.
- 2.2.2. The AIA will also assess any potentially damaging activities proposed in the vicinity of retained trees and the effect that the retained trees may have on the development such as potential nuisance caused by excessive leaf/fruit litter, lighting levels and potential damage to structures.

2.3. Documents provided

- 2.3.1. A scaled plan has been provided with tree positions already plotted. Any extra trees found on site that were not included on the original plan have been plotted according to measurements taken on site and/or using aerial photography.
- 2.3.2. Tree locations which have been estimated are illustrated on the Tree Protection Plan in Appendix 4. The exact locations of these trees must be verified, and any discrepancies discussed with the Arboricultural Consultant before starting works on site.
- 2.3.3. A PDF plan outlining the development proposals has been overlaid with the Tree Constraints Plan in order to assess the potential impacts.

2.4. Limitations

- 2.4.1. The report is based upon a visual inspection. The consultant shall not be responsible for events that happen after the date of the report due to factors that were not apparent at the time, and the acceptance of this report constitutes an agreement with the guidelines and the terms listed in this report.
- 2.4.2. The consultant accepts no liability in respect of the trees unless the recommendations of this report are carried out under his supervision.
- 2.4.3. Assessing the potential influence of trees upon load bearing soils, beneath existing and proposed structures resulting from water abstraction by trees or rehydration of shrinkable soils was not included in the contract brief and is therefore not considered in the report. The consultant cannot be held responsible for damage arising from such action.
- 2.4.4. Trees are living organisms whose health, condition and structure can change over time. The contents of this report are valid for a period of one year from the date of the report.
- 2.4.5. Potentially hazardous trees are highlighted, and appropriate recommendations are made. However, this report is not a substitute for a full tree risk assessment or management plan which are specifically designed to minimise risk and liability associated with responsibility for trees.

3. Legislation

3.1. Tree protection status

- 3.1.1. A Tree Preservation Order (TPO) is an order made by a Local Authority to protect specific trees, groups of trees or woodlands in the interests of amenity. A TPO prohibits the cutting down, topping, lopping, uprooting and wilful damage or destruction of trees without the Local Authority's written consent.
- 3.1.2. At the time of writing the report, we have not yet received a response from the Local Planning Authority to our request regarding the status of trees on or adjacent to the site.
- 3.1.3. It is recommended that the Local Authority is consulted before any tree works are undertaken, as new TPOs may have been created since the time of enquiry, and heavy fines exist for unauthorised works to protected trees.
- 3.1.4. All works to trees covered by a TPO require permission from the Local Authority, including any pruning. However, this does not include trees that are dead or have become dangerous. The removal of dead branches is also excluded from a TPO. Although the above exceptions exist, it is advisable to give the Local Authority five days' notice in writing of any intended removal. Permission is not needed where tree work is required to implement an approved planning application.
- 3.1.5. In a Conservation Area, all trees greater than 75mm in diameter at 1.5m above ground level are protected. Where tree work is required in a Conservation Area, a Section 211 notice of intent must be submitted the Local Planning Authority who have six weeks to decide to either make a TPO or allow the work to proceed.
- 3.1.6. The proposed work can proceed after six weeks as it is presumed that the Local Authority consents if they have not responded in that time.
- 3.1.7. It is an offence to remove more than 5m³ of timber in any one calendar quarter without having first obtained a felling licence from the Forestry Commission. It must be noted, however, that this excludes sites where planning permission has already been granted.

3.2. Wildlife

- 3.2.1. Prior to the commencement of any tree works, the trees should be assessed for the presence species which are subject to protection under the *Wildlife and Countryside Act 1981* (as amended) and the *Conservation of Habitats and Species Regulations 2017*.
- 3.2.2. Where there is evidence that bats, birds or other protected species are present, the advice of a suitably qualified ecologist should be sought.
- 3.2.3. If tree works are carried out during the bird nesting season (March to September inclusive), trees would need to be inspected by a qualified ecologist no more than 48 hours prior to the commencement works.

4. Arboricultural Impact Assessment (AIA)

4.1. Summary of the development

- 4.1.1. It is proposed to develop a ground source heat pump. Full details of the proposed site layout can be seen on the plans included in Appendix 4.

4.2. Tree constraints

- 4.2.1. BS 5837:2012 recognises that conflicting requirements of the planning system for development means that trees are only one factor which need to be taken into consideration. Although there may be certain specimens that can pose significant constraints to development due to their importance, it is essential that inappropriate tree retention is avoided.
- 4.2.2. Trees can be adversely affected on development sites if their protection is not factored into the wider project management of onsite operations. We have transposed the tree survey plan over plans detailing current proposals in order to assess the impact on surveyed trees.
- 4.2.3. It is essential that roots are protected from construction works including physical damage from excavation and changes in soil structure from compaction and changes in ground levels.

4.3. Root Protection Areas (RPAs) explained

- 4.3.1. The RPA is an area of ground around the base of a retained tree, which is calculated in relation to the stem diameter, where disturbance should be kept to a minimum and avoided if at all possible.
- 4.3.2. The majority of tree roots grow within the upper 600mm of the soil profile where most nutrients are available as the result of the decomposition of organic matter close to the surface. Rooting conditions become less favourable at depth as the soil density increases, creating anaerobic conditions.

4.4. Impacts of development

- 4.4.1. The site contains 26 trees and groups of which 1 tree requires removal to facilitate the development.
- 4.4.2. Tree protective fencing is used for protection on part of G4, T5, T6, G7, T12, T13, T14, T15, T16, T17, T18. Smaller temporary tree guards should be used for 1 tree within G4, T8, T9, T10, T11, T19, T20, T21. It should be constructed in line with 4.7 of this document.
- 4.4.3. Pruning work is required on one tree within G4 to allow for 4m clearance for the machinery that will be used to install the ground heat source pump. The pruning should be complete by a qualified arboriculturist.
- 4.4.4. The heat source pump involves hand digging to a depth of 1.2m, while being supervised by an arboricultural consultant. Roots can be pruned up to a diameter of 25mm by an arboricultural consultant. If any significant roots over 25mm are found, then the heat source pump will be moved 500mm to the north or south to avoid the roots.

4.5. Tree surgery works

- 4.5.1. Tree works that are recommended within the Tree Works Schedule (Appendix 4) are works required to facilitate development and also include details or remedial works. Tree works stated in the Tree Data Schedule (Appendix 1) are of a general maintenance nature and can be carried out at any time as per recommendations.
- 4.5.2. Tree works required to facilitate the development will be carried out prior to the commencement of any onsite operations. This should allow sufficient space for approved construction to be carried out.
- 4.5.3. Any unforeseen tree works that become apparent during the construction process will require written consent from the Local Authority Tree Officer.

4.6. Protective fencing

- 4.6.1. Temporary protective fencing will need to be installed at the alignment indicated on the Tree Protection Plan in Appendix 4, prior to the commencement of any construction activities on site including the delivery of materials and site facilities.
- 4.6.2. Any fencing that is damaged so that it is no longer able to protect retained trees must be replaced/repared immediately with appropriate fencing.
- 4.6.3. The required specification for protective fencing is illustrated in the Tree Protection Plan (Insert 1).
- 4.6.4. The 'in-ground' system involves driving vertical scaffold poles approximately 0.6m into the ground onto which are affixed horizontal scaffold poles and bracing struts. 2m high anti-climb weldmesh panels are then wired to the scaffold framework. The vertical scaffold poles should be at a maximum of 3m apart.
- 4.6.5. No fixing shall be made to any tree and all possible precautions shall be taken to prevent damage to the tree roots when locating uprights.
- 4.6.6. A 600mm x 300mm warning sign reading "TREE PROTECTION AREA KEEP OUT" shall be fixed to every 10m of protective fencing, as illustrated on the Tree Protection Plan (Insert 2).

4.7. Temporary tree guard

- 4.7.1. Where space is limited, it is sometimes necessary to construct a temporary tree guard to physically protect the main stem of the tree.
- 4.7.2. This should be made by joining together 4 X 25mm Exterior Grade pieces of plywood to 47mm X 47mm treated timber posts to create a box shaped frame which is attached to the ground or adjacent structures. No fixings are to be made to the tree and suitable ground protection should be employed within the RPA of the tree.

4.8. Boundary treatments

- 4.8.1. Where fencing is to be installed within RPAs of retained trees, post holes will be excavated by hand and kept as narrow as possible. Trial holes will be dug using a manually operated soil augur in order to position post holes to avoid major roots.

- 4.8.2. Exploratory post holes will be dug before committing to positions. If any roots in excess of 25mm are encountered they are to remain intact and the post hole will be relocated to avoid them. The fencing system must permit such flexibility (i.e. where fixed panel widths are used, all post holes must be excavated before committing to the final location)
- 4.8.3. All post holes will be excavated by hand and kept as narrow as possible (maximum diameter 300mm).

4.9. Demolition and removal of surfaces in the RPA

- 4.9.1. During demolition, the following restrictions will apply:
- Where direct damage by falling masonry is likely, the tree should be protected by exterior grade plywood sheets constructed around the main stem.
 - The main body of any mechanical excavator will operate outside the RPA.
 - Masonry will be pulled away from trees where possible.
 - When breaking masonry, a fine water spray will be used to minimise dust particles.
 - Excessive dust particles on trees will be removed each day by spraying with water.
 - Hard surfaces should be kept in place for as long as possible during construction works in order to prevent soil compaction in the RPA.
 - During surface removal, the following restrictions will apply:
 - Only hand operated tools will be used to lift existing surfaces and sub-base. No mechanical excavators are to be used.
 - No excavation below the existing sub-base will occur.
 - All surface removal within the RPA will be supervised by the Arboricultural Consultant or the Local Authority Tree Officer.

4.10. Temporary site cabins

- 4.10.1. All storage facilities and deliveries will make use of existing hard surfaces to avoid unnecessary compaction within RPAs. The locations will be agreed in writing with the LPA prior to delivery and will remain in the agreed locations unless approved by the LPA.
- 4.10.2. If storage facilities require siting within RPAs, every effort will be made to ensure that any damage to aerial parts of retained trees is avoided and that appropriate footings are used to avoid root damage or compaction of the soil.

4.11. Utilities

- 4.11.1. At the time of writing Urban Green have not been made aware of any new utilities or service runs that will be associated with the development. Information regarding the layout of new utilities and drainage and final site levels should be submitted to the Arboricultural Consultant so that the impact of these on the retained trees can be assessed.

4.12. Recommendations

- 4.12.1. An Arboricultural Method Statement (AMS) will be required to provide solutions and working methods so that the impacts identified do not have a detrimental effect on retained trees.
- 4.12.2. All operations that could affect trees on and adjacent to the site must be considered as part of the project management of the Proposed Development. It is therefore recommended that an Arboricultural Consultant is appointed as part of the design and management team to advise on pre-development issues and supervise on-site operations.
- 4.12.3. The Arboricultural Consultant may also have an advisory role in the preparation of site including tree surgery works and the protection of trees during demolition processes.
- 4.12.4. The Arboricultural Consultant shall be responsible for inspecting all protective fencing prior to the commencement of all onsite activity.

Appendix 1 - Tree Data Schedule

The following pages contain information gathered during the site survey. The reader should refer to Appendices 2 and 3 in order to correctly interpret the tree data.

Reference T = Tree G = Group H = Hedge W = Woodland	Age & Species	Height (m)	Crown Ht (m)	DBH (mm)	Crown Spread (m) N W E S	Notes	Recommendations		Physiological Condition	Life Expectancy (yrs)	RPA Radius (m)
							Priority	Inspect Freq (yrs)			
T1	Early-Mature Sycamore Acer pseudoplatanus	13	2	400	5.5 5	1: Located adjacent playing fields. 2: Not pruned to any extent. 3: Bifurcated stem. 4: Small leaf size and premature browning of leaves.	Monitor condition.		Fair	20-40 B1	4.80
							Low	3	Good		
T2	Early-Mature Sycamore Acer pseudoplatanus	13	2.5	350	5 4	1: Trifurcate stem. 2: Not pruned to any extent. 3: Small leaf size and premature browning of leaves.	Monitor condition.		Fair	20-40 B1	4.20
							Low	3	Good		
G3	Semi-Mature Mixed Species	av 6	av 2	av 120	av 2 2 each	1: Three london plane and two red oak. 2: Stakes remain, ties cut. stakes abrading stems. 3: Not pruned to any extent.	Remove stakes.		Good	20-40 B1.2	1.44
							Moderate	1	Fair		
G4	Semi-Mature Norway Maple Acer platanoides	av 5	av 2	av 100	av 2 2 each	1: Three planted ornamentals. 2: Stakes and ties removed. 3: Not pruned to any extent.	No action required.		Good	40+ B	1.20
							n/a	3	Good		
T5	Early-Mature Silver Birch Betula pendula	7	2	250	4 2 3	1: Canopy biased to east. 2: Pruned in the past to remove low hanging lateral branches. 3: Several small cavities exhibiting good closure.	No action required.		Good	40+ B	3.00
							n/a	3	Good		
T6	Early-Mature Silver Birch Betula pendula	10	3	270	4 2 5	1: Pruned in the past to remove low hanging lateral branches. 2: Dieback to upper crown. 3: Bark dieback on north side of stem with poor adaptive growth.	Monitor condition.		Fair	10-20 C1	3.24
							Moderate	1	Fair		

Reference T= Tree G = Group H = Hedge W = Woodland	Age & Species	Height (m)	Crown Ht (m)	DBH (mm)	Crown Spread (m) N W E S	Notes	Recommendations		Physiological Condition	Life Expectancy (yrs)	RPA Radius	
							Priority	Inspect Freq (yrs)	Structural Condition	Retention Category	(m)	
G7	Early-Mature Mixed Species	av 13	av 1	av 350	av 4 4 4 4 each	1: Silver birch and wild cherry. 2: Closely growing group of approximately 20 trees. 3: Group not pruned to any extent.	No action required.		Good	40+	B	4.20
	n/a	3	Good									
T8	Semi-Mature Silver Birch Betula pendula	7.5	1.5	120	2 2 2 2	1: Ornamental planting. 2: Not pruned to any extent.	No action required.		Good	40+	B	1.44
	n/a	3	Good									
T9	Semi-Mature Red Oak Quercus rubra	5	2	100	2 3 2 2	1: Ornamental planting. 2: Not pruned to any extent.	No action required.		Good	40+	B	1.20
	n/a	3	Good									
T10	Semi-Mature Alder (common) Alnus glutinosa	7	1.5	210	3 3 3 3	1: Trifurcate stem. 2: Included bark union of codominant stems with no signs of failure. 3: Canopy overhanging car park, could be pruned if required.	No action required.		Good	20-40	C1	2.52
	n/a	3	Fair									
T11	Semi-Mature London Plane Platanus x hispanica	8	2	150	3 3 3 3	1: Ornamental planting. 2: Not pruned to any extent. 3: Canopy overhangs car park and could be pruned if required.	No action required.		Good	40+	B	1.80
	n/a	3	Good									
T12	Early-Mature Sycamore Acer pseudoplatanus	10	3	500	6 7 6 6	1: Offsite, canopy to south overhangs into site and could be pruned if required. 2: Several branch tears exhibiting good closure. 3: Acceptable condition at present.	No action required.		Good	20-40	B	6.00
	n/a	3	Fair									

Reference T= Tree G = Group H = Hedge W = Woodland	Age & Species	Height (m)	Crown Ht (m)	DBH (mm)	Crown Spread (m) N W S E	Notes	Recommendations		Physiological Condition	Life Expectancy (yrs)	RPA Radius	
							Priority	Inspect Freq (yrs)	Structural Condition	Retention Category	(m)	
T13	Early-Mature Common Lime Tilia x europaea	16	3	600	5 6 7	1: Offsite. 2: Basal growth. 3: Planted street tree. 4: Pruned in the past to remove low hanging lateral branches.	No action required.		Good	40+	B	7.20
	n/a						3	Good				
T14	Early-Mature Common Lime Tilia x europaea	15	3	550	5 4 5 6	1: Offsite street tree. 2: Canopy overhangs onsite car park. 3: Pruned in the past and exhibiting good closure.	No action required.		Good	40+	A	6.60
	n/a						3	Good				
T15	Early-Mature Common Lime Tilia x europaea	16	5	650	8 7 7 8	1: Offsite street tree. 2: Canopy to west overhangs into the site and could be raised if required. 3: Pruned in the past and exhibiting good closure.	No action required.		Good	40+	A1	7.80
	n/a						3	Good				
T16	Early-Mature Common Lime Tilia x europaea	14	4	550	5 6 7 7	1: Offsite street tree. 2: Canopy to west overhangs into the site and could be raised if required. 3: Pruned in the past and exhibiting good closure.	No action required.		Good	40+	A1	6.60
	n/a						3	Good				
T17	Early-Mature Norway Maple Acer platanoides	8	4	350	3 3 4	1: Offsite street tree. 2: Canopy to west overhangs into the site and could be raised if required. 3: Pruned in the past and exhibiting good closure. 4: Some dieback within the crown.	Monitor condition.		Fair	20-40	B1	4.20
	Low						3	Good				
T18	Early-Mature Red Oak Quercus rubra	15	5	600	7 8 8	1: Offsite street tree. 2: Canopy to west overhangs into the site and could be raised/pruned back if required. 3: Large cavity at base from vehicular impact, exhibiting good closure. 4: Localized canopy dieback related to over pruning.	Monitor condition.		Fair	20-40	B1	7.20
	Moderate						1	Good				

Reference T = Tree G = Group H = Hedge W = Woodland	Age & Species	Height (m)	Crown Ht (m)	DBH (mm)	Crown Spread (m) N W S E	Notes	Recommendations		Physiological Condition	Life Expectancy (yrs)	RPA Radius (m)
							Priority	Inspect Freq (yrs)			
T19	Semi-Mature Silver Birch Betula pendula	8	2	130	2 2 2	1: Ornamental planting. 2: Not pruned to any extent.	No action required.		Good	40+	B
							n/a	3			
T20	Semi-Mature Silver Birch Betula pendula	9	2	150	2 2 2	1: Ornamental planting. 2: Not pruned to any extent.	No action required.		Good	40+	B
							n/a	3			
T21	Semi-Mature Silver Birch Betula pendula	10	1	130	2 2 2	1: Ornamental planting. 2: Not pruned to any extent.	No action required.		Good	40+	B
							n/a	3			
T22	Semi-Mature London Plane Platanus x hispanica	8	2	150	3 3 3	1: Ornamental planting. 2: Not pruned to any extent.	No action required.		Good	40+	B
							n/a	3			
T23	Semi-Mature Silver Birch Betula pendula	6	3	250	4 3 4	1: Bifurcated stem. 2: Ivy clad stem. 3: Pruned in the past and exhibiting poor closure. 4: Dieback within crown.	Monitor condition.		Fair	10-20	C
							Moderate	1			
T24	Semi-Mature Pear Pyrus sp	5	0.5	130	1.5 1.5 1.5	1: Ornamental planting. 2: Not pruned to any extent.	No action required.		Good	40+	B
							n/a	3			

Reference T= Tree G = Group H = Hedge W = Woodland	Age & Species	Height (m)	Crown Ht (m)	DBH (mm)	Crown Spread (m) N W E S	Notes	Recommendations		Physiological Condition	Life Expectancy (yrs)	RPA Radius
							Priority	Inspect Freq (yrs)	Structural Condition	Retention Category	(m)
T25	Semi-Mature Pear Pyrus sp	5	2	110	1 1 1	1: Ornamental planting. 2: Not pruned to any extent.	No action required.		Good	40+	1.32
	n/a						3	Good	B		
T26	Semi-Mature London Plane Platanus x hispanica	7.5	2	140	3 3 2	1: Ornamental planting. 2: Not pruned to any extent. 3: Canopy overhangs walkway and could be raised if required.	No action required.		Good	40+	1.68
	n/a						3	Good	B		

Appendix 2 - Tree Schedule Definition of Terms

Tree Referencing	Individual Trees T (+number) Grouped Trees G (+number) Hedgerows H (+number) Woodlands W(+number)
Age Category	Young Usually <15 years Semi-mature Significant growth expected, approximately one third of life expectancy complete Early-Mature Full height achieved with further significant growth possible, up to two thirds of life expectancy complete Mature Full height has been achieved with possible spreading of the canopy, usually past two thirds of overall life expectancy Veteran Usually a tree of significant age with characteristics that give additional cultural, landscape and conservation benefits, Over-mature A tree declining due to age as indicated by deterioration in the health and condition of its crown and trunk.
Species	Botanical Name conforming to the International Code of Nomenclature for algae, fungi, and plants (ICN). For universal plant recognition. Common Name commonly used names usually on a local and national scale.
Tree Height	The vertical distance between the base of the tree (where soil and buttress meet) and the tip of the highest branch on the tree.
Crown Height	Measured from ground level to the height at which the main crown begins.
Stem Diameter (DBH)	Stem diameter is measured at 1.5 m above ground level
Crown	Measurements taken from all four cardinal points in metres.
Notes	Notes are made to inform of any possible defects, peculiarities or points of interest that may relate to the trees position, physiology, safety and possible effects on developments.
Recommendations	Recommendations are made in accordance to good arboricultural practice. Recommendations are made regardless to the end usage of the site.
Priority Scale	Priority is given dependant on the perceived threat and the likelihood of failure given to a possible hazard. The priority of work is given regardless of the end usage of the site. Urgent To be carried out as soon as possible. Very High To be carried out within 1 month. High To be carried out within 3 months. Moderate To be carried out within 1 year. Low To be carried out within 3 years.
Physiological Condition:	Good Usually healthy with no symptoms of poor health or disease. Fair Exhibiting signs of poor health or minor disease infections that are not considered to be hazardous. Poor Disease present in considerable quantities or with very poor physiological vigour. Very Poor Tree is in a moribund state in extremely poor condition, usually with little chance of recovery.
Structural Condition:	Good A tree with no significant structural defects. Fair Minor defects may have been observed but are not considered to be immediately hazardous. Poor Significant defects found. Tree requires monitoring or remedial works. Very Poor Major defects that require immediate remedial work or the removal of the tree.
Life Expectancy:	The estimated number of years before the tree may require removal should no unexpected mechanical or environmental impacts occur to the tree.
Retention Category:	Please refer to Tree retention categorisation table on the next page.

Appendix 3 - Tree Retention Category

The following table provides an explanation of retention categories used.

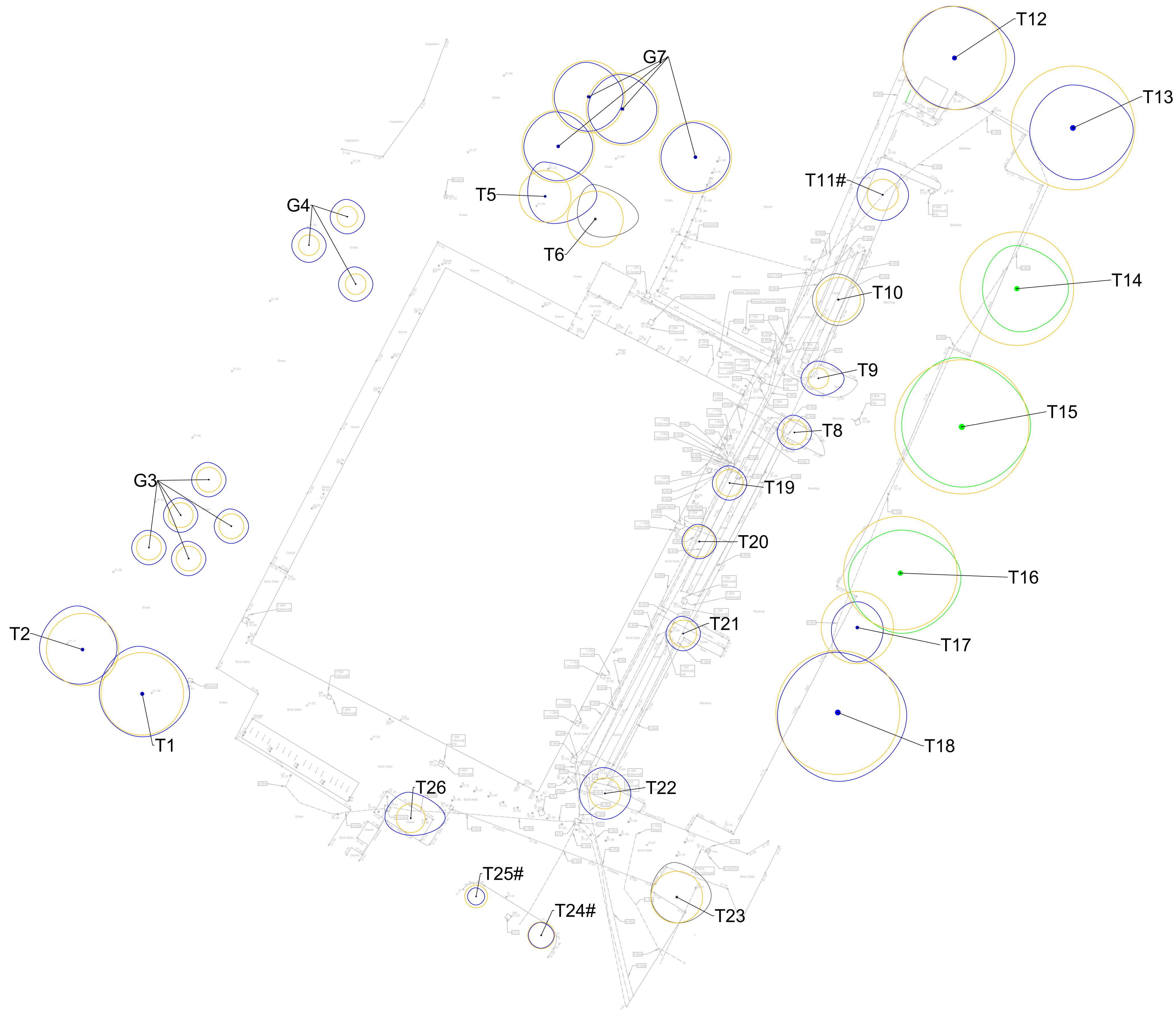
Trees to be removed		Colour on Plan
Category U Includes trees of very low quality that offer little or no amenity value.	Trees that are in such a condition that they should be removed as a matter of good arboricultural practice regardless of given proposals.	RED
Trees to be considered for retention		
Category A Trees of a high quality, with an estimated life of expectancy of at least 40 years	Trees that are excellent examples of their species, usually mature, especially if rare or unusual including veteran trees. Category A trees are likely to enhance a development and should be retained wherever possible.	GREEN
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.	Trees that are good examples of their species. B category trees are usually mature or younger trees with the potential to reach A category in the future. Although the retention of these trees is desirable, some losses may be acceptable.	BLUE
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm.	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.	GREY
NOTE: Trees that are viewed as borderline and do not fit neatly into either of the categories are given a plus or minus rating (+/-) in the tree data schedule. Therefore, C+ would denote a tree being borderline C/B although C is deemed to be the most appropriate category. Similarly, B- would denote a tree being borderline B/C with B seen as the most appropriate category.		

Appendix 4 - Site Plans

The site plans referred to in the report follow this page which include the following:

- Tree Constraints Plan
- Tree Removal Plan
- Tree Works Schedule
- Tree Protection Plan
- Tree Protection Inserts

Although included plans are usually to scale, they are only intended to indicate positions of surveyed trees and dimensions should not be taken from these drawings.



Do not scale this drawing (printed or electronic version).
Contractors must check all dimensions from site.
This drawing is copyright and is for use on this site only. This drawing should be read in conjunction with all relevant consultants drawings and specialist subcontractors / supply chain drawings and specifications.
All works to be carried out in accordance with the latest British Standards / Codes of Practice unless specifically directed otherwise in the specification.
Responsibility for the reproduction of this drawing in paper form, or issued in electronic format, lies with the recipient to check that all information has been replicated in full and is correct when compared to the original paper or electronic image.
Graphical representations of equipment on this drawing have been co-ordinated, but are approximations only. Please refer to the specifications and / or details for actual sizes and / or specific contractor construction information.

Notes:-

Category A tree, group or hedge

Category B tree, group or hedge

Category C tree, group or hedge

Category U tree, group or hedge

Root Protection Area (RPA)

Position estimated on site

REV.	DATE	DESCRIPTION	DRAWN	CHKD
------	------	-------------	-------	------



A: Ground Floor, The Tower,
Deva City Office Park, Trinity Way,
Manchester M3 7BF

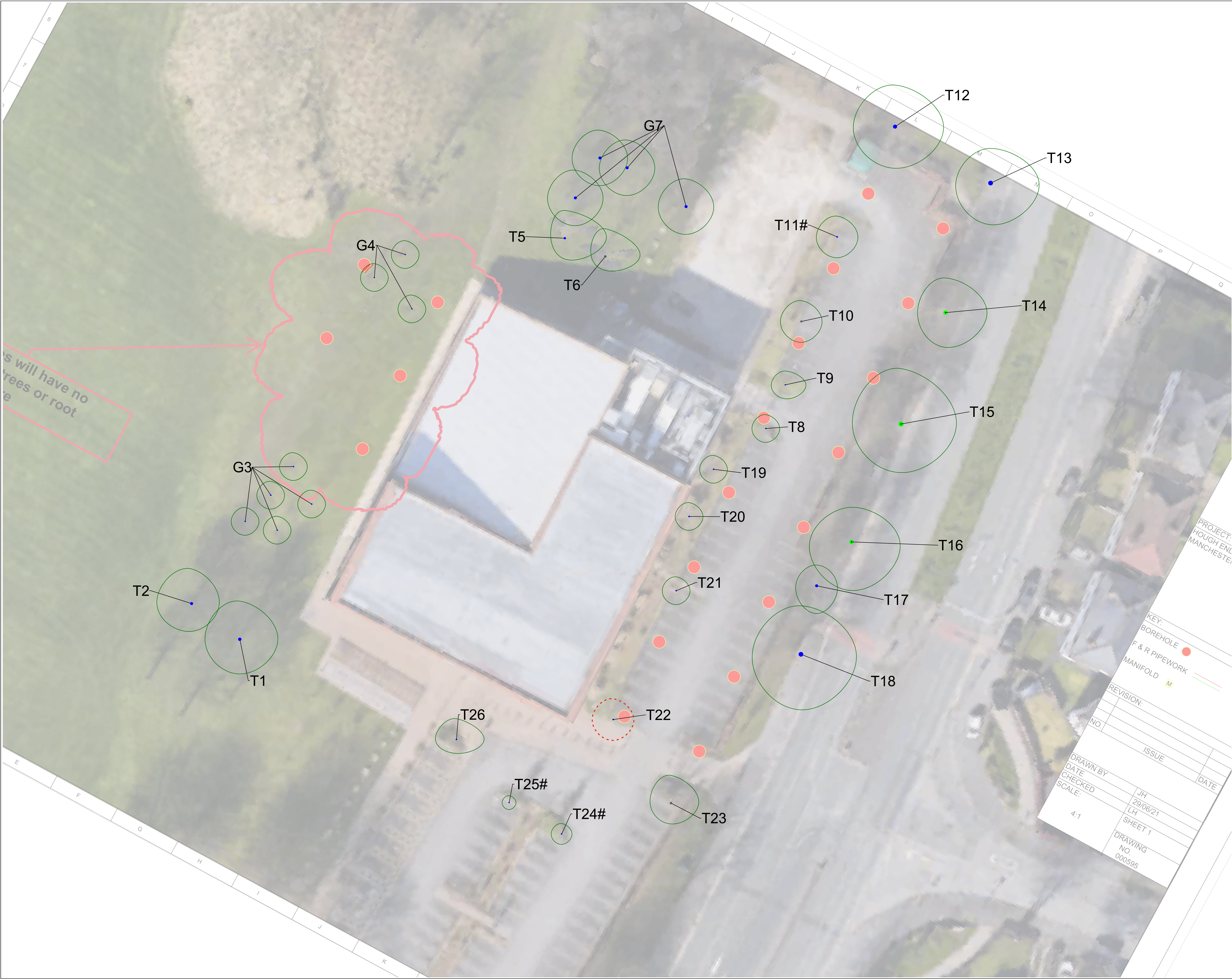
T: +44 (0) 161 312 3131
weareurbangreen.co.uk

Client: **AMERESCO**

Project: **HOUGH END
LEISURE CENTRE**

Title: **TREE CONSTRAINTS PLAN**

Issue: PLANNING		
Drawn: EA	Checked: RH	Approved: EA
Project: UG1192	Scale @ A1: 1:250	Date: 10/08/21
Dwg No: UG_1192_ARB_TCP_01	Revision: 00	



Do not scale this drawing (printed or electronic version).
Contractors must check all dimensions from site.
This drawing is copyright and is for use on this site only. This drawing should be read in conjunction with all relevant consultants drawings and specialist subcontractors / supply chain drawings and specifications.
All works to be carried out in accordance with the latest British Standards / Codes of Practice unless specifically directed otherwise in the specification.
Responsibility for the reproduction of this drawing in paper form, or issued in electronic format, lies with the recipient to check that all information has been replicated in full and is correct when compared to the original paper or electronic image.
Graphical representations of equipment on this drawing have been co-ordinated, but are approximations only. Please refer to the specifications and / or details for actual sizes and / or specific contractor construction information.

Notes:-

Category A tree, group or hedge

Category B tree, group or hedge

Category C tree, group or hedge

Category U tree, group or hedge

Retained tree

Removed tree

Extents of pruning

#

Position estimated on site

REV.	DATE	DESCRIPTION	DRAWN	CHK'D	

URBANGREEN

A: Ground Floor, The Tower,
Deva City Office Park, Trinity Way,
Manchester M3 7BF

T: +44 (0) 161 312 3131
weareurbangreen.co.uk

Client: **AMERESCO**

Project: **HOUGH END LEISURE CENTRE**

Title: **TREE REMOVAL PLAN**

Issue: **PLANNING**

Drawn: EA	Checked: RH	Approved: EA
Project: UG1192	Scale @ A1: 1:250	Date: 18/08/21
Dwg No: UG_1192_ARB_TRP_01	Revision: 00	

Tree Works Schedule

Tree Number	Species	Works Required	Reason
G4	Norway maple	Pruning see Tree Removal Plan	To facilitate the development
T22	London Plane	Removal	To facilitate the development

REV.

DATE

DESCRIPTION

DRAWN

CHKD

U R B A N
G R E E N

A: Ground Floor, The Tower,
Deva City Office Park, Trinity Way,
Manchester M3 7BF

T: +44 (0) 161 312 3131

weareurbangreen.co.uk

Client:

AMERESCO

Project:

HOUGH END
LEISURE CENTRE

Title:

TREE WORKS SCHEDULE

Issue:

PLANNING

Drawn:

EA

Checked:

RH

Approved:

EA

Project:

UG1192

Scale @ A1:

NTS

Date:

10/08/21

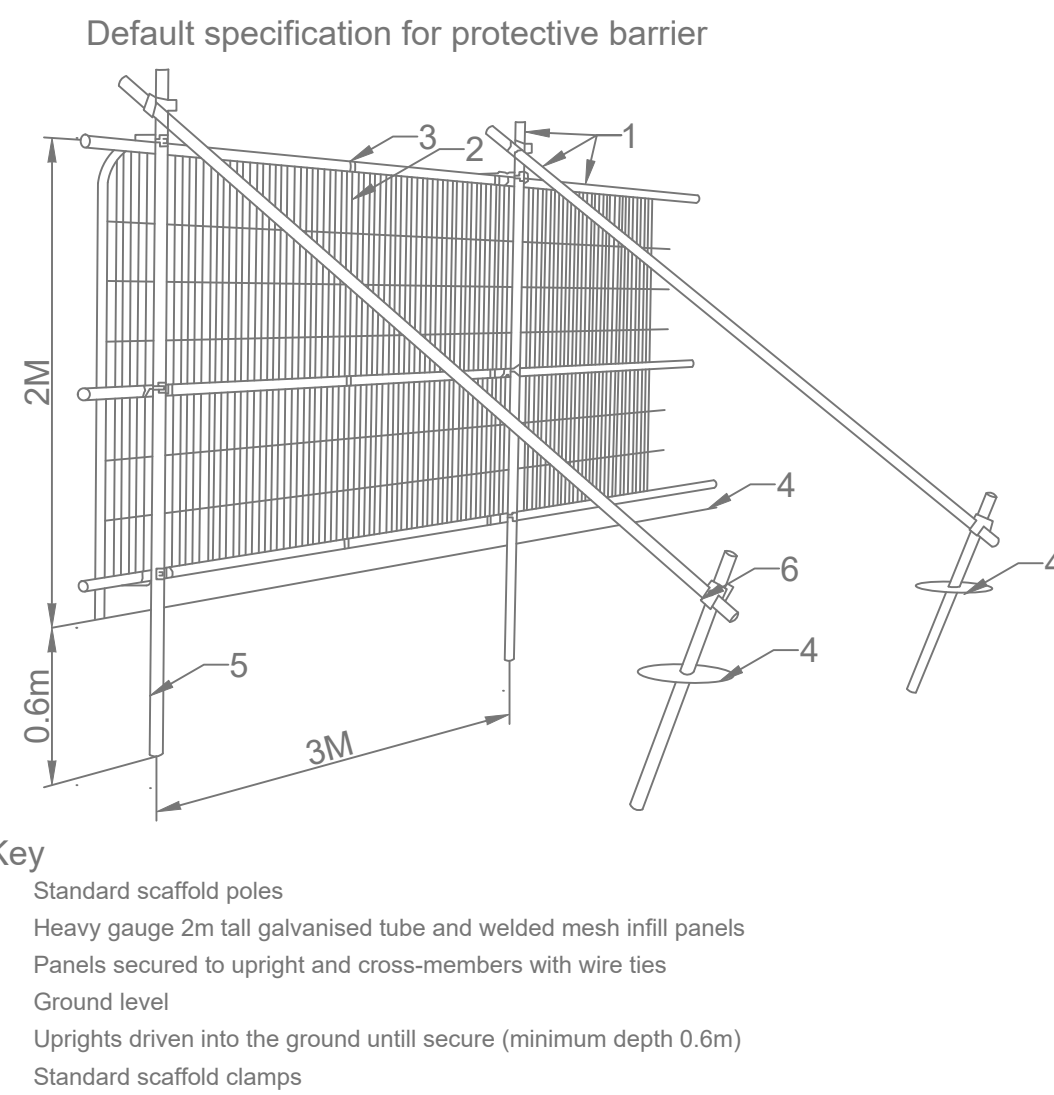
Dwg No:

UG_1192_ARB_TWS_01

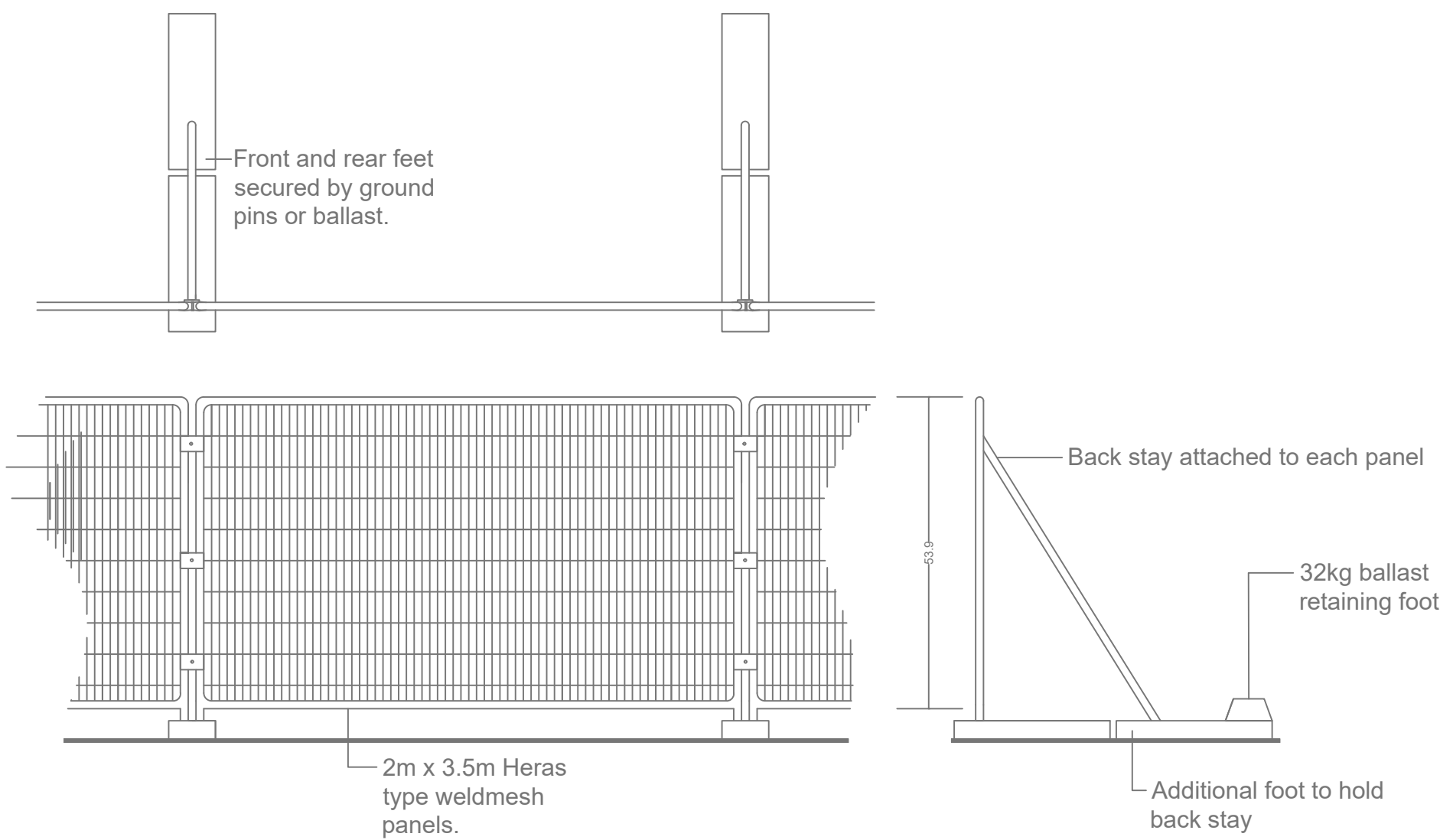
Revision:

00

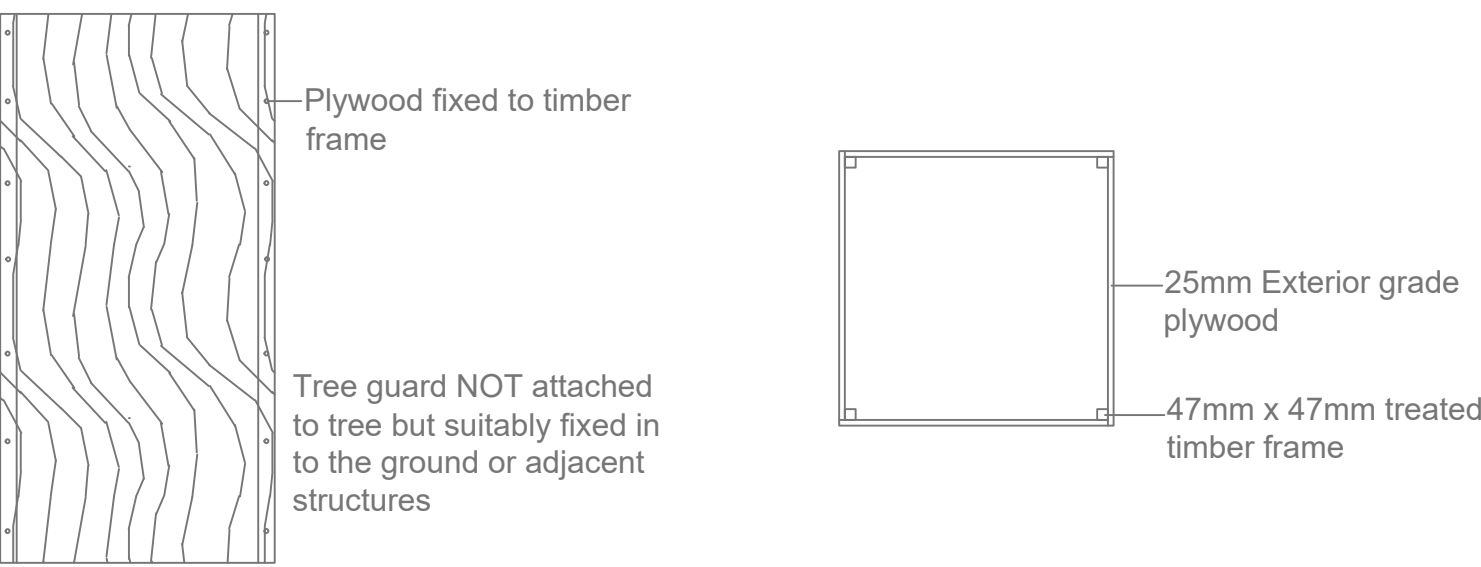
Insert 1: Tree protective fencing specification



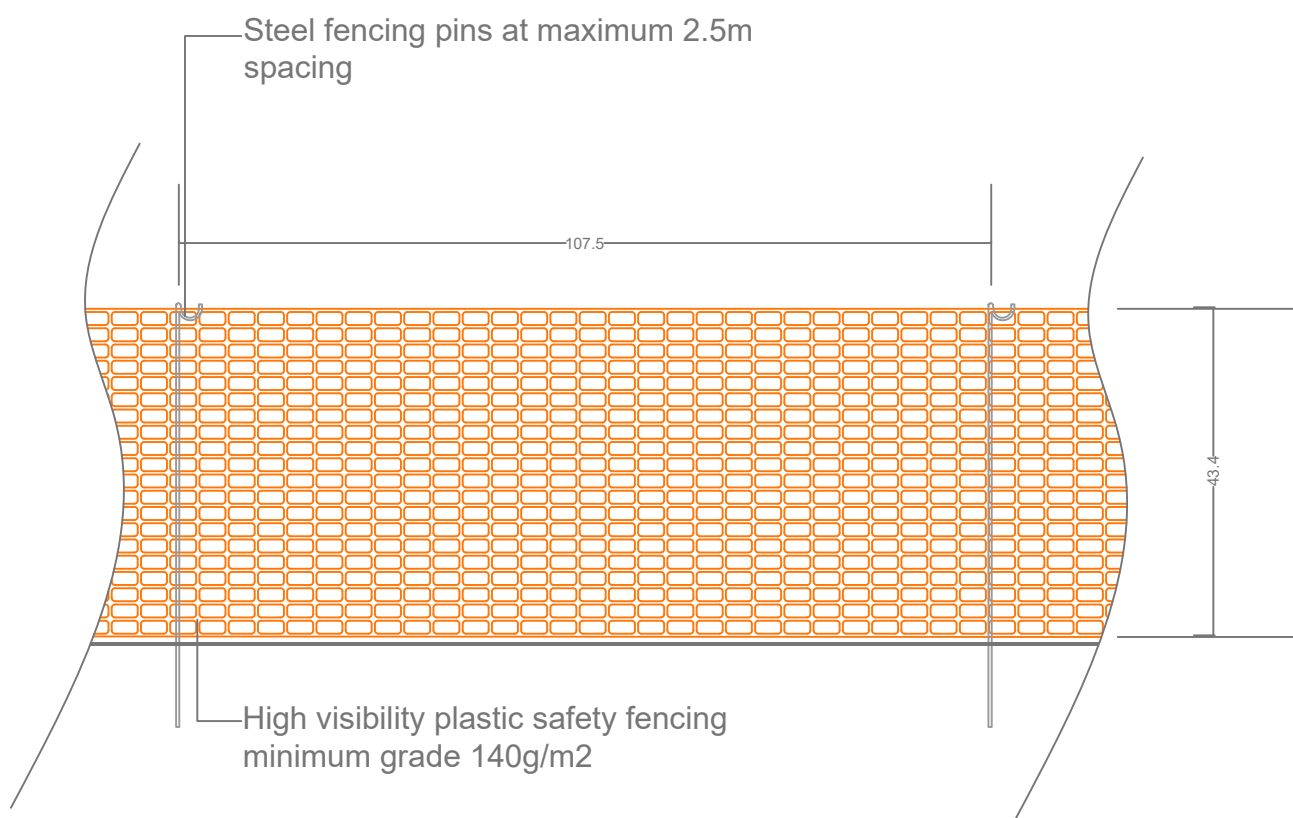
Back-stay support



Temporary tree guard specification



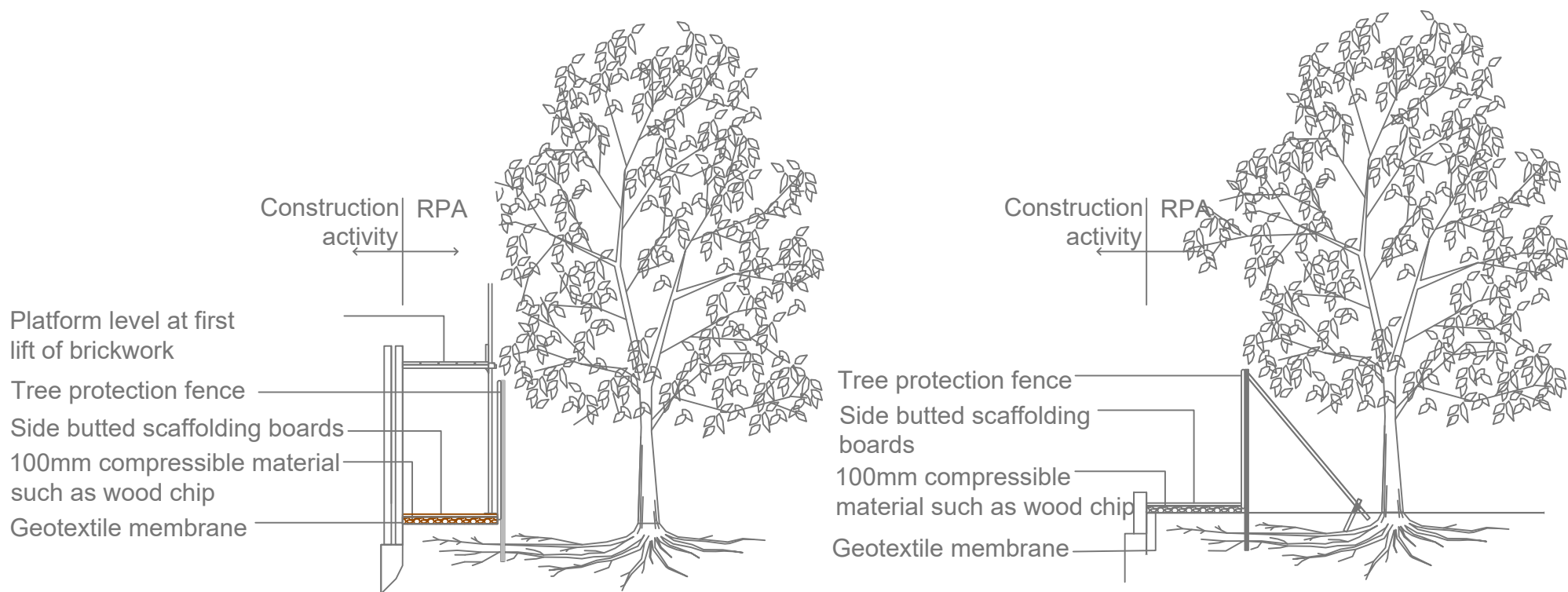
Barrier mesh specification



Insert 2: Tree protection notice

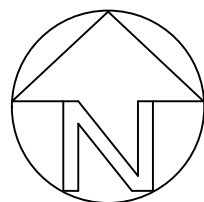


Insert 3: Ground protection specification



Do not scale this drawing (printed or electronic version).
Contractors must check all dimensions from site.
This drawing is copyright and is for use on this site only. This drawing should be read in conjunction with all relevant consultants drawings and specialist subcontractors / supply chain drawings and specifications.
All works to be carried out in accordance with the latest British Standards / Codes of Practice unless specifically directed otherwise in the specification.
Responsibility for the reproduction of this drawing in paper form, or issued in electronic format, lies with the recipient to check that all information has been replicated in full and is correct when compared to the original paper or electronic image.
Graphical representations of equipment on this drawing have been co-ordinated, but are approximations only. Please refer to the specifications and / or details for actual sizes and / or specific contractor construction information.

Notes:-



REV.	DATE	DESCRIPTION	DRAWN	CHK'D
URBAN GREEN A: Ground Floor, The Tower, Deva City Office Park, Trinity Way, Manchester M3 7BF T: +44 (0) 161 312 3131 weareurbangreen.co.uk				
Client:		AMERESCO		
Project:		HOUGH END LEISURE CENTRE		
Title:		TREE PROTECTION INDEX		
Issue:		PLANNING		
Drawn:	EA	Checked:	RH	Approved: EA
Project:	UG1192	Scale @ A1:	NTS	Date: 18/08/21
Dwg No:	UG_1192_ARB_TPI_01	Revision:	00	