

Arboricultural Impact Assessment (AIA)

September 2023

Mercury 62

Land off Cronton Road

Tarbock

Prescot

L35 1QR

U R B A N
G R E E N

QUALITY MANAGEMENT

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1. Executive Summary

- 1.1.1. Urban Green has been instructed by Maro Developments to carry out an Arboricultural Survey to British Standard 5837: 2012 guidelines at Land off Cronton Road, Tarbock, Prescot and produce our findings in a report.
- 1.1.2. It is proposed to erect 1 No. commercial unit (use class B8) with ancillary offices and outbuildings together with access works, landscaping, service yard, car parking, servicing, and other associated works at land to the north of Cronton Road and south of the M62 motorway, Cronton, Knowsley. 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 individual trees, nine tree groups, a section of a further tree group, and a section of the woodland within the site boundary. The removals are mostly along the southern boundary of the site bordering Cronton Road and are required to facilitate the two proposed access roads. Loss of this vegetation will have a moderate impact in the short term in terms of its contribution to the landscape and amenity of the 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. The woodland which has been assessed as BS 5837: 2012 'Moderate Quality' Retention Category 'B' is protected by virtue of a Tree Preservation Order, as are trees adjacent to the southeastern boundary.
- 1.1.5. Some construction works to facilitate the attenuation pond are proposed within the Root Protection Areas of retained trees and these are achievable with no significant long-term effects on trees if guidance within this report is adhered to.
- 1.1.6. The retained protected woodland and a retained group of trees to the northeast of the site will be pruned to accommodate installation of the new attenuation pond, trailer parking and to provide working space around the site. The proposed works are relatively minor and will be carried out in accordance with current best practice.
- 1.1.7. Urban Green have also carried out a Preliminary Ecological Appraisal (PEA) of the site (ref: UG_1602_ECO_PEA_03). This report should be read and adhered to in conjunction with the PEA report.
- 1.1.8. 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.
- 1.1.9. 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. Urban Green have been instructed by Maro Developments 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.
- 2.1.2. All trees, regardless of their statutory status, are a material consideration in a planning application. BS 5837: 2012 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. The approximate grid reference is SJ 46752 89301.



Figure 1 – Site Location Plan

2.2. Scope

- 2.2.1. This AIA considers any potential impacts on existing trees including the effect of any tree loss required to implement the design and also recommendations for the establishment of new trees in accordance with BS 5837: 2012.
- 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 plans included 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 to assess any potential impacts to trees and vice versa.

2.4. Limitations

- 2.4.1. This 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 their 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 reduce risk and liability associated with responsibility for trees.

2.5. The Site

- 2.5.1. The site is located off Cronton Road, Prescot and comprises agricultural land, featuring densely wooded areas to the northeast and southwest. The site is bounded by the M62 Motorway to the north, additional wooded and agricultural land to the east and south, and the M57/M62 Motorway roundabout junction to the west.

2.6. Geology

- 2.6.1. Reference to the Cranfield Soil and Agrifood Institute's Soilscape Viewer suggests the underlying topography in the site vicinity is characterised as a slightly acidic, base-rich, seasonally wet, and slowly permeable loamy and clayey soil, with moderate fertility and impeded drainage. This soil type is typical of seasonally wet pasture and woodland environments.

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. Knowsley Council's interactive map showed that the site contains one TPO, which covers woodland W29 Halsnead Park Lickers Lane Whiston Knowsley L35 3, **Ref No:** 64/00001/TPO, **Order No:** TREE PRESERVATION ORDER NO.1 – 1964.
- 3.1.3. Additionally, there is a TPO on the site boundary next to G4, Land at Cronton Road Cronton Knowsley, **Ref No:** 86/00002/TPO, **Order No:** TREE PRESERVATION ORDER NO.2 1986
- 3.1.4. 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.
- 3.1.5. 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.
- 3.1.6. 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.

3.2. Wildlife

- 3.2.1. Prior to the commencement of any tree works, the trees should be assessed for the presence of 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. Urban Green have been appointed to complete a Preliminary Ecological Appraisal (PEA) of the site (ref: UG_1602_ECO_PEA_03). The objectives of the PEA 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.
- 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 erect 1 No. commercial unit (use class B8) with ancillary offices and outbuildings together with access works, landscaping, service yard, car parking, servicing and other associated works at land to the north of Cronton Road and south of the M62 motorway, Cronton, Knowsley. 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. Surveyed Trees

- 4.4.1. The survey assessed twenty-three individual trees, twenty-two tree groups and one woodland, the quality and value of which are summarised below. Full details of the surveyed trees can be viewed in the Tree Data Schedule in Appendix 1.
- 4.4.2. Four individual trees were assessed as BS 5837: 2012 'High Quality' Retention Category 'A'; twelve individual trees, eleven tree groups, and one woodland were assessed as BS 5837: 2012 'Moderate Quality' Retention Category 'B'; six individual trees and eleven tree groups were assessed as BS 5837: 2012 'Low Quality' retention Category 'C'; and one individual tree was assessed as BS 5837: 2012 'Unsuitable' Category 'U'.
- 4.4.3. Trees and tree groups T7-G26 are offsite. The remaining trees, tree groups and woodland are within the site or on the boundaries.
- 4.4.4. The tree cover comprises mainly of moderate-quality natural colonisation, apart from T6 & T19-T21, which are of higher quality.
- 4.4.5. Trees, tree groups and woodland G1, G2, G26, G27, W29 & G30-G46 are visually important in terms of their contribution to the character and appearance of the area. Trees internal/central to the site are of secondary importance in visual terms.

4.5. Impacts of Development

- 4.5.1. The proposed development would necessitate the removal of seven individual trees (T35, T37, T38, T40, T41, T44 & T45), three tree groups (G2, G30 & G42), and a section of a further tree group (G46) assessed as BS 5837: 2012 'Moderate Quality' Retention Category 'B'; one individual tree (T33) and six tree groups (G1, G31, G32, G34, G36 & G43) assessed as BS 5837: 2012 'Low Quality' Retention Category 'C'; and one individual tree (T39) assessed as BS 5837: 2012 'Unsuitable' Category 'U' within the site boundary. The removal of vegetation along the frontage of Cronton Road will have a moderate impact on the visual amenity in the short term but can be mitigated by the implementation of an extensive landscaping scheme and management of the surrounding existing tree cover and the woodland.

- 4.5.2. A small section of the woodland W29 will require removal to facilitate the development. This woodland is protected by Tree Preservation Order *Halsnead Park Lickers Lane Whiston Knowsley L35 3*, Ref No: 64/00001/TPO, Order No: *TREE PRESERVATION ORDER NO.1 – 1964*. This section of woodland requires removal to facilitate the proposed western access into the site off Cronton Road, removal of which will only have a minor impact upon the visual amenity provided by the woodland, will be partially mitigated in visual terms by retention of most of the woodland and there is space for replacement planting of new native and ornamental trees and shrubs both internal to the site and to the site frontage.
- 4.5.3. Best practice guidance for avoiding physical damage to retained tree roots during construction is set out at section 7.2 of BS 5837: 2012. Where located within an RPA, the proposed new attenuation pond is identified by red cross hatching on the Tree Protection Plan and works should be implemented in accordance with this guidance as far as is reasonably practicable. As an added precaution the works should be supervised by the project Arboriculturalist. Excavation works proposed to facilitate the eastern access road within the RPA of T3 should be supervised by the project arboriculturalist.
- 4.5.4. The retained protected woodland (W29) and a retained group of trees to the northeast of the site (G16) will be pruned to accommodate installation of the new attenuation pond, trailer parking and to provide working space around the site. The proposed works are relatively minor and will be carried out in accordance with current best practice detailed in BS 3998: 2010 – Tree Work – Recommendations.

4.6. Tree Surgery Works

- 4.6.1. 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.
- 4.6.2. 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.
- 4.6.3. Any unforeseen tree works that become apparent during the construction process will require written consent from the Local Authority Tree Officer.

4.7. Protective Fencing

- 4.7.1. 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.
- 4.7.2. Any fencing that is damaged so that it is no longer able to protect retained trees must be replaced/repaired immediately with appropriate fencing.
- 4.7.3. The required specification for protective fencing is illustrated in the Tree Protection Plan (Insert 1).

- 4.7.4. 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.
- 4.7.5. 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.
- 4.7.6. 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).

4.8. Temporary Site Cabins

- 4.8.1. 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.
- 4.8.2. 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.

4.9. Utilities

- 4.9.1. 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.

4.10. Recommendations

- 4.10.1. 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.
- 4.10.2. 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.
- 4.10.3. 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.
- 4.10.4. 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)	
G1	Semi-Mature Mixed Species	av 10	av 0.3	av 200	av 3 3 3 each	1: Mixed boundary screening with ivy on some stems. 2: Mix of oak, hawthorn, goat willow and sycamore. 3: Growing on slope from public path to fence line. 4: Acceptable clearance from path, has been previously pruned back. 5: Undergrowth to base.	No action required.		Fair	40+	C	2.40
	n/a		3	Good								
G2	Semi-Mature Mixed Species	av 13	av 2	av 300	av 4 4 4 each	1: Oak and sycamore mix boundary screening. 2: Previously pruned back from site. 3: Snapped branches and minor wounds on stem. 4: Growing along ditch.	No action required.		Good	40+	B	3.60
	n/a		3	Good								
T3	Early-Mature Sycamore Acer pseudoplatanus	12	2	560	5 5 5	1: Heavily ivy covered stems. 2: Lower branches snapped and shaded out. 3: Growing next to stream and edge of woodland to east.	No action required.		Good	40+	C	6.72
	n/a		3	Fair								
G4	Early-Mature Mixed Species	av 11	av 1.5	av 300	av 6 6 6 each	1: Boundary group along woodland edge. 2: Mix of oak and sycamore. 3: Deadwood within canopy typical of species. 4: <u>Northern & southern sections protected by Tree Preservation Order No.2 1986-Land At Cronton Road Cronton Knowsley.</u>	No action required.		Good	40+	B	3.60
	n/a		3	Good								
T5	Early-Mature Willow Salix sp	7	0.1	260	4 4 4	1: Multiple stems from base with failures, with stem resting against bank. 2: Multiple dead stems. 3: Acceptable condition for current land use.	No action required.		Good	20-40	C	3.12
	n/a		3	Fair								
T6	Early-Mature Oak Quercus petraea	15	2	580	6 6 6	1: Deadwood in lower canopy. 2: Growing at end of ditch at the top of the wall. 3: Ivy on part of stem. 4: <u>Protected by Tree Preservation Order No.2 1986-Land At Cronton Road Cronton Knowsley.</u>	No action required.		Good	40+	A	6.96
	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)
G7	Early-Mature Mixed Species	av 13	av 0.1	av 300	av 3.5 3.5 3.5 each	1: Mix of hazel, goat willow and oak. 2: Historically been coppiced multiple stems. 3: Edge of woodland growing along ditch. 4: Deadwood present.	No action required.		Good	40+	3.60
							n/a	3	Good	B	
T8	Early-Mature Goat Willow Salix caprea	7	0.1	380	4 4 4	1: Multiple stems from base. 2: One stem failure. 3: Growing at edge of woodland at top of bank.	No action required.		Good	40+	4.56
							n/a	3	Fair	C	
T9	Semi-Mature Oak Quercus petraea	16	3	400	5 5 5	1: Growing on slope not fully accessed. 2: Deadwood within lower canopy. 3: Growing on edge of woodland.	No action required.		Good	40+	4.80
							n/a	3	Good	B	
T10	Early-Mature Sycamore Acer pseudoplatanus	10	1.5	720	5 5 5	1: Multiple stems from base. 2: Growing on slope. 3: Good open structure.	No action required.		Good	40+	8.64
							n/a	3	Good	B	
G11	Semi-Mature Mixed Species	av 10	av 0.1	av 150	av 2 2 2 each	1: Mainly birch with oak and willow within. 2: Elongated self set woodland. 3: Acceptable condition at present.	No action required.		Good	40+	1.80
							n/a	3	Good	B	
T12	Mature Goat Willow Salix caprea	12	0.1	500	6 2 3	1: Multiple stems just above base. 2: Decay and loss of additional stems previously at base. 3: Dead stem within canopy. 4: Acceptable for current land use.	No action required.		Fair	20-40	6.00
							n/a	3	Good	C	

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	Semi-Mature Oak Quercus petraea	9	0.1	380	6 6 6	1: Wide spreading canopy from base. 2: Growing at top of embankment.	No action required.		Good	40+	4.56
							n/a	3	Good	B	
G14	Semi-Mature Mixed Species	av 8	av 0.1	av 180	av 3 3 each	1: Mix of birch and hawthorn. 2: Growing along embankment. 3: Multiple stems. 4: Boundary linear feature.	No action required.		Good	40+	2.16
							n/a	3	Good	B	
T15	Early-Mature Willow Salix sp	10	0.1	560	4 4 4	1: Multiple stems from just above base. 2: Good form. 3: Thick undergrowth to base.	No action required.		Good	40+	6.72
							n/a	3	Good	B	
G16	Semi-Mature Mixed Species	av 6	av 0.1	av 100	av 2 2 each	1: Alder, oak and birch mix. 2: Dense boundary group. 3: No access.	No action required.		Good	40+	1.20
							n/a	3	Good	B	
G17	Young Oak Quercus petraea	av 5	av 0.2	av 150	av 3 3 each	1: Spaced out oak group with highly developed low canopies. 2: Along slightly raised boundary. 3: Acceptable condition at present.	No action required.		Good	40+	1.80
							n/a	3	Good	B	
G18	Semi-Mature Oak Quercus petraea	av 10	av 0.2	av 200	av 2 2 each	1: Group of two along track edge on northern boundary. 2: Western side suppressed by neighbouring tree. 3: Acceptable condition at present.	No action required.		Good	40+	2.40
							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)
T19	Early-Mature Oak Quercus petraea	14	2	800	7 4 7 7	1: Twin stemmed from 1m. 2: Suppressing canopy to west of neighbouring tree. 3: Deadwood above track to east. 4: Acceptable condition at present. 5: Merging of stems at points with evidence of barbed wire underneath bark.	No action required.		Good	40+	9.60
	n/a						3	Good	A		
T20	Early-Mature Oak Quercus petraea	15	2	570	8 8 4 8	1: Good open structure. 2: Suppressed canopy to east by neighbouring tree. 3: Minor deadwood in inner canopy.	No action required.		Good	40+	6.84
	n/a						3	Good	A		
T21	Early-Mature Oak Quercus petraea	16	3	850	9 9 9 9	1: Evidence of previous branch snapped typical for age. 2: Growing on edge of woodland. 3: Multiple stems from 2.5m.	No action required.		Good	40+	10.20
	n/a						3	Good	A		
T22	Early-Mature Ash Fraxinus excelsior	11	0.1	600	4 4 4 4	1: Multiple stems from base. 2: Evidence of ash dieback. 3: Previous stem failures. 4: Regrowth from old wounds.	No action required.		Fair	20-40	7.20
	n/a						3	Fair	C		
G23	Semi-Mature Mixed Species	av 4-5	av 0.1	av 150	av 1 1 1 each	1: Mix of oak, hazel and hawthorn. 2: Dense group. 3: Edge of woodland. 4: Acceptable condition at present.	No action required.		Good	40+	1.80
	n/a						3	Fair	C		
G24	Young Mixed Species	av 4	av 0.1	av 100	av 1 1 1 each	1: Mix of birch, ash, hawthorn and gorse. 2: Self set group. 3: Acceptable condition at present.	No action required.		Good	40+	1.20
	n/a						3	Good	C		

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	Early-Mature Oak Quercus petraea	11	2	530	3 3 5 4	1: Major deadwood within canopy. 2: Biased canopy to east. 3: Growing on edge of woodland.	No action required.		Fair	40+	6.36
	n/a						3	Good	B		
G26	Semi-Mature Mixed Species	av 6	av 0.1	av 80	av 1 1 1 each	1: Mix of hazel, ash, oak and hawthorn. 2: Edge of woodland. 3: Elongated form.	No action required.		Good	40+	0.96
	n/a						3	Fair	C		
G27	Semi-Mature Ash Fraxinus excelsior	av 9	av 2	av 250	av 3 3 3 each	1: Behind fence next to motorway no access. 2: Evidence of ash dieback. 3: Acceptable condition at present.	Monitor.		Fair	10-20	3.00
	Low						3	Good	C		
G28	Young Mixed Species	av 3.5	av 0.1	av 75	av 0.5 0.5 0.5 each	1: Mix of ash and goat willow. 2: Self set group. 3: Acceptable condition at present.	No action required.		Good	40+	0.90
	n/a						3	Good	C		
W29	Early-Mature Mixed Species	av 17	av 0.1	av 500	av 6 6 6 each	1: Mixed woodland of oak, sycamore, ash and hawthorn. 2: Many dead stems in wood likely ash as ash dieback evidence in woodland. 3: Dense woodland. 4: West bordered by road. 5. <u>Protected by Tree Preservation Order No.1 1964-Halsnead Park Lickers Lane Whiston Knowsley L35 3.</u>	No action required.		Good	40+	6.00
	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)	
G30	Early-Mature Mixed Species	av 18	av 2	av 300	av 3 3 each	1: Growing on slope. 2: Mainly sycamore and beech. 3: Bordering road. 4: Acceptable condition at present.	No action required.		Good	40+	B	3.60
	n/a		3	Good								
G31	Early-Mature Mixed Species	av 9	av 0.1	av 300	av 2 2 each	1: Mix of goat willow, sycamore and birch. 2: Boundary group with poor form. 3: Multiple stems. 4: Dead stems and deadwood throughout group.	No action required.		Good	40+	C	3.60
	n/a		3	Fair								
G32	Semi-Mature Mixed Species	av 6	av 0.1	av 150	av 1.5 1.5 each	1: Mix of hawthorn and ash. 2: Multiple stemmed. 3: Deadwood throughout. 4: Crossing and rubbing branches.	No action required.		Good	20-40	C	1.80
	n/a		3	Fair								
T33	Mature Goat Willow Salix caprea	13	2	710	5 5 5	1: Multiple stems from base spreading. 2: Deadwood throughout, canopy beginning to decline. 3: Pressure on fence.	Monitor.		Fair	20-40	C	8.52
	Moderate		1	Fair								
G34	Early-Mature Mixed Species	av 10	av 0.1	av 150	av 3 3 each	1: Mix of goat willow, birch, holly and hazel. 2: Deadwood throughout. 3: Dense boundary group sheltering road. 4: Multiple stemmed.	No action required.		Good	40+	C	1.80
	n/a		3	Fair								
T35	Early-Mature Ash Fraxinus excelsior	12	3	440	5 5 5	1: Acceptable clearance above road. 2: Multiple stems from base. 3: 2 stems previously removed. 4: Acceptable condition at present.	No action required.		Good	40+	B	5.28
	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)
G36	Early-Mature Hazel Corylus avellana	av 5.5	3	av 75	av 0.5 4.2 4.1 each	1: Linear screening group of multistemmed trees growing at top of embankment between footpath and adjacent woodland. 2: Stubs present from previous pruning works away from footpath, adequate clearance currently. 3: Occasional small diameter dead stems noted which pose no significant risk. 4: Acceptable condition at present.	No action required.		Good	20-40 C	0.90
							n/a	3	Fair		
T37	Semi-Mature Pedunculate Oak Quercus robur	12	6	360	5.5 5.5 5.5	1: Ivy clad stem prevented a detailed inspection. 2: Growing on sloped embankment adjacent woodland. 3: Stubs present from previous branch loss. 4: Bifurcated stem at 4m above ground level.	No action required.		Good	40+ B	4.32
							n/a	3	Good		
T38	Semi-Mature Sycamore Acer pseudoplatanus	12	6	300	7.5 7.5 7.5	1: Ivy clad stem prevented a detailed inspection. 2: Bifurcated stem at 1m above ground level. 3: Adequate clearance over footpath. 4: Acceptable condition at present.	No action required.		Good	40+ B	3.60
							n/a	3	Fair		
T39	Young Pedunculate Oak Quercus robur	6	2	130	0.5 0.5 0.5	1: Ivy clad stem prevented a detailed inspection. 2: Multiple stems arising from ground level. 3: Suppressed by neighbouring trees. 4: Small canopy and little long term retention value.	Fell to ground level.		Poor	<10 U	n/a
							Moderate	1	Poor		
T40	Semi-Mature Pedunculate Oak Quercus robur	12	4	250	0.5 0.5 5.5	1: Growing atop sloped embankment adjacent footpath. 2: Ivy clad stem prevented a detailed inspection. 3: Biased canopy due to neighbouring trees. 4: Acceptable condition at present.	No action required.		Good	40+ B	3.00
							n/a	3	Fair		
T41	Semi-Mature Pedunculate Oak Quercus robur	13	5	260	0.5 0.5 4.5	1: Growing on sloped embankment adjacent footpath. 2: Biased canopy due to neighbouring trees. 3: Large previously removed stump left in situ tight against stem to south. 4: Occasional pruning wounds due to crown lifting with some occlusion.	No action required.		Good	40+ B	3.12
							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 E S	Notes	Recommendations		Physiological Condition	Life Expectancy (yrs)	RPA Radius
							Priority	Inspect Freq (yrs)	Structural Condition	Retention Category	(m)
G42	Semi-Mature Mixed	av	av	av	av	1: One sycamore and two oak in close proximity presenting as one tree adjacent footpath. 2: Ivy clad stems prevented a detailed inspection. 3: Multiple pruning wounds due to crown lifting with some occlusion. 4: Acceptable condition at present.	No action required.		Good	40+	2.28
	Species	9	5	190	4 each		n/a	3	Good	B	
G43	Semi-Mature Mixed	av	av	av	av	1: Ivy clad stems prevented a detailed inspection. 2: One sycamore and one hawthorn in close proximity present as one tree, growing adjacent footpath. 3: Multiple stems arising from ground level. 4: Adequate clearance over footpath.	No action required.		Good	40+	1.56
	Species	7	2.5	130	3.2 each		n/a	3	Fair	C	
T44	Semi-Mature Pedunculate Oak	13	6	250	4.7	1: Ivy clad stem prevented a detailed inspection. 2: Growing on sloped embankment adjacent woodland. 3: Stubs present from previous branch loss. 4: Small diameter deadwood noted, poses no significant risk.	No action required.		Good	40+	3.00
	Quercus robur				4.7		n/a	3	Good	B	
T45	Semi-Mature Sycamore	13	4.5	230	5.9	1: Growing on sloped embankment adjacent woodland. 2: Trifurcated stem at ground level. 3: Multiple pruning wounds due to crown lifting with some occlusion. 4: Adequate clearance over footpath.	No action required.		Good	40+	2.76
	Acer pseudoplatanus				5.9		n/a	3	Good	B	
G46	Semi-Mature Mixed	av	av	av	av	1: Naturally colonised peripheral group of sycamore and pedunculate oak with hazel, hawthorn, fern and young self-set ash among ground flora, extending from adjacent TPO woodland. 2: Ivy clad stems, fallen and dead specimens throughout group which pose no significant risk. 3: Larger trees generally single stemmed with upright form, understory populated by multitemmed shrubby specimens. 4: Provides screening from adjacent road. 5: Potentially valuable wildlife habitat.	No action required.		Good	40+	3.00
	Species	14	8	250	5 each		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

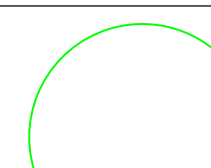
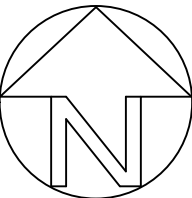
The site plans referred to in the report follow this page which include the following:

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

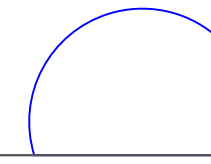
Although included plans are usually to scale, they are only intended to indicate positions of surveyed trees and dimensions should not be taken from these drawings.

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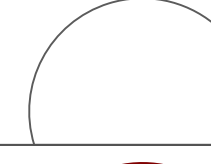
Notes:-



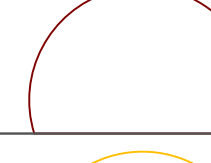
Category A tree, group or hedge



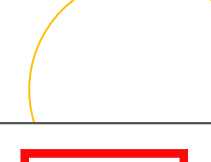
Category B tree, group or hedge



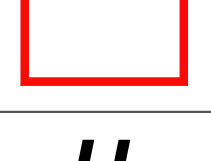
Category C tree, group or hedge



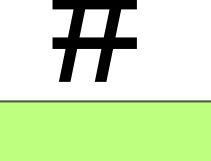
Category U tree, group or hedge



Root Protection Area (RPA)



Redline site boundary



Position estimated on site



Tree Preservation Order
(TPO No.1-1964)

01	21/08/23	ADDITIONAL AREA SURVEYED	AH	AB
REV.	DATE	DESCRIPTION	DRAWN	CHK'D



A: Ground Floor, The Tower,
Deva City Office Park, Trinity Way,
Manchester M3 7BF
T: +44 (0) 161 312 3131
weareurbangreen.co.uk

Client:	MARO DEVELOPMENTS		
Project:	MERCURY 62, CRONTON ROAD		
Title:	TREE CONSTRAINTS PLAN		
Issue:	PLANNING		
Drawn:	EA	Checked:	AB
Approved:	AB		
Project:	UG1459	Scale @ A1:	1:1000
Date:	03/02/22		
Dwg No:	UG_1459_ARB_TCP_01		Revision:
		01	





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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
- Redline site boundary
- Position estimated on site
- Tree Preservation Order (TPO No. 1-1964)

04	21/08/23	ADDITIONAL AREA SURVEYED	AH	AB
03	28/03/2023	TREE REMOVAL/PRUNING HATCH UPDATED	AB	AH
02	07/07/22	PROPOSAL UPDATE	EA	AB
01	27/05/22	PROPOSAL UPDATE	EA	AB
REV.	DATE	DESCRIPTION	DRAWN	CHK'D



A: Ground Floor, The Tower,
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Client:	MARO DEVELOPMENTS		
Project:	MERCURY 62, CRONTON ROAD		
Title:	TREE REMOVAL PLAN		
Issue:	PLANNING		
Drawn:	EA	Checked:	AB
Project:	UG1459	Scale @ A1:	1:1000
Dwg No:	UG_1459_ARB_TRP_01	Date:	08/02/22
		Revision:	04

Tree Works Schedule

Tree Number	Species	Works Required	Reason	
G1	Mixed species	Fell to ground level. Grub or grind out the stumps.	To facilitate the access road/visibility splays.	
G2				
G16		Prune small section to south to reduce lateral spread by up to 2 metres: see Tree Removal Plan.	To facilitate trailer parking.	
W29		Prune lateral canopy spread/crown raise as detailed on the Tree Removal Plan.	To facilitate attenuation pond construction.	
W29		Remove linear section to south, as indicated on the Tree Removal Plan, grind or grub out the stumps.	To facilitate the access road/visibility splays.	
G30		Fell to ground level. Grub or grind out the stumps.		
G31				
G32				
T33				Goat willow
G34				Mixed species
T35	Ash			
G36	Hazel			
T37	Pedunculate oak			
T38	Sycamore			
T39	Pedunculate oak			
T40				
T41				
G42	Mixed species			
G43				
T44	Pedunculate oak			
T45	Sycamore			
G46	Mixed species	Remove a section, as indicated on the Tree Removal Plan, and grind or grub out the stumps.		

04	21/08/23	ADDITIONAL AREA SURVEYED	AH	AB
03	28/03/23	PRUNING SPECIFICATION UPDATED	AB	AH
02	07/07/22	PROPOSAL UPDATE	EA	AB
01	27/05/22	PROPOSAL UPDATE	EA	AB
REV.	DATE	DESCRIPTION	DRAWN	CHK'D



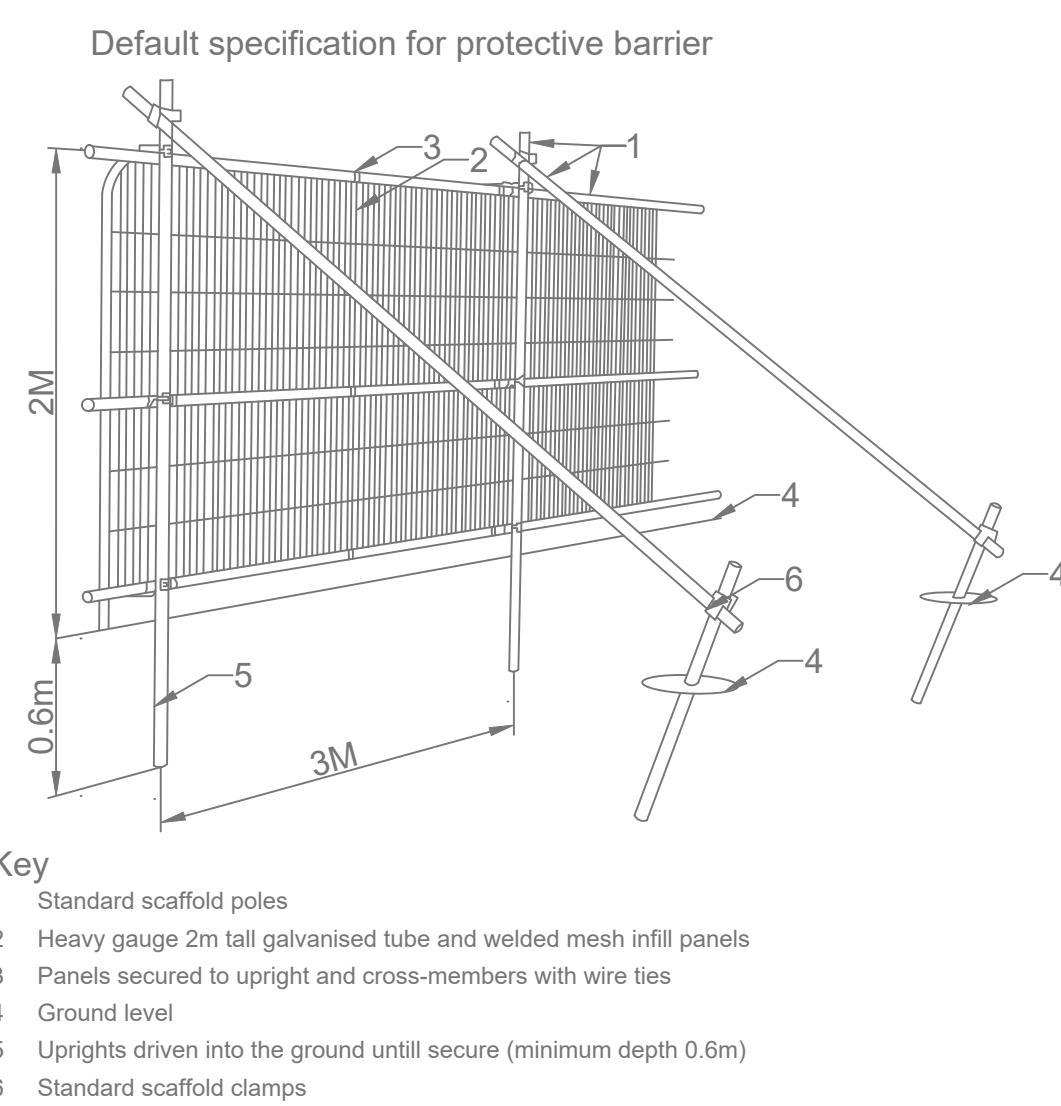
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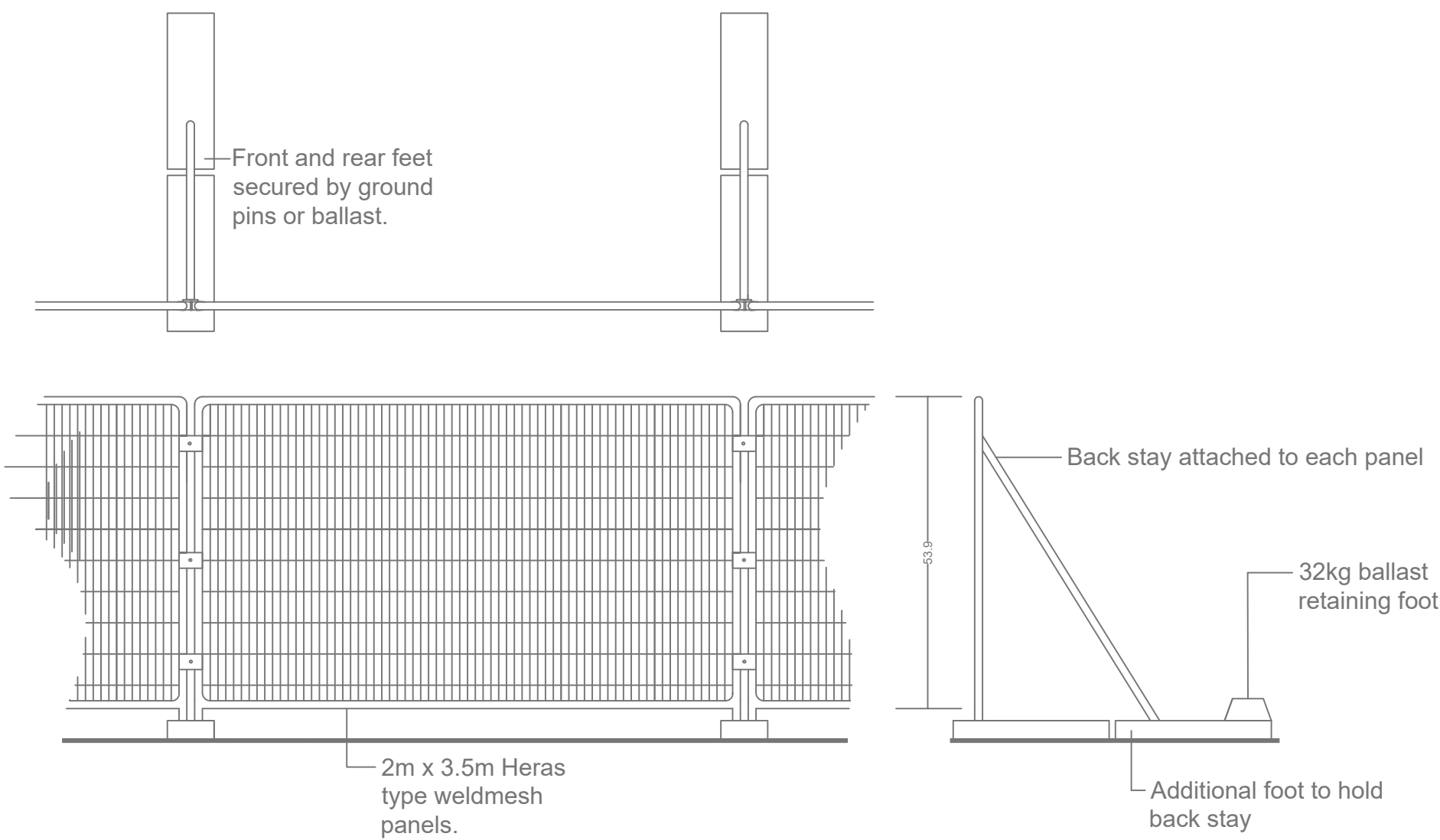
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Client:	MARO DEVELOPMENTS		
Project:	MERCURY 62, CRONTON ROAD		
Title:	TREE WORKS SCHEDULE		
Issue:	PLANNING		
Drawn:	EA	Checked:	AB
		Approved:	AB
Project:	UG1459	Scale @ A1:	NTS
		Date:	08/02/22
Dwg No:	UG_1459_ARB_TWS_01		Revision:
			04

Insert 1: Tree protective fencing specification



Back-stay support



Insert 2: Tree protection notice



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Notes:-

REV.	DATE	DESCRIPTION	DRAWN	CHK'D
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: MARO DEVELOPMENTS				
Project: MERCURY 62, CRONTON ROAD				
Title: TREE PROTECTION INDEX				
Issue: PLANNING				
Drawn: EA	Checked: AB	Approved: AB		
Project: UG1459	Scale @ A1: NTS	Date: 08/02/22		
Dwg No: UG_1459_ARB_TPI_01			Revision: 00	