

Arboricultural Impact Assessment (AIA)

November 2021

Space Studios
Vaughan Street
Manchester
M12 5FQ

U R B A N
G R E E N

QUALITY MANAGEMENT

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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. Ground protection for pedestrians or light vehicles	7
4.8. Temporary tree guard – G27	7
4.9. Demolition and removal of surfaces in the RPA	7
4.10. Temporary site cabins	8
4.11. Utilities	8
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 Manchester Council to carry out an Arboricultural Survey to British Standard 5837:2012 guidelines at Space Studios, Vaughan Street, Manchester, M12 5FQ and produce our findings in a report.
- 1.1.2. It is proposed to complete the last phase of the development, with the construction of one new unit along with soft and hard landscaping. Full details of the proposed site layout can be seen on the plans included in Appendix 4.
- 1.1.3. Trees on and adjacent to the application site have been assessed and the effects of the development proposal on them evaluated in accordance with current best practice.
- 1.1.4. Removal of mostly low-quality trees is required to accommodate the development proposal, but these works will have only short-term impacts on the visual quality of the tree cover and appropriate new landscaping could bring substantial benefits.
- 1.1.5. Visually important boundary trees to the south and west of the site will be retained and can be protected during the development in accordance with current best practice.
- 1.1.6. 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.
- 1.1.7. 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.
- 1.1.8. It will also be necessary to carry out supervised excavation adjacent to G5, T6, G7 T11 and T24 as indicated on the Tree Protection Plan.
- 1.1.9. 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 Manchester Council 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 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.’
- 2.1.4. The site is located in the area shown in Figure 1.



2.1.5. 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 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. Manchester City Council confirmed by email on 13/07/21 that the site does not contain any TPO's. The site is not within a conservation area.
- 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. 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*.
- 3.2.1. An Ecological survey has been carried out, UG_893_ECO_PEA_01 which should be read and followed should any tree work be required.
- 3.2.2. 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 works.

4. Arboricultural Impact Assessment (AIA)

4.1. Summary of the development

- 4.1.1. It is proposed to complete the last phase of the development, with the construction of one new unit with soft and hard landscaping. 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. Most 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. Sixteen individual trees and fifteen groups of trees have been surveyed. The easternmost tree in G5, group G26, the northernmost tree in G27 and T28 to G30 are off-site; all the other trees are within the site or on the site boundaries.
- 4.4.2. Of these, nine trees and seven groups are BS5837: 2012 'moderate quality' B category, five trees and eight groups are 'low quality' C category, and two trees (T25 and T29) are 'unsuitable quality' U category.
- 4.4.3. Trees along the southern boundary adjacent to Wenlock Way and adjacent to Kniverton Road, form part of the boundary landscaping associated with the existing site use and are key in visual terms. Trees and shrubs to the centre of the site are more secondary in visual terms.
- 4.4.4. Visually important boundary trees to the south and west of the site will be retained and can be protected during the development in accordance with current best practice.

- 4.4.5. The 'moderate quality' B category trees and groups G4, G15, T18, G20, T21, T22 and G23 along with three 'low quality' C category trees and five 'low quality' groups will be removed to accommodate the development. All of these are planted ornamental trees to the centre of the site associated with the current land use, the loss of which will not significantly harm public views from outside of the site. Any visual impacts resulting from the loss of these trees and groups can be mitigated with new boundary landscaping.
- 4.4.6. Removal of 'unsuitable' U category trees T25 and T29 is proposed as appropriate arboricultural management irrespective of the development proposal.
- 4.4.7. Retention of the areas of existing hardstanding beneath G5, T6, G7, T8, T9, T10, T11 and G27 as identified on the tree protection plan, during demolition and construction, will limit the risk of damage to the underlying soils and roots within the tree's RPA. Resurfacing in this area should be carried out in accordance with section 7.3.6 and 7.4 of BS5837, although top-dressing over the existing hard surface would be preferable and more straightforward.
- 4.4.8. Cellular confinement will be required to construct the above ground surface within the RPA of T24. This is required to avoid damage to the rooting area from compaction. The finished surface material used will need to be porous to allow water and air to pass through it.
- 4.4.9. Supervised excavation is required adjacent to trees G5, T6, G7, T11 and T24, to allow for the construction of footpaths and the access road within the RPAs of these trees. The works should be undertaken in accordance with section 7.2 (Avoiding physical damage to the roots during demolition or construction) of BS5837: 2012 and overseen by the project Arboriculturalist.

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. Ground protection for pedestrians or light vehicles

- 4.7.1. 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.
- 4.7.2. Ground protection measures whilst working the RPA must be capable of supporting the expected loads and avoid compaction of the soil.
- 4.7.3. The boarding will be left in place until the construction works are finished.
- 4.7.4. Scaffolding may first be erected with the uprights on spreader boards and the ground protection installed around the uprights.

4.8. Temporary tree guard – G27

- 4.8.1. Where space is limited, it is sometimes necessary to construct a temporary tree guard to physically protect the main stem of the tree.
- 4.8.2. 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.

4.9. 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
							Priority	Inspect Freq (yrs)	Structural Condition	Retention Category	(m)
T1	Semi-Mature Norway Maple Acer platanoides	8	2.5	250	3 3 3	1: Growing within planting bed. 2: Ivy beginning on stem. 3: Minor decline within canopy. 4: Damage to branches, loss of bark from vehicles.	No action required.		Fair	20-40	3.00
							n/a	3	Good	C	
T2	Semi-Mature Norway Maple Acer platanoides	8	3	250	3 3 3	1: Growing within planting bed. 2: Ivy on stem. 3: Half of canopy dead. 4: Canopy merging with neighbouring trees.	No action required.		Poor	10-20	3.00
							n/a	3	Fair	C	
T3	Early-Mature Norway Maple Acer platanoides	10	4	300	4 4 4	1: Growing within planting bed. 2: Bifurcates at 1.5m. 3: Crown raised in the past. 4: Minor decline within canopy.	No action required.		Fair	20-40	3.60
							n/a	3	Good	C	
G4	Semi-Mature Norway Maple Acer platanoides	av 9	av 2	av 320	av 4 4 each	1: Growing within planting bed. 2: Crown raised in the past with stubs remaining. 3: Acceptable condition currently. 4: Canopies merging with neighbouring trees.	No action required.		Good	20-40	3.84
							n/a	3	Good	B	
G5	Semi-Mature London Plane Platanus x hispanica	av 10	av 2	av 330	av 4 4 each	1: Boundary group with merged canopies. 2: Canopies overhanging footpath with good clearance. 3: Minor deadwood within canopy. 4: Splitting and cracking of bark typical of species.	No action required.		Good	40+	3.96
							n/a	3	Good	B	
T6	Early-Mature London Plane Platanus x hispanica	11	4	370	5 5 5	1: Canopy overhanging footpath with good clearance. 2: Bifurcates at 4m, growing in raised edge boarder. 3: Minor decline within canopy. 4: Acceptable condition currently.	No action required.		Good	40+	4.44
							n/a	3	Good	B	

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	Semi-Mature London Plane Platanus x hispanica	av 9	av 3	av 300	av 3 3 each	1: Boundary line group with merged canopies. 2: Canopies overhanging footpath with good clearance. 3: Dieback within canopies.	No action required.		Fair	20-40	3.60
							n/a	3	Good	C	
T8	Semi-Mature Oak Quercus petraea	10	2	220	3 3 1	1: Outside boundary fence. 2: Growing within planting pit. 3: Acceptable condition currently.	No action required.		Fair	20-40	2.64
							n/a	3	Good	B	
T9	Young Red Oak Quercus rubra	4.5	1	140	1 1 1	1: Outside of boundary fence with decline to canopy. 2: Suppressed by neighbouring tree. 3: Loss of leader. 4: Growing in planting bed.	No action required.		Fair	20-40	1.68
							n/a	3	Fair	C	
T10	Early-Mature Birch Betula sp	10	2	310	2 2 2	1: Wound to stem with loss of bark, is occluding. 2: Canopy overhanging footpath with good clearance. 3: Removal of rooting area in the past with loss of 30cm depth within 2m of stem. 4: Minor deadwood within canopy.	No action required.		Fair	40+	3.72
							n/a	3	Good	B	
T11	Early-Mature Birch Betula sp	9	1	250	2.5 2.5 2.5	1: Large wound to stem with loss of bark is occluding. 2: Pruned in the past. 3: Slight stem lean to south. 4: Acceptable condition currently.	No action required.		Fair	40+	3.00
							n/a	3	Good	B	
T12	Semi-Mature Alder (common) Alnus glutinosa	8.5	1	150	2 2 2	1: Acceptable clearance from building. 2: Good form. 3: Acceptable condition currently.	No action required.		Good	40+	1.80
							n/a	3	Good	B	

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							Priority	Inspect Freq (yrs)	Structural Condition	Retention Category	(m)
G13	Semi-Mature Mixed species	av 5	av 1	av 120	av 1.5 1.5 1.5 each	1: Mix of rowan and whitebeam. 2: Growing within border shrubs, no access. 3: Acceptable condition currently. 4: Minor splitting of bark.	No action required.		Fair	20-40	1.44
							n/a	3	Fair	C	
G14	Semi-Mature Mixed species	av 8	av 1.5	av 140	av 3 3 3 each	1: 5 rowan and 1 birch. 2: Growing behind fence. 3: Almost touching building. 4: Minor decline within canopy. 5: Shrubs at base.	No action required.		Fair	20-40	1.68
							n/a	3	Good	C	
G15	Early-Mature Oak Quercus petraea	av 14	av 1.5	av 270	av 4.5 4.5 each	1: Canopy touching building. 2: Damage to branches within canopy snapped by vehicle. 3: Minor deadwood within canopy.	Prune back from building and remove deadwood.		Fair	20-40	3.24
							Moderate	1	Good	B	
G16	Semi-Mature Alder (common) Alnus glutinosa	av 8	av 6	av 130	av 1 1 each	1: Stake and tie left at base. 2: Heavily crown raised. 3: Acceptable condition currently.	No action required.		Fair	40+	1.56
							n/a	3	Good	C	
G17	Semi-Mature Variegated Sycamore Acer pseudoplatanus 'variegated'	av 7	av 4.5	av 220	av 2.5 2.5 2.5 each	1: Group of 2. 2: Heavily crown raised with stub cuts. 4: Wounds to lower stem with loss of bark is occluding.	No action required.		Fair	40+	2.64
							n/a	3	Good	C	
T18	Early-Mature Swedish Whitebeam Sorbus intermedia	9	2	390	2 5 5	1: Multi stemmed from 1.5m. 2: Pruned in the past with stub cuts. 3: Acceptable clearance from building. 4: Minor splitting to stem with contortion.	No action required.		Good	40+	4.68
							n/a	3	Good	B	

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)
G19	Semi-Mature Rhus Rhus typhina	av 3	av 0.2	av 100	av 2 2 2 each	1: Group growing on top of mound. 2: Sucking from main tree. 3: Acceptable condition currently. 4: One whitebeam growing out of west group.	No action required.		Fair	10-20 C	1.20
	n/a	3	Fair								
G20	Semi-Mature Birch Betula sp	av 12	av 1	av 130	av 1.5 1.5 1.5 each	1: Stakes left at base. 2: Circle of closely planted trees. 3: Canopies merging. 4: Acceptable clearance from building.	No action required.		Good	40+ B	1.56
	n/a	3	Fair								
T21	Early-Mature Swedish Whitebeam Sorbus intermedia	12	1.5	380	1 5 5	1: Thigmotropism of stem. 2: Acceptable clearance from building. 3: Biased canopy due to building. 4: Bifurcates at 2m.	No action required.		Good	40+ B	4.56
	n/a	3	Fair								
T22	Early-Mature Silver maple Acer saccharinum	13	2	460	4 6 6	1: Canopy touching building with stem leans toward it. 2: Growing within shrubs at base not fully accessed. 3: Crown reduced from building in the past. 4: Large birds nest.	No action required.		Good	40+ B	5.52
	n/a	3	Good								
G23	Early-Mature Silver maple Acer saccharinum	av 11	av 2	av 300	av 4 4 4 each	1: Not fully accessed shrubs up base. 2: Minor declined within canopies. 3: Curving of stems. 4: Acceptable condition currently.	No action required.		Fair	40+ B	3.60
	n/a	3	Good								
T24	Mature Silver maple Acer saccharinum	18	4	630	6 6 6	1: Bifurcates at 3.5m. 2: Minor decline in canopy. 3: Epicormic growth on stem. 4: Lighting in ground with pipe within 1m of stem. 5: Acceptable clearance from building.	Monitor.		Fair	20-40 C	7.56
	Low	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)
T25	Over-Mature Silver maple Acer saccharinum	16	2	630	4 5 5	1: 90% of canopy dead. 2: Bark peeling and splitting of wood. 3: Significant hollowing when hit with nylon hammer. 4: Epicormic growth at base. 5: Lighting in ground with pipe within 1m of stem.	Remove.		Very Poor	<10 U	7.56
							High	N/A	Very Poor		
G26	Early-Mature Norway Maple Acer platanoides	av 12	av 3	av 470	av 6 6 each	1: Multi stemmed from 2m. 2: Deadwood in lower canopy. 3: Merged canopies. 4: 4 in a line. 5: Ivy beginning on stems.	No action required.		Good	40+ B	5.64
							n/a	3	Good		
G27	Early-Mature London Plane Platanus x hispanica	av 13	av 4	av 400	av 8.5 8.5 each	1: Linear group with canopies merging. 2: Canopies overhanging road out side of the site with acceptable clearance. 3: Growing within raised bed. 4: 2m clearance above some parking spaces.	No action required.		Good	40+ B	4.80
							n/a	3	Good		
T28	Mature Silver Maple Acer saccharinum	13	3	730	10.2 9 6.5	1: Epicormic growth at base and lower stem. 2: Multi stemmed from 2.5m. 3: Growing on raised land above parking. 4: 1m clearance from building.	No action required.		Fair	40+ B	8.76
							n/a	3	Good		
T29	Dead Rowan Sorbus aucuparia	6	2	210	1 1 1	1: Dead specimen.	Remove.		Dead	Dead U	2.52
							Moderate	N/A	Dead		
G30	Early-Mature Rowan Sorbus aucuparia	av 10	av 3	av 230	av 3 3 each	1: Cracking to bark on stem. 2: Deadwood in canopy. 3: Reduced vitality of canopy. 4: Canopies merging.	Monitor.		Fair	10-20 C	2.76
							Low	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 E S	Notes	Recommendations		Physiological Condition	Life Expectancy (yrs)	RPA Radius
							Priority	Inspect Freq (yrs)	Structural Condition	Retention Category	(m)
G31	Semi-Mature Alder (common)	av	av	av	av	1: Linear group of planted specimens. 2: Stake and ties still attached. 3: Acceptable condition currently.	Remove stake and ties.		Fair	40+	1.08
	Alnus glutinosa	5	1	90	1				Fair	C	
					each		Moderate	1			

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 with 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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Contractors must check all dimensions from site.

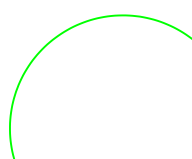
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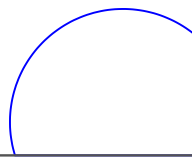
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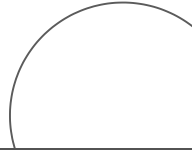
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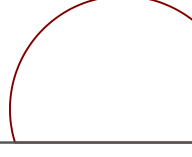
Category A tree, group or hedge



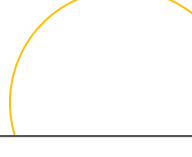
Category B tree, group or hedge



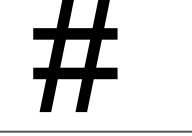
Category C tree, group or hedge



Category U tree, group or hedge



Root Protection Area (RPA)



Position estimated on site

REV.	DATE	DESCRIPTION	DRAWN	CHKD

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:

MANCHESTER COUNCIL

Project:

SPACE STUDIOS

Title:

TREE CONSTRAINTS PLAN

Issue:

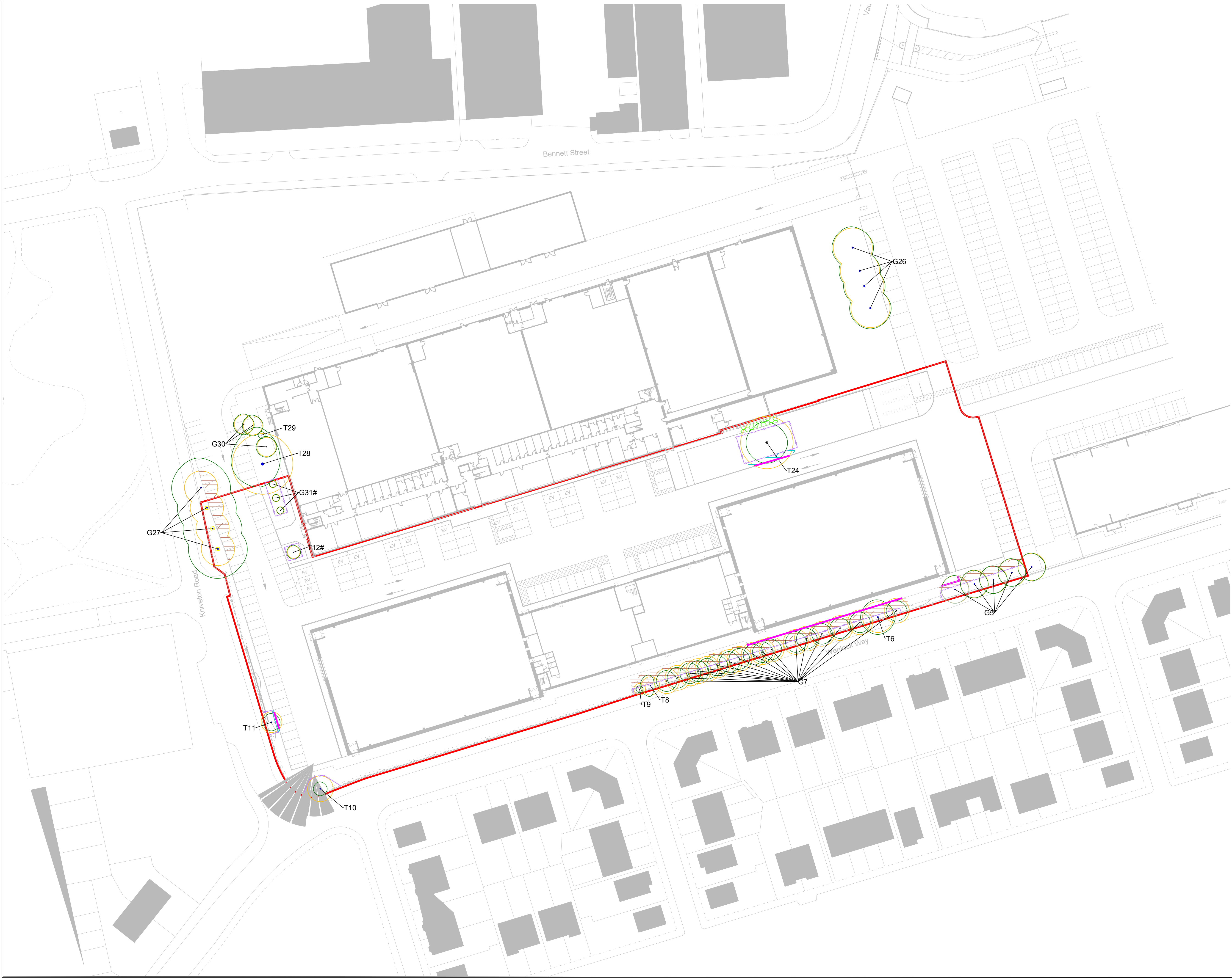
PLANNING

Drawn:	EA	Checked:	AB	Approved:	KO
Project:	UG893	Scale @ A1:	1:500	Date:	15/06/21
Dwg No:	UG_893_ARB_TCP_01			Revision:	00

Tree Works Schedule

Tree Number	Species	Works Required	Reason
T1	Norway maple	Fell to ground level. Grind or grub out the stump to a depth of 0.2m	To facilitate the development
T2			
T3			
G4			
G13	Mixed species		
G14			
G15	Oak		
G16	Alder		
G17	Variegated sycamore		
T18	Swedish whitebeam		
G19	Rhus		
G20	Birch		
T21	Swedish whitebeam		
T22	Silver maple		
G23			
T25			
T29	Rowan		Appropriate arboricultural management

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: MANCHESTER COUNCIL					
Project: SPACE STUDIOS					
Title: TREE WORKS SCHEDULE					
Issue: PLANNING					
Drawn:	EA	Checked:	AB	Approved:	KO
Project:	UG893	Scale @ A1:	NTS	Date:	13/07/21
Dwg No:	UG_893_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

Protective fencing (See Insert 1)

Protective fencing (See Insert 1)

Arboricultural Supervised Excavation

Ground protection (See Insert 3)

Ground protection (Existing Hard Surface)

Engineered Surface (CellWeb)

01	05/11/21	UPDATED LAYOUT	EA	RH
REV.	DATE	DESCRIPTION	DRAWN	CHKD

URBAN GREEN

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

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Client: MANCHESTER COUNCIL

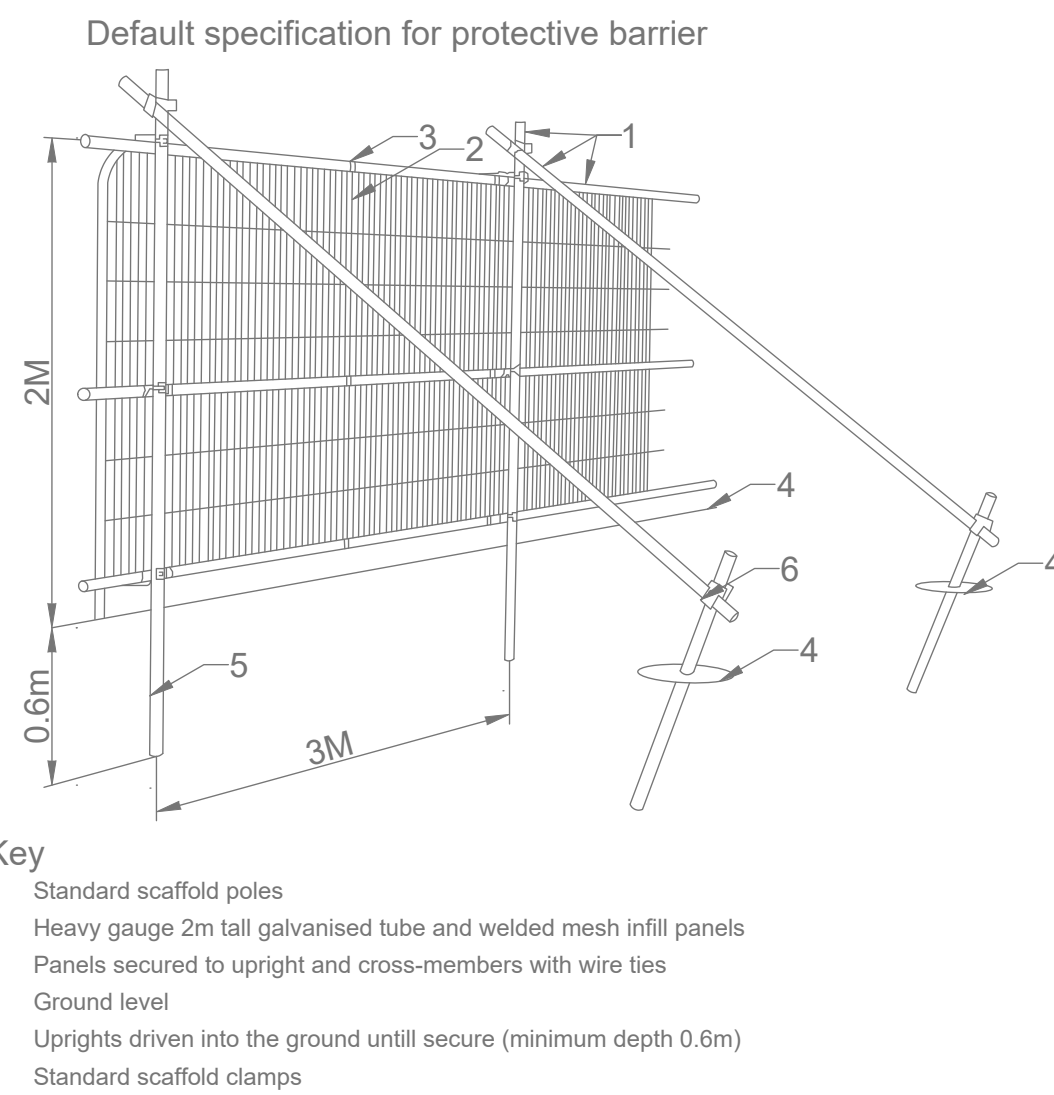
Project: SPACE STUDIOS

Title: TREE PROTECTION PLAN

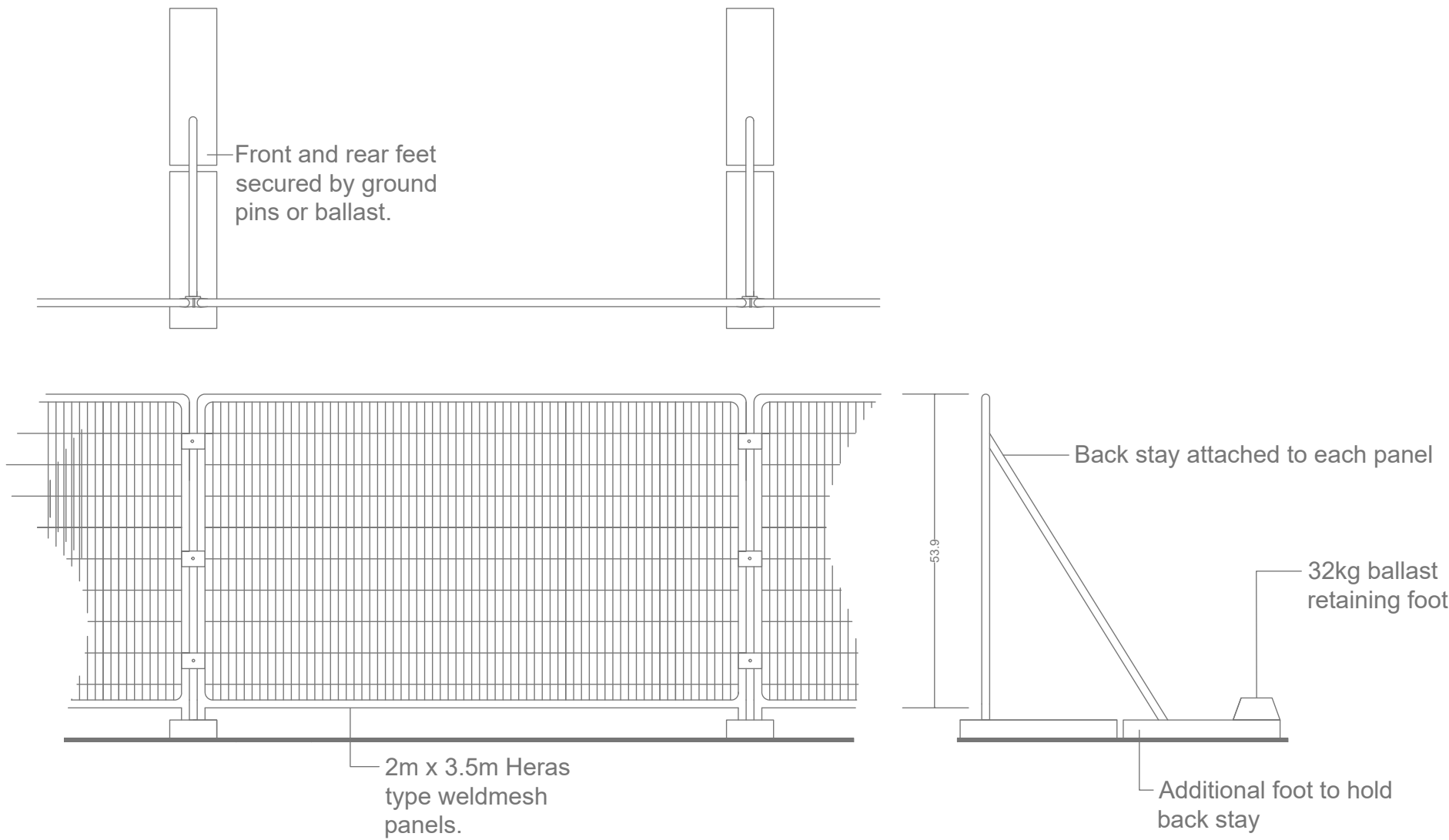
Issue: PLANNING

Drawn: EA	Checked: AB	Approved: KO
Project: UG893	Scale @ A1: 1:500	Date: 13/07/21
Dwg No: UG_893_ARB_TPP_01	Revision: 01	

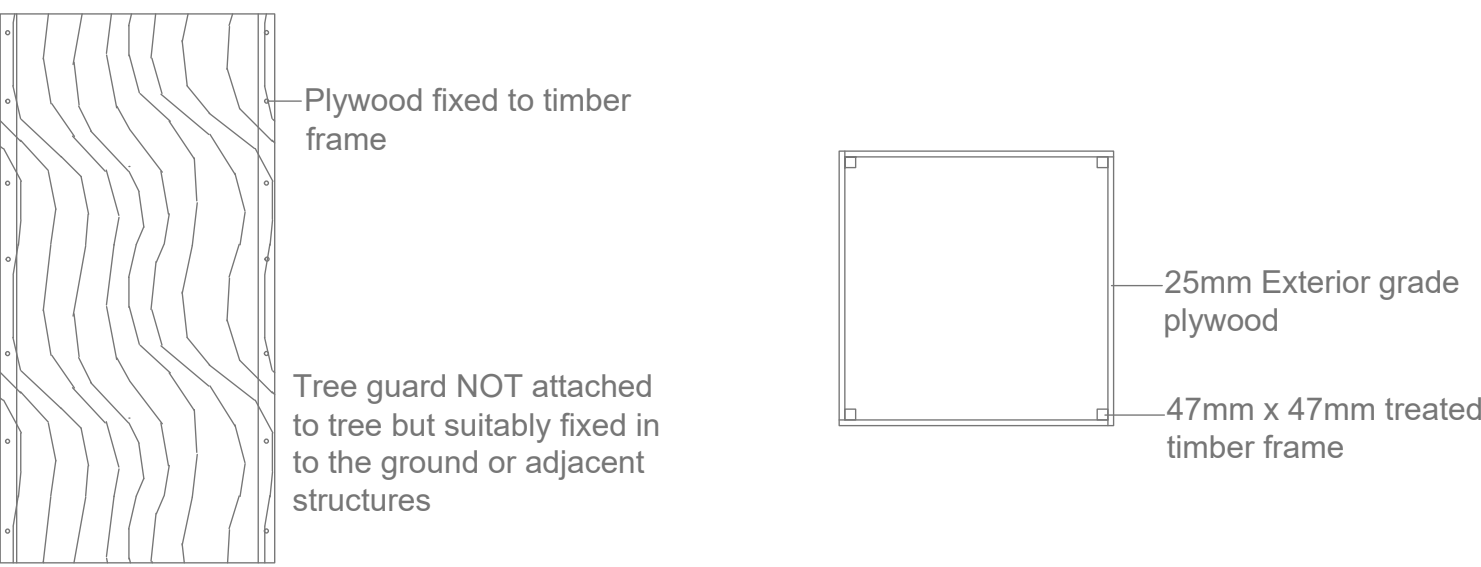
Insert 1: Tree protective fencing specification



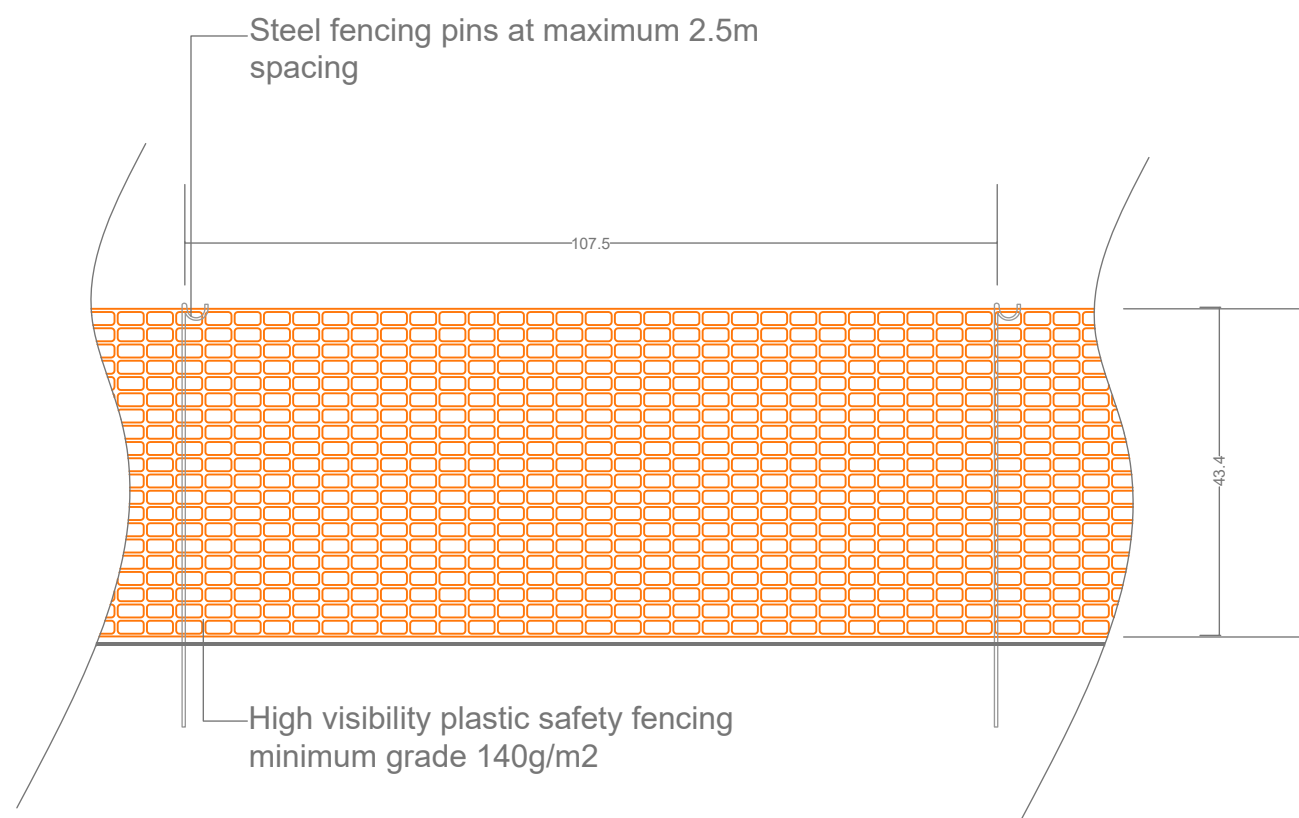
Back-stay support



Temporary tree guard specification



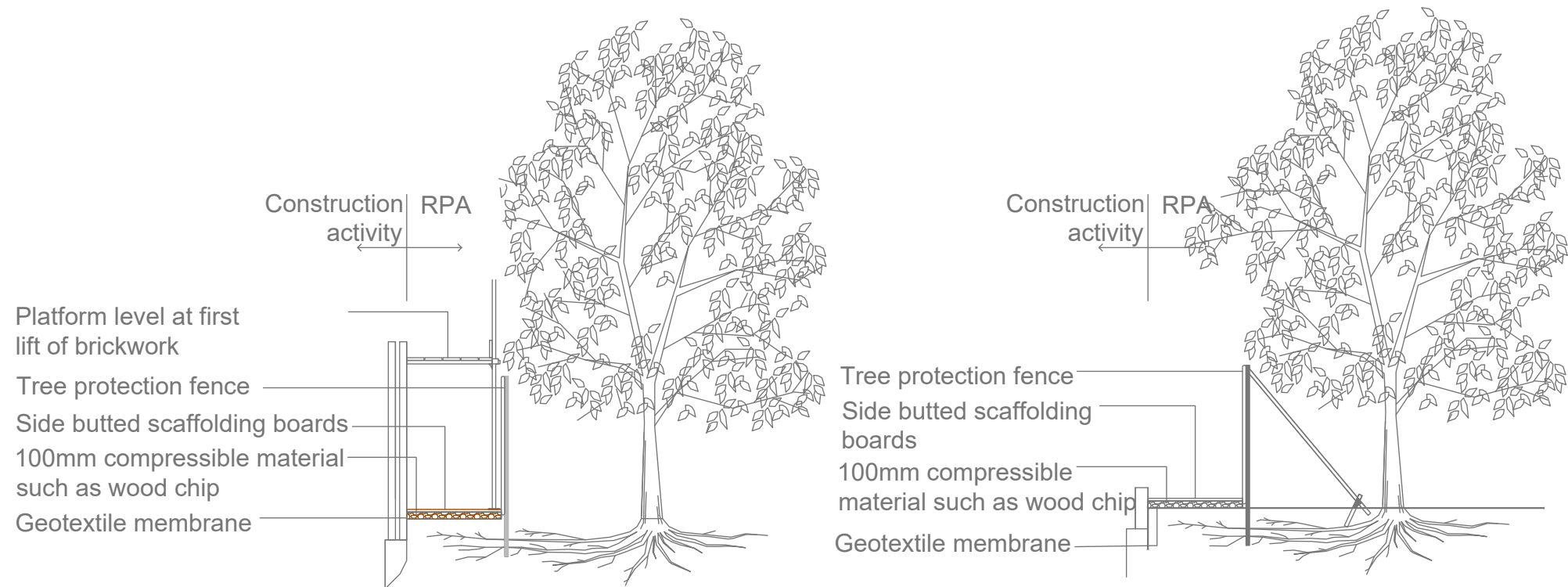
Barrier mesh specification



Insert 2: Tree protection notice

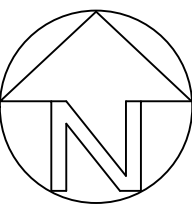


Insert 3: Ground protection specification



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Notes:-



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Client: MANCHESTER COUNCIL				
Project: SPACE STUDIOS				
Title: TREE PROTECTION INDEX				
Issue: PLANNING				
Drawn: EA		Checked: AB		Approved: KO
Project: UG893		Scale @ A1: NTS		Date: 13/07/21
Dwg No: UG_893_ARB_TPI_01				Revision: 00