

Arboricultural Impact Assessment (AIA)

December 2022

Albert Bridge House

1 Bridge Street

Manchester

M60 9AF

U R B A N
G R E E N

QUALITY MANAGEMENT

Project No.:	UG1452			
Project:	Albert Bridge House			
Location:	1 Bridge Street, Manchester, M60 9AF			
Title:	Arboricultural Impact Assessment			
Document Type:	BS 5837			
Date:	01/12/2022			
Prepared By:	Adam Hodgins			
Checked By:	Robert Hickey			
Approved By:	Andy Bagshaw			
Revision Status:				
Rev:	Date:	Issue/Purpose/ Comment:	Prepared:	Checked:

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1. Executive Summary

- 1.1.1. Urban Green has been instructed by Oval Real Estate Ltd. to carry out an Arboricultural Survey to British Standard 5837:2012 guidelines at Albert Bridge House, 1 Bridge Street, Manchester, M60 9AF and produce our findings in a report.
- 1.1.2. It is proposed to demolish all existing buildings on site and construct a multi-purpose scheme comprising residential property and office buildings, up to forty-four and seventeen storeys. 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 nine trees and three groups within the site boundary. The loss of these trees will have moderate short-term impacts on the character and visual amenity of the localised area. It is recommended that this tree loss is mitigated for by replacement tree planting and the production of a robust soft landscaping scheme.
- 1.1.4. At the time of writing this report we have not been made aware of the proposed demolition methodology for the site. Upon receipt of a finalised demolition method statement this report will be updated accordingly.
- 1.1.5. There is an incursion of construction work where the new buildings extend into the RPA of one tree and one group. Given the relatively minor incursions and the presence of existing hard surfaces within the RPAs the impacts of the proposed root incursions are likely to be tolerable providing that the trees are protected as detailed within this report. It is recommended that the works are supervised by the project Arboriculturalist.
- 1.1.6. Proposed new walkways within predicted root protection areas of trees to be retained will need to be constructed using an above ground method such as cellular confinement system, or similar, as detailed in BS5837.
- 1.1.7. Pruning works will be carried out to one group of boundary trees to provide adequate working space within the site and clearance from the new building. The works will be carried out in accordance with BS3998: 2012 Tree Work – Recommendations.
- 1.1.8. Tree protection fencing and ground protection will need to be installed at the alignment shown on the Tree Protection Plan in Appendix 4 before any construction activity takes place.
- 1.1.9. 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.
- 1.1.10. Urban Green have produced a Preliminary Ecological Appraisal, a Biodiversity Net Gain Assessment and Biodiversity Enhancement Management Plan, which should be read in conjunction with this report.
- 1.1.11. 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.
- 1.1.12. 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.

Introduction

1.2. Instructions and references

- 1.2.1. Urban Green have been instructed by Oval Real Estate Ltd. to carry out an 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.
- 1.2.2. 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 aide with decision making. This is achieved by providing impartial and balanced information on trees and their potential impacts.
- 1.2.3. Due to the size and 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.'*
- 1.2.4. The site is located in the area shown in Figure 1. The OS Grid Reference is SJ 83437 98372.



Figure 1 – Site Redline Boundary

1.3. Scope

- 1.3.1. 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.
- 1.3.2. 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.

1.4. Documents provided

- 1.4.1. 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.
- 1.4.2. 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.
- 1.4.3. A plan outlining the development proposals has been overlaid with the Tree Constraints Plan in order to assess the potential impacts.

1.5. Limitations

- 1.5.1. 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.
- 1.5.2. The consultant accepts no liability in respect of the trees unless the recommendations of this report are carried out under their supervision.
- 1.5.3. 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.
- 1.5.4. 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.
- 1.5.5. 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 reduce risk and liability associated with responsibility for trees.

2. Legislation

2.1. Tree protection status

- 2.1.1. 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.
- 2.1.2. Manchester City Council Planning department have confirmed via email on 31/10/2022 that TPO 2018 (Albert Bridge House, Bridge Street) is currently in effect at the site. This TPO relates to trees T1-T3 on the Tree Data Schedule at Appendix 1 and the Site Plans at Appendix 4.
- 2.1.3. The site is not located within a Conservation Area.
- 2.1.4. 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.
- 2.1.5. 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.
- 2.1.6. 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.

2.2. Wildlife

- 2.2.1. Urban Green have been appointed to complete a Preliminary Ecological Appraisal of the site (UG_1452_ECO_PEA_02), which should be read and adhered to should any tree work be required. The objectives of the assessment are to identify habitats on site and determine the suitability for any 'protected and/or notable' species, with consideration of any potential impacts on nearby designated sites. This report should be read in conjunction with the PEA report should any tree work be required.
- 2.2.2. 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 of works.

3. Arboricultural Impact Assessment (AIA)

3.1. Summary of the development

- 3.1.1. It is proposed to demolish all existing buildings on site and construct a multi-purpose scheme comprising residential property and office buildings, up to forty-four and seventeen storeys. Full details of the proposed site layout can be seen on the plans included in Appendix 4.

3.2. Tree constraints

- 3.2.1. 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.
- 3.2.2. 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.
- 3.2.3. 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.

3.3. Root Protection Areas (RPAs) explained

- 3.3.1. 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.
- 3.3.2. 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.
- 3.3.3. The RPAs of T1 and G21 has been modified in accordance with guidance as set out at section 4.6.2 of BS5837: 2012.

3.4. Surveyed Trees

- 3.4.1. Fifteen individual trees and six tree groups have been assessed, the quality and value of which are summarised below.
- 3.4.2. Ten individual trees and five tree groups were assessed as BS5837: 2012 'Moderate Quality' Retention Category 'B'; three individual trees and one tree group were assessed as BS5837: 2012 'Low Quality' Retention Category 'C'; and two individual trees were assessed as BS5837: 2012 'Unsuitable' Retention Category 'U'.
- 3.4.3. One tree within G18, G20 and G21 reside outside the provided red line boundary and are understood to be under third party ownership. all remaining trees reside within the ownership boundaries.

- 3.4.4. Tree cover onsite consists of moderate quality, mixed species ornamental planting, with more densely spaced trees and tree groups along the riverside embankment to the north of the site.
- 3.4.5. Trees are visually important in terms of their contribution to the character and appearance of the area, providing some screening and respite to a location dominated by urban infrastructure.

3.5. Impacts of development

- 3.5.1. BS5837: 2012 `Moderate Quality` B category trees T5, T6, T9, T10, T13, T15, T19 and groups G8, G11 along with `Low Quality` C category trees T7, T12, and group G14 will require removal to facilitate the development. Full details of all removals can be found in the Tree Work Schedule attached as Appendix 4.
- 3.5.2. This tree loss will have a moderate, localised impact on the visual amenity provided by the site to the surrounding area. The loss of these trees will be at least partially mitigated by the retention and protection of the remaining onsite vegetation and the provision of new tree planting and soft landscaping.
- 3.5.3. At the time of writing this report we have not been made aware of the proposed demolition methodology for the site. Upon receipt of a finalised demolition method statement this report will be updated accordingly.
- 3.5.4. T16 & T17, assessed as BS5837: 2012 Retention Category 'U' are in poor condition and will require removal in line with good arboricultural practice.
- 3.5.5. There is an incursion of construction work where the new buildings extend into the RPA of tree T1 and group G21 by 8.6% and 5% respectfully. Given the relatively minor incursions and the presence of existing hard surfaces within the RPAs, which is likely to have limited root growth, the impacts of the proposed root incursions on T1 and G21 are likely to be tolerable providing that the trees are protected as detailed on the tree protection plan. It is recommended that the works are supervised by the project Arboriculturalist as an added precaution. Works should be carried out using hand dig tools only within this area, with any necessary root pruning to be undertaken by the project Arboriculturist in accordance with section 7.2 of BS5837: 2012.
- 3.5.6. New permanent hard surfacing is required within the predicted RPAs of trees T1, T2, T3 and T4. An engineered system such as Cellular Confinement will facilitate the construction of proposed surfaces, preventing compaction of the soil and damage to the rooting environments, as indicated on the Tree Protection Plan at Appendix 4.
- 3.5.7. Temporary ground protection should be installed adjacent to T1 in the location specified on the Tree Protection Plan at appendix 4, as detailed at section 6.2.3 of BS5837: 2012 and also at section 4.8 of this report prior to work starting on site.
- 3.5.8. G21 requires selective pruning along its southern canopy to reduce lateral spread by 2 metres to facilitate access to and provide sufficient clearance for the proposed development. The works will not harm the health of the trees and are detailed in the Tree Works Schedule and on the Tree Removal Plan at appendix 4.

3.6. Tree surgery works

- 3.6.1. 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.
- 3.6.2. 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.
- 3.6.3. Any unforeseen tree works that become apparent during the construction process will require written consent from the Local Authority Tree Officer.

3.7. Protective fencing

- 3.7.1. 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.
- 3.7.2. Any fencing that is damaged so that it is no longer able to protect retained trees must be replaced/repared immediately with appropriate fencing.
- 3.7.3. The required specification for protective fencing is illustrated in the Tree Protection Plan (Insert 1).
- 3.7.4. 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.
- 3.7.5. 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.
- 3.7.6. 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).

3.8. Ground protection for pedestrians or light vehicles

- 3.8.1. The primary method of ground protection is the installation of a compressible layer (e.g. woodchip) over a geotextile fabric with side butting scaffold boards.
- 3.8.2. Ground protection measures whilst working the RPA must be capable of supporting the expected loads and avoid compaction of the soil.
- 3.8.3. The boarding will be left in place until the construction works are finished.
- 3.8.4. Scaffolding may first be erected with the uprights on spreader boards and the ground protection installed around the uprights.

3.9. Demolition and removal of surfaces in the RPA

3.9.1. 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.

3.10. Temporary site cabins

- 3.10.1. 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.
- 3.10.2. 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.

3.11. Utilities

- 3.11.1. 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. Where utilities need to be brought onto the site, these should be routed away from the RPAs of retained trees. Where this is not possible, methodologies on the installation of underground services without damaging the tree roots should be considered.
- 3.11.2. It is assumed that the existing service runs will be exploited where possible, but if new works are required it is important that they comply with the National Joint Utilities Group (NJUG) 'Guidelines for the planning, installation and maintenance of utility services in proximity to trees'.

3.12. Recommendations

- 3.12.1. In accordance with section 6.1 of BS5837:2012, the next stage should be the preparation of an Arboricultural Method Statement (AMS), this ensures that all retained trees survive the development process. An AMS details solutions and working methods so that the impacts identified do not have a detrimental effect on retained trees. The AMS will advise on temporary protective barriers, temporary ground protection, site supervision, and will detail specialist construction techniques (such as cellular confinement).
- 3.12.2. A Tree Demolition Plan will be required to provide adequate protection to the onsite trees to be retained during demolition of existing onsite structures.
- 3.12.3. 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.
- 3.12.4. 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.
- 3.12.5. 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
							Priority	Inspect Freq (yrs)	Structural Condition	Retention Category	(m)
T1	Mature Italian Alder Alnus cordata	19	6	900	4.5 6 5 7	1: Moderate stem lean south west. 2: Pruning wounds due to crown lifting. 3: Western canopy encroaching onto adjacent property. 4: Acceptable condition at present.	No action required.		Good	40+ B1	10.80
							n/a	3	Good		
T2	Semi-Mature Cherry Prunus sp	8	2	400	5.5 4.5 6.5	1: Basal epicormic growth. 2: Stem bifurcates at a height of approximately 2m. 3: Previously pruned, with wounds well occluded. 4: Hanging branch situated on northern extent of canopy.	Remove hanging branches.		Fair	20-40 B1	4.80
							Moderate	1	Good		
T3	Mature Italian Alder Alnus cordata	17	3	700	3 5.5 8.5	1: Situated within stone planting pit. 2: Moderate stem lean south. 3: Previously topped at a height of approximately 10m.	No action required.		Good	40+ B1	8.40
							n/a	3	Good		
T4	Early-Mature Lime Tilia sp	12	4	400	3.5 5 4.3 6	1: Located in raised planting bed. 2: Evidence of stem girdling roots within the top 500mm of topsoil. 3: Evidence of displacement of planting bed. 4: Rooting area likely to be restricted due to location of tree within hard standing.	No action required.		Fair	10-20 C1	4.80
							n/a	3	Good		
T5	Early-Mature Norway Maple Acer platanoides	13	5	560	5.5 5.5 7 7	1: Located in raised planting bed. 2: Exposed structural roots, due to displacement of planting bed border. 3: Bifurcated stem at a height of approximately 4m. 4: Moderate amounts of deadwood throughout canopy, up to approximately 100mm diameter.	Crown clean to remove dead and damaged branches.		Good	20-40 B2	6.72
							Moderate	1	Good		
T6	Mature Willow Salix sp	14	8	900	6 6 5 6	1: Situated within raised planting bed. 2: Roots evidently displaced planting bed wall. 3: Densely ivy clad stem, which significantly restricted detailed inspection of stem. 4: Possible hanging deadwood within canopy.	Sever ivy at base to 1m and remove significant deadwood.		Fair	20-40 B1	10.80
							Low	1.5	Good		

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
T7	Semi-Mature Lime Tilia sp	8	3	250	2 1 3	1: Situated in raised planting bed. 2: Basal epicormic growth present. 3: Signs of displacement to planting bed boundary. 4: Moderate canopy bias due to suppression from neighbouring tree.	No action required.		Fair	10-20	C1	3.00
	n/a						3	Fair				
G8	Early-Mature Norway Maple Acer platanoides	av 15	av 5	av 600	av 9 5 6 each	1: Located in raised planting bed. 2: All trees displaying girdling roots. 3: Trees evidently displacing planting bed wall. 4: Several hanging dead branches throughout canopies of group.	Crown clean to remove dead and damaged branches.		Good	20-40	B1	7.20
	Moderate						1	Good				
T9	Mature Willow Salix sp	19	4	1000	10 8 5	1: Located on slight west facing banking. 2: Ivy partially obscuring stem on southern side. 3: Minor amounts of deadwood located throughout canopy.	No action required.		Good	20-40	B2	12.00
	n/a						3	Good				
T10	Early-Mature Sycamore Acer pseudoplatanus	11	4	400	2 4 5	1: Located on west facing banking. 2: Stem bifurcates at a height of approximately 2m. 3: Minor deadwood throughout crown. 4: Moderate canopy bias due to suppression from neighbouring tree.	No action required.		Good	20-40	B2	4.80
	n/a						3	Good				
G11	Early-Mature Mixed Species	av 18	av 5	av 460	av 4 6 4 each	1: Closely spaced linear group located on west facing banking. 2: Species include sycamore and willow. 3: Dense ivy covering two trees in group. 4: Minor deadwood throughout crown.	Crown clean to remove dead and damaged branches.		Fair	20-40	B2	5.52
	Moderate						1	Good				
T12	Mature Willow Salix sp	18	6	710	3 6 1	1: Situated on west facing banking. 2: Twin stemmed from ground level. 3: Dense ivy on stem significantly restricted detailed inspection of stem. 4: Moderate canopy bias due to suppression from neighbouring trees.	Remove ivy and re-inspect for defects.		Fair	20-40	C1	8.52
	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)
T13	Early-Mature Lime Tilia sp	16	6	530	4 4 2	1: Located at top of west facing banking. 2: Twin stemmed from ground level. 3: Dense vegetation restricted access for detailed inspection of stem. 4: Previously pruned, with wounds well occluded.	Remove vegetation and reinspect.		Good	20-40 B2	6.36
							Low	1	Good		
G14	Semi-Mature Laurel Prunus laurocerasus	av 7	av 1	av 210	av 2 2 each	1: Closely spaced pair. 2: Multistemmed from ground level. 3: Located on west facing banking.	No action required.		Good	10-20 C1	2.52
							n/a	3	Good		
T15	Semi-Mature Sycamore Acer pseudoplatanus	13	5	430	4 4 4	1: Located on west facing banking. 2: Dense vegetation significantly restricted detailed inspection of stem. 3: Previously pruned, with wounds well occluded.	Remove vegetation and reinspect.		Good	20-40 B2	5.16
							Low	1	Good		
T16	Semi-Mature Elder Sambucus nigra	6	1	190	1 1 1	1: Moribund tree. 2: Located on west facing banking. 3: Little remaining canopy.	Remove.		Poor	<10 U	2.28
							Moderate	1	Poor		
T17	Semi-Mature Elder Sambucus nigra	6	1	190	1 1 1	1: Moribund tree. 2: Located on west facing banking. 3: Little remaining canopy.	Remove.		Poor	<10 U	2.28
							Moderate	1	Poor		
G18	Early-Mature Sycamore Acer pseudoplatanus	av 14	av 5	av 500	av 4 4 each	1: Closely spaced group. 2: Located on steep west facing banking and subsequently not inspected in detail.	No action required.		Good	20-40 B2	6.00
							n/a	3	Good		

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)
T19	Semi-Mature Sycamore Acer pseudoplatanus	13	5	430	4 4 4	1: Located on west facing banking. 2: Dense vegetation significantly restricted detailed inspection of stem. 3: Previously pruned, with wounds well occluded.	Remove vegetation and reinspect.		Good	20-40 B2	5.16
							Low	1	Good		
G20	Semi-Mature Lime Tilia sp	av 8	av 3	av 290	av 2.5 2.5 2.5 each	1: Two rows of closely spaced urban planting. 2: Signs of uplift to planting pits evident to a number of trees in group. 3: All previously pruned to a similar extent.	No action required.		Good	10-20 B1	3.48
							n/a	3	Good		
G21	Early-Mature Mixed Species	av 15	3	av 550	av 5 5 5 each	1: Closely spaced group situated along riverbank. 2: Species include willow and sycamore. 3: Restricted access and subsequently not inspected in detail. 4: Rooting area likely to be restricted due to proximity of group to river.	No action required.		Good	20-40 B2	6.60
							n/a	3	Good		

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

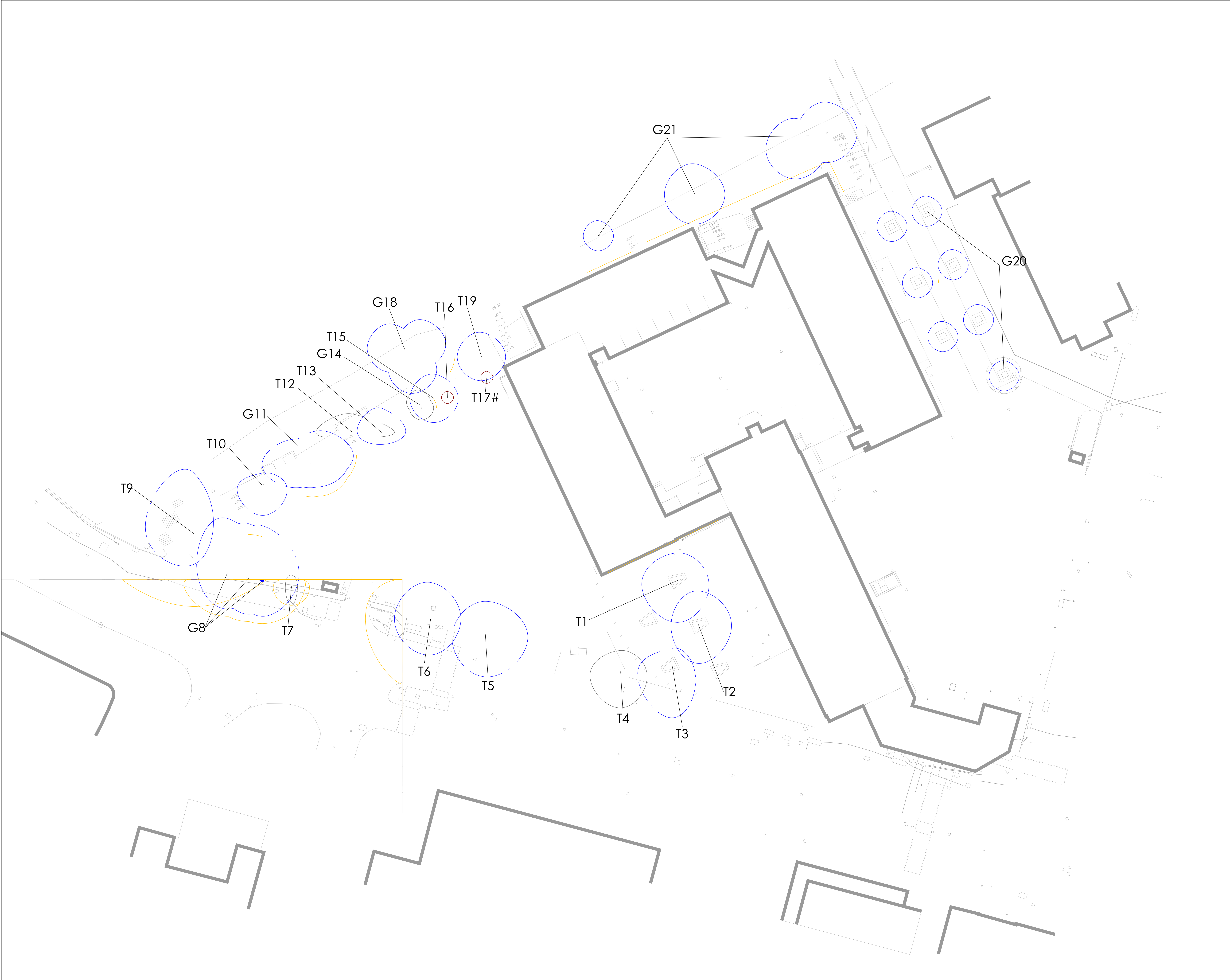
The following table provides an explanation of retention categories used.		
Trees to be removed		Colour on Plan
Category U Includes trees of very low quality that offer little or no amenity value.	Trees that are in such a condition that they should be removed as a matter of good arboricultural practice 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.



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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)

#

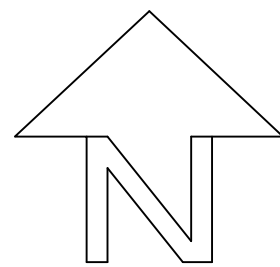
Position estimated on site

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Client: OVAL REAL ESTATE LTD.				
Project: ALBERT BRIDGE HOUSE				
Title: TREE CONSTRAINTS PLAN				
Issue: PLANNING				
Drawn:	WS	Checked:	AB	Approved:
				AB
Project:	UG1452	Scale @ A0:	1:200	Date:
				4/3/2022
Dwg No:	UG_1452_ARB_TCP_01			Revision:
				00



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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
	Site Redline Boundary

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Client: **OVAL REAL ESTATE LTD.**

Project: **ALBERT BRIDGE HOUSE**

Title: **TREE REMOVAL PLAN**

Issue: **PLANNING**

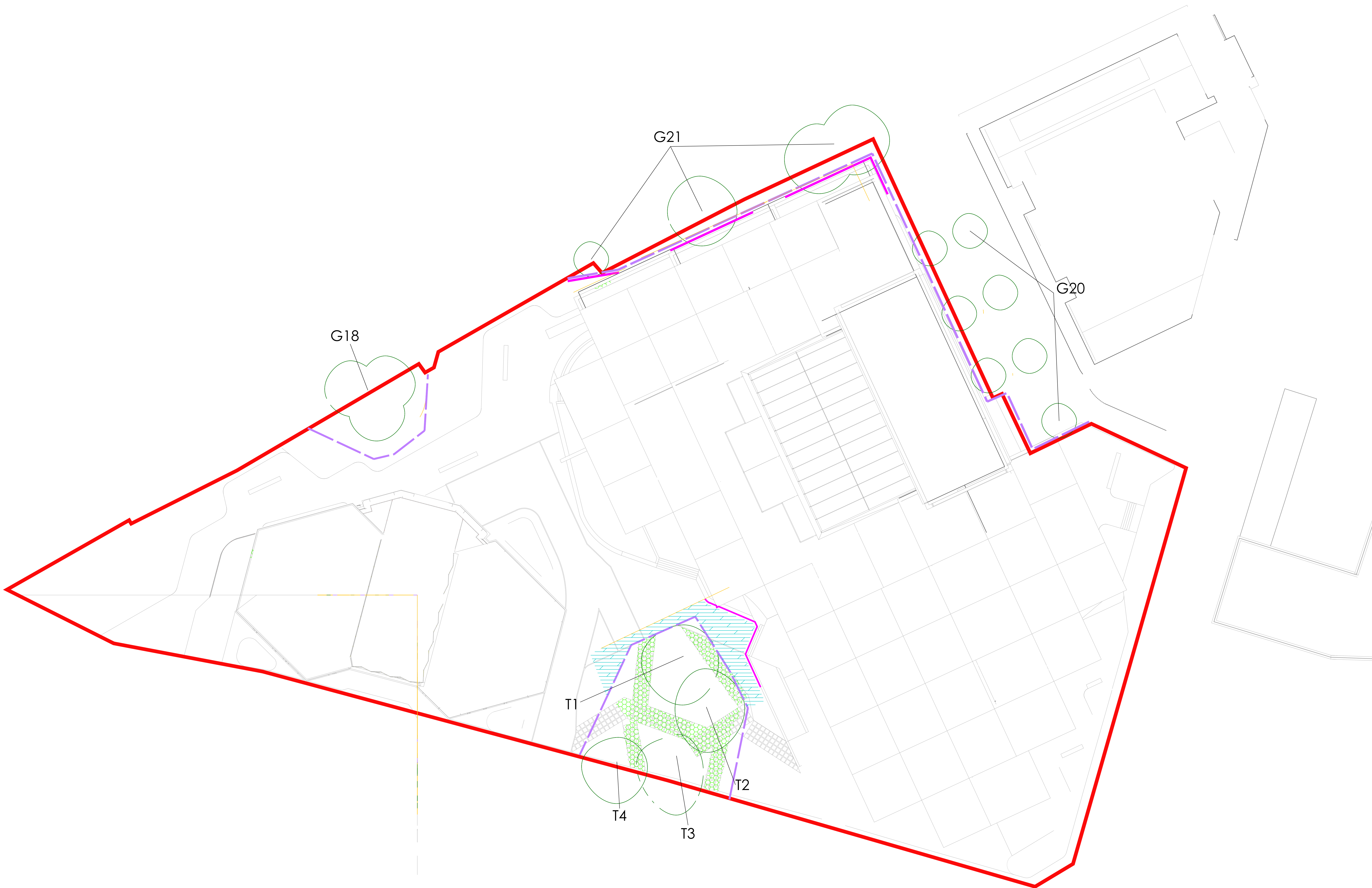
Drawn:	AH	Checked:	AB	Approved:	AB
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Project:	UG1452	Scale @ A0:	1:200	Date:	01/12/22
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Dwg No:	UG_1452_ARB_TRP_01	Revision:	00
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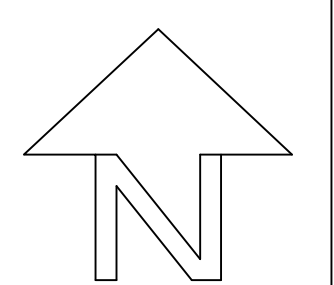
Tree Works Schedule			
Tree Number	Species	Works Required	Reason
T5	Norway Maple	Fell to ground level and grind out stumps.	To facilitate the development.
T6	Willow sp.		
T7	Lime sp.		
G8	Norway Maple		
T9	Willow sp.		
T10	Sycamore		
G11	Mixed Species		
T12	Willow sp.		
T13	Lime sp.		
G14	Cherry laurel		
T15	Sycamore		
T16	Sycamore		Arboricultural best practice.
T17	Elder		To facilitate the development.
T19	Sycamore		
G21	Mixed Species	Prune to reduce lateral extension by 2 metres on southern side of the group as detailed on the Tree Removal Plan.	

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Title: TREE WORKS SCHEDULE				
Issue: PLANNING				
Drawn:	AH	Checked:	AB	Approved: AB
Project:	UG1452	Scale @ A0:	NTS	Date: 01/12/22
Dwg No:	UG_1452_ARB_TWS_01			Revision: 00



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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
- Root Protection Area (RPA)
- # Position estimated on site
- Redline Site Boundary
- Protective fencing (See Insert 1 & Insert 2)
- Cellular Confinement System
- Arboricultural Supervised Excavations
- Ground protection (See Insert 3)
- Site Redline Boundary

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Project:

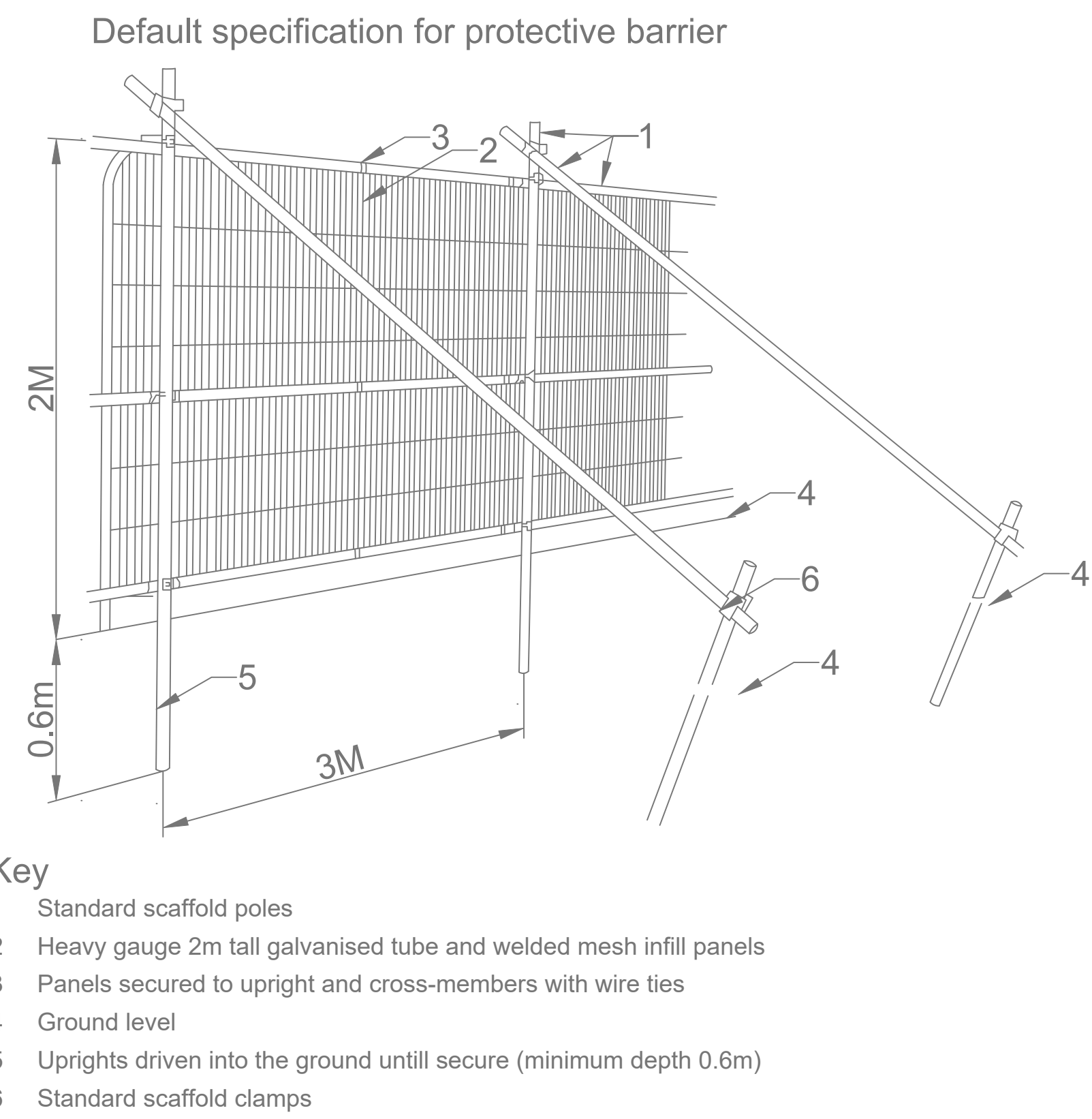
ALBERT BRIDGE HOUSE

Title:

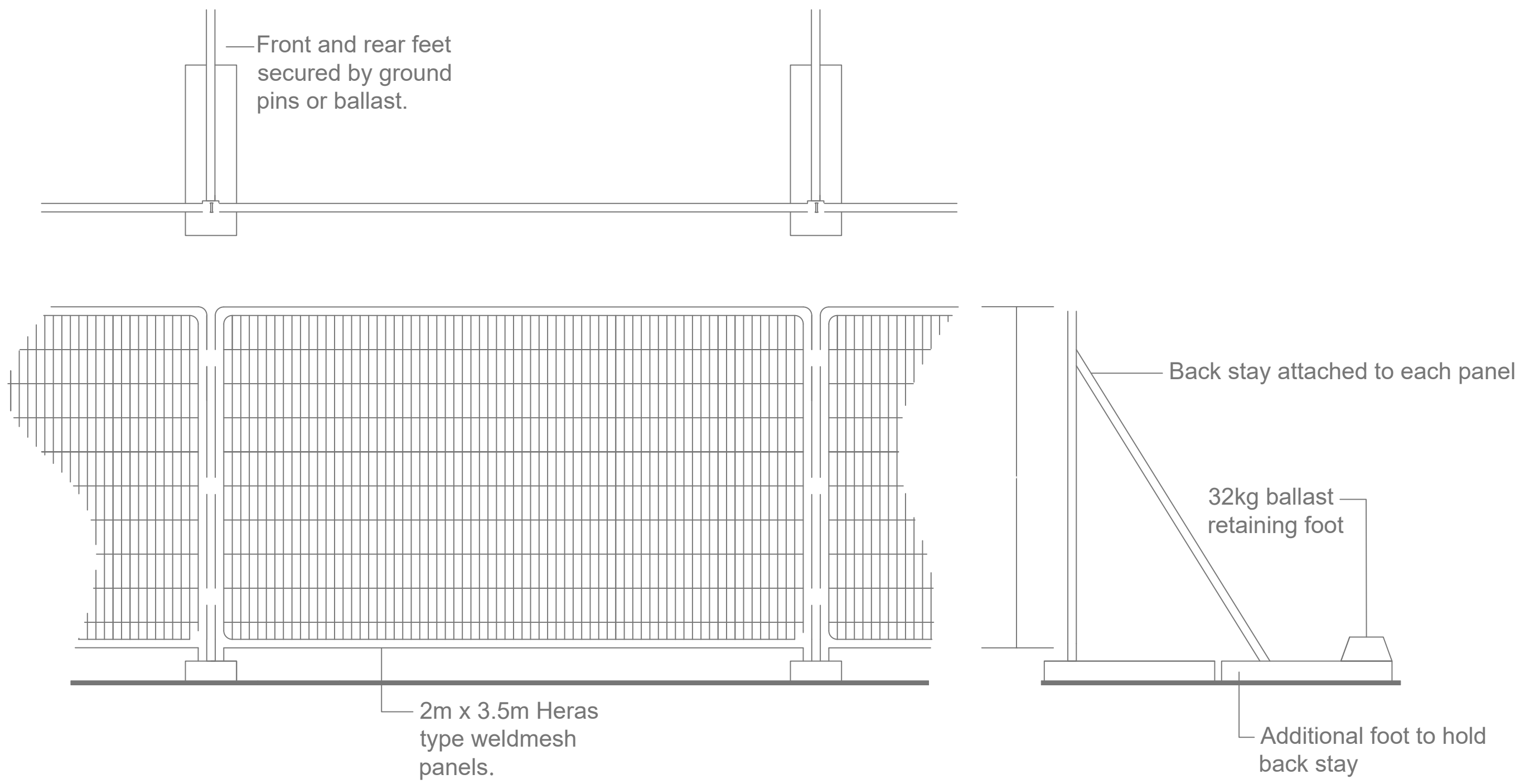
TREE PROTECTION PLAN

Issue: PLANNING			
Drawn:	AH	Checked:	AB
Project:	UG_1452	Scale @ A0:	1:200
Dwg No:	UG_1452_ARB_TPP_01	Date:	01/12/22
		Revision:	00

Insert 1: Tree protective fencing specification



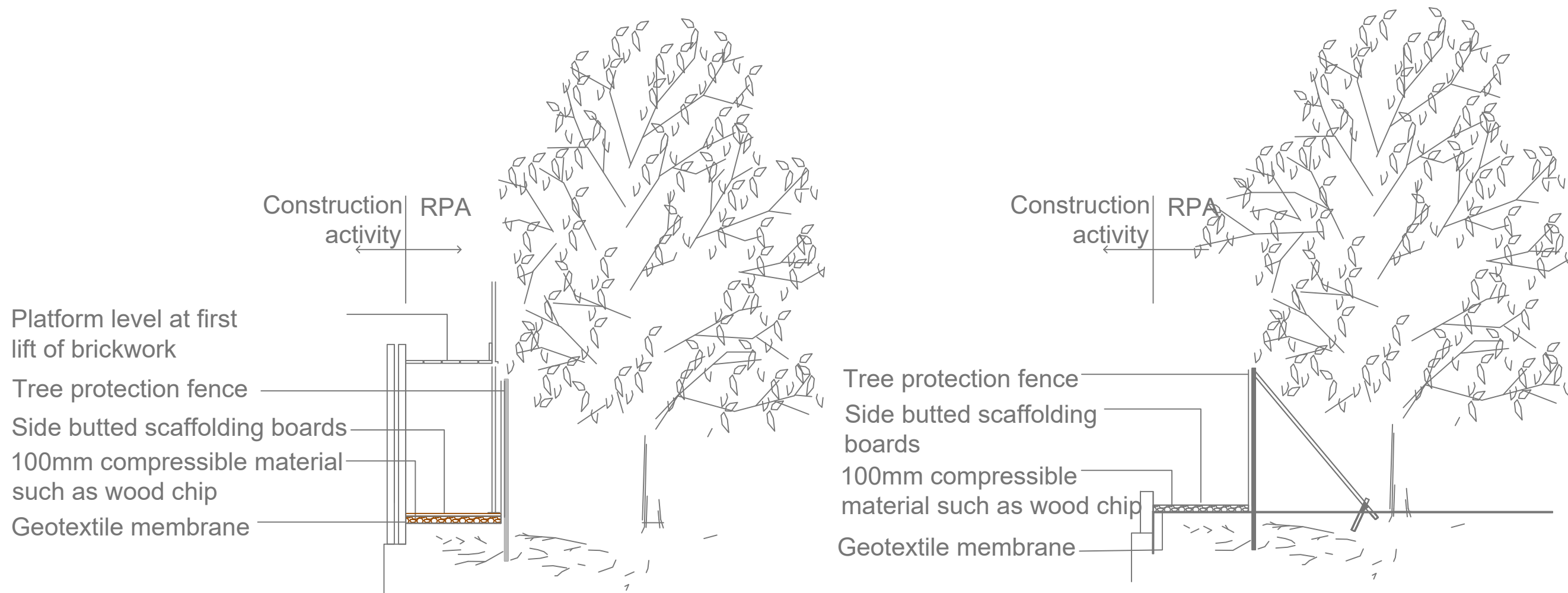
Back-stay support



Insert 2: Tree protection notice



Insert 3: Ground protection specification



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Notes:-

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Project: ALBERT BRIDGE HOUSE				
Title: TREE PROTECTION INDEX				
Issue: PLANNING				
Drawn: AH		Checked: AB		Approved: AB
Project: UG1452		Scale @ A0: NTS		Date: 01/12/22
Dwg No: UG_1452_ARB_TPI_01				Revision: 00