

Arboricultural Impact Assessment (AIA)

November 2022

Ormskirk Road
Knowsley
Liverpool
L34 9EY

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 Caddick Group, to carry out an Arboricultural Survey to British Standard 5837:2012 guidelines at Ormskirk Road, Knowsley, Liverpool and produce our findings in a report.
- 1.1.2. It is proposed to develop the site into a three-unit industrial estate, alongside hard and soft landscape alterations such as internal access roads, parking bays and footpaths. Additionally, there is a proposed new vehicular access point to the west of the site off Ormskirk Road. 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 most of a small woodland copse, two low quality trees and a hedgerow to facilitate access and visibility splays.
- 1.1.4. The woodland highlighted for removal is of moderate quality, with the hedge and trees being of low quality, with moderate impacts on visual amenity. However, an extensive new planting scheme is proposed which is projected to adequately compensate for the necessary tree loss at the site.
- 1.1.5. Tree protection fencing will need to be installed at the alignment shown on the Tree Protection Plan in Appendix 4 before any construction activity takes place.
- 1.1.6. Information regarding the layout of new utilities and drainage and final site levels should be submitted to the Arboricultural Consultant so that the impact of these on the retained trees can be assessed.

2. Introduction

2.1. Instructions and references

- 2.1.1. We have been instructed by Caddick 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 alongside 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. The OS Grid Reference is SJ4379 9681

Figure 1 – Site Location Plan

2.2. Scope

- 2.2.1. The AIA considers 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 topographical survey 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, and as such, their locations cannot be considered wholly accurate.
- 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 project Arboriculturist prior to the commencement of any works on site.
- 2.3.3. A development proposal has been provided by the client which has been overlaid with the Tree Constraints Plan to assess the potential impacts to the existing tree population at the site.

2.4. Limitations

- 2.4.1. The report is based upon a visual inspection, taken from ground level using non-invasive techniques, in sufficient detail to gather data for and inform the design of the current project only. 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. According to Knowsley Metropolitan Borough Councils website, the site does not stand within a conservation area nor are there any active TPO's at the site. However, it is strongly advised that Knowsley Metropolitan Borough Councils planning office is contacted to clarify the presence of any statutory tree protection prior to the undertaking of any tree works not directly related to the implementation of a detailed (i.e. full) planning permission.
- 3.1.3. It is strongly advised 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.

3.2. Wildlife

- 3.2.1. Prior to the commencement of any tree works, the trees should be assessed for the presence of protected species, some of which are subject to the *Wildlife and Countryside Act 1981* (as amended) and the *Conservation of Habitats and Species Regulations 2017*.
- 3.2.2. Urban Green have previously visited the site and undertaken a preliminary ecological assessment (PEA) – Report ref (UG45_ECO_PEA_01)
- 3.2.3. If tree works are carried out during the bird nesting season (March to August inclusive), trees would need to be inspected by a qualified ecologist within the 24-hour period prior to the commencement of works.

4. Arboricultural Impact Assessment (AIA)

4.1. Summary of the development

- 4.1.1. It is proposed to develop the site into a three-unit industrial estate, alongside hard and soft landscape alterations such as internal access roads, parking bays and footpaths. Additionally, there is a proposed new vehicular access point to the west of the site off Ormskirk Road. 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. The tree population

- 4.4.1. The survey assessed 31 individual trees, 15 groups of trees, nine hedges and one woodland, the quality and value of which are summarised below.
- 4.4.2. Four trees were categorised as BS5837: 2012 high quality (i.e. 'A' category), 22 trees, six groups and one woodland were categorised as moderate quality (i.e. 'B' category), six trees, eight groups and five hedges were categorised as low quality (i.e. 'C' category). Full details of the tree population can be found in the survey schedule attached as Appendix 1.
- 4.4.3. Trees T8-T23, T26, T28, T29, T31, T33, T39, T46, T47 groups G24, G25, G30, G32, part of G36, G40, G41, G43, G44, G45, G48 and parts of hedge H51 reside either on or outside the provided red line boundary of the development proposal and are understood to be under third party ownership. All other surveyed trees reside within ownership boundaries unless stated otherwise.

4.5. Impacts of development

- 4.5.1. The removal of most of one woodland group of moderate quality (W35), two trees (T1, T4) and one hedge of low quality (H49) are required to facilitate the development as proposed. Refer to Tree Works Schedule at appendix 4 for full details.
- 4.5.2. Removal of T1, T4 and H49 is required to construct the new vehicular access to the west of the site as proposed. It should be noted that H49 partially resides on council owned land the provided red line boundary and is understood to be under third party ownership. As such, permission from relevant landowner(s) will be required before any removals are undertaken.
- 4.5.3. The majority of 'moderate quality' woodland (W35) will be removed to accommodate the construction of 'building 3'. This woodland comprises mainly of sycamore which appears to be lapsed coppice (previously coppiced and left beyond the previous rotation), probably 30 to 40 years ago. This woodland is visually prominent from the north (A580-East Lancs Road) and its loss will have a moderate localised impact in the short term.
- 4.5.4. Landscape proposal plan (UG_45_LAN_GA_DRW_01 Po1), details an extensive new tree planting scheme consisting of mixed native species which is projected to adequately compensate for the necessary tree loss. Accordingly, the adherence to the landscape proposal plan can be assured through the imposition of a suitably worded planning condition.
- 4.5.5. Remaining trees and hedges can be retained and protected during construction in accordance with current best practice as set out in BS5837.

4.6. Proposed Replacement Planting

- 4.6.1. The majority of trees proposed for removal are from 'moderate quality' B category semi mature copse woodland W35 which appears to be lapsed coppice of sycamore possibly planted alongside the easement. This woodland attracts a higher collective value than if surveyed as individual trees. Although the group is categorised as 'moderate quality' it is essentially a monoculture which has not seen any recent management to promote long term sustainability or biodiversity. That said, the woodland presents a significant landscape feature.
- 4.6.2. While the proposed development will result in the loss of approximately 100 to 150 woodland trees from within W35, the proposals make every effort to replant as many trees within the site as is feasibly possible. The total number of proposed trees is 205. Of these trees, 44 are heavy standard, 158 are select standard, and 3 are standard multi-stem trees. The proposals also include 2746m² of woodland understory mix, which contains a mix of native shrubs and tree whips, to create a woodland structure that will mature into full height woodland with shrub underlayer. While large areas of the site are unsuitable for tree planting due to various easements, all other areas of the site are proposed to contain trees, including the area surrounding the proposed ecology pond, areas beside the existing and proposed roads and carparks, and areas adjacent to existing woodland. Where tree planting would typically be restricted near to the gas easement, efforts have been made to propose trees of appropriate species at the minimum possible distance from the gas main, to maximise the possible amount of tree planting along this boundary.

4.7. Tree surgery works

- 4.7.1. Tree works that are recommended within the Tree Works Schedule (Appendix 4) are works required to facilitate development and 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.
- 4.7.2. 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.
- 4.7.3. Any unforeseen tree works that become apparent during the construction process will require written consent from the Local Authority Tree Officer.

4.8. Protective fencing

- 4.8.1. 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.
- 4.8.2. Any fencing that is damaged so that it is no longer able to protect retained trees must be replaced/repared immediately with appropriate fencing.
- 4.8.3. The required specification for protective fencing is illustrated in the Tree Protection Plan (Insert 1).
- 4.8.4. 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.
- 4.8.5. 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.
- 4.8.6. 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).

4.9. Temporary site cabins

- 4.9.1. 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.
- 4.9.2. 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.

4.10. Utilities

- 4.10.1. 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.

4.11. Recommendations

- 4.11.1. 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.
- 4.11.2. 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.
- 4.11.3. 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 Hawthorn Crataegus monogyna	4	2	150	2 2 2	1: Acceptable condition at present.	No action required.		Good	40+	1.80
	n/a						3	Good	C2		
T2	Semi-Mature Oak Quercus spp	12	3	280	4 5 5.5	1: Minor deadwood. 2: Asymmetric crown. 3: Vehicle damage present to lower canopy.	No action required.		Good	40+	3.36
	n/a						3	Good	B2		
T3	Semi-Mature Lawson's Cypress Chamaecyparis lawsoniana	15	2	430	3 3 3	1: Acceptable condition. 2: Minor asymmetry in crown. 3: Vehicle damage present to lower canopy.	No action required.		Good	40+	5.16
	n/a						3	Good	B2		
T4	Semi-Mature Lawson's Cypress Chamaecyparis lawsoniana	14	2	520	3 3 3	1: Acceptable condition. 2: Minor asymmetry in crown. 3: Some snapped out branches over access rd. 4: Included union at 1m.	No action required.		Good	40+	6.24
	n/a						3	Fair	C2		
H5	Semi-Mature Hawthorn Crataegus monogyna	av 7	2	150	2 2 2	1: Acceptable condition. 2: Evidently broken and lapsed hedgerow. 3: Evidence of historical management.	No action required.		Good	40+	1.80
	n/a						3	Fair	C2		
T6	Early-Mature Birch Betula spp	14	4	350	3 4 5	1: Acceptable condition. 2: Ivy covered lower stem.	No action required.		Good	40+	4.20
	n/a						3	Good	A1		

Reference T= Tree G = Group H = Hedge W = Woodland	Age & Species	Height (m)	Crown Ht (m)	DBH (mm)	Crown Spread (m) W N E S	Notes	Recommendations		Physiological Condition	Life Expectancy (yrs)	RPA Radius
							Priority	Inspect Freq (yrs)	Structural Condition	Retention Category	(m)
G7	Semi-Mature Common Alder Alnus glutinosa	av 15	av 6	av 380	av 4 6 4 each	1: Acceptable condition. 2: Closey spaced linear group of approximately six trees. 3: One dead tree located wthin greater extents of group.	No action required.		Good	40+ B2	4.56
							n/a	3	Good		
T8	Over-Mature Common Alder Alnus glutinosa	10	2	700	6 6 8	1: Acceptable condition - possibly in decline- high eco value. 2: Located outside red line boundary. 3: Ivy covered stem. 4: Bifrucated stem. 5: Deadwood in crown - with some historical snapped out branches.	Monitor		Fair	10-20 A3	8.40
							n/a	1	Fair		
T9	Over-Mature Rowan Sorbus aucuparia	4	4	600	4 4 5	1: Located outside red line boundary. 2: Multi-stemmed at base, with two stems dead. 3: Standing deadwood exhibiting good structual integrity.	No action required.		Fair	10-20 C1	7.20
							n/a	1	Fair		
T10	Semi-Mature Hawthorn Crataegus monogyna	5	1	250	2 2 2.5	1: Located outside red line boundary. 2: Acceptable condition at present. 3: Ivy clad stem. 4: Minor canopy bias due to suppression from neighbouring tree.	No action required.		Good	40+ B1	3.00
							n/a	3	Good		
T11	Semi-Mature Oak Quercus petraea	5	1	240	3 2.5 3	1: Located outside red line boundary. 2: Acceptable condition at present. 3: Ivy clad stem. 4: Moderate canopy bias due to suppression from neighbouring tree.	No action required.		Good	40+ B1	2.88
							n/a	3	Good		
T12	Semi-Mature Hawthorn Crataegus monogyna	5	1	200	4 4 4	1: Located outside red line boundary. 2: Good specimen. 3: Situated beneath low voltage overhead cables. 4: Remnants of historical boundary fence occluded into stem. 5: Previousy topped, with substantial regrowth present.	No action required.		Good	40+ B1	2.40
							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) W N E S	Notes	Recommendations		Physiological Condition	Life Expectancy (yrs)	RPA Radius
							Priority	Inspect Freq (yrs)	Structural Condition	Retention Category	(m)
T13	Semi-Mature Hawthorn Crataegus monogyna	5	2	270	3 4 2 4	1: Located outside red line boundary. 2: Multistemmed from a height of approximately 0.5m 3: Good condition. 4: Stem stradling boundary fence. 5: Northern canopy previously pruned.	No action required.		Good	40+	3.24
							n/a	3	Good	B1	
T14	Semi-Mature Hawthorn Crataegus monogyna	4	2	280	4 4 4 4	1: Multi-stemmed at base. 2: Good condition. 3: Stem stradling boundary fence. 4: Asymmetrical crown.	No action required.		Good	40+	3.36
							n/a	3	Good	B1	
T15	Semi-Mature Common Elder Sambucus nigra	5	2	260	4 0 4 4	1: Multi-stemmed at base. 2: Good condition. 3: Stem stradling boundary fence.	No action required.		Good	40+	3.12
							n/a	3	Good	B1	
T16	Early-Mature Pedunculate Oak Quercus robur	13	3	740	5 7 6 7	1: Twin stemmed at a height of approximately 1m 2: Included stem union at base 3: Multiple sites of stem fusions at a height of approximately 1m 4: Minor deadwood.	No action required.		Good	B1	8.88
							n/a	1.5	Fair		
T17	Early-Mature Crab Apple Malus sylvestris	7	1	350	5 3 5 2	1: Located outside red line boundary. 2: Asymmetric crown due to suppression from neighbouring tree 3: Minor deadwood throughout. 4: Acceptable condition.	No action required.		Good	40+	4.20
							n/a	3	Fair	C1	
T18	Semi-Mature Sycamore Acer pseudoplatanus	14	1	680	6 6 6 6	1: Multi-stemmed at base. 2: Stem stradling boundary fence. 3: Acceptable condition.	No action required.		Good	40+	8.16
							n/a	3	Good	B2	

Reference T= Tree G = Group H = Hedge W = Woodland	Age & Species	Height (m)	Crown Ht (m)	DBH (mm)	Crown Spread (m) W N 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	14	1	510	5 5 5	1: Twin stemmed at base. 2: Stem stradling boundary fence. 3: Acceptable condition.	No action required.		Good	40+	6.12
	n/a						3	Good	B2		
T20	Semi-Mature Hawthorn Crataegus monogyna	6	2	390	4.5 5 4	1: Located outside red line boundary. 2: Minor stem lean north. 3: Evidence of historical flailing. 4: Inculded union present on north facing lateral branch.	No action required.		Good	40+	4.68
	n/a						3	Good	B1		
T21	Mature Pedunculate Oak Quercus robur	15	1	920	8 7 7	1: Low lateral limb at base, which extends east. 2: Trifrucated stem. 3: Minor deadwood. 4: Acceptable condition.	No action required.		Good	40+	11.04
	n/a						3	Good	A1		
T22	Mature Pedunculate Oak Quercus robur	9	1	270	5 3 1	1: Located outside red line boundary. 2: Minor canopy bias due to suppression from neighbouring tree. 3: Minor deadwood. 4: Acceptable condition.	No action required.		Good	40+	3.24
	n/a						3	Good	B2		
T23	Mature Pedunculate Oak Quercus robur	8	1	320	4 5 4	1: Good condition.	No action required.		Good	40+	3.84
	n/a						3	Good	B2		
G24	Early-Mature Sycamore Acer pseudoplatanus	av 12	av 1	av 550	av 6 6 each	1: X7 trees inclusive of x4 multi-stemmed trees. 2: Included unions present. 3: Crossing limbs/branches. 4: Remants of historical boundary fence occluded into stem.	No action required.		Good	40+	6.60
	n/a						3	Good	B1		

Reference T= Tree G = Group H = Hedge W = Woodland	Age & Species	Height (m)	Crown Ht (m)	DBH (mm)	Crown Spread (m) W N E S	Notes	Recommendations		Physiological Condition	Life Expectancy (yrs)	RPA Radius
							Priority	Inspect Freq (yrs)	Structural Condition	Retention Category	(m)
G25	Semi-Mature Sycamore Acer pseudoplatanus	av 10	av 1	av 260	av 6 6 6 each	1: Closely spaced pair. 2: Both trees multi-stemmed from ground level. 3: Acceptable condition. 4: Remnants of historical boundary fence occluded into stem.	No action required.		Good	40+	3.12
							n/a	3	Good	B1	
T26	Semi-Mature Hawthorn Crataegus monogyna	7	1	370	3 3 4	1: Located outside red line boundary. 2: Evidence of historical flailing. 3: Acceptable condition.	No action required.		Good	40+	4.44
							n/a	3	Good	B1	
G27	Early-Mature Sycamore Acer pseudoplatanus	av 12	av 1	av 900	av 6 6 each	1: Three multistemmed trees. 2: Included unions present. 3: Crossing limbs/branches. 4: Minor deadwood.	No action required.		Good	40+	10.80
							n/a	3	Good	B2	
T28	Mature Turkey Oak Quercus cerris	15	1	1030	10 9 9	1: Multis-temmed from ground level. 2: Several areas of stem fusion at stem base. 3: Epicormic growth throughout crown. 4: Minor deadwood. 5: Pruning wounds from previous crown lift.	No action required.		Good	40+	12.36
							n/a	3	Good	A1	
T29	Early-Mature Birch Betula spp	16	3	420	5 4 2.5	1: Acceptable condition. 2: Located outside red line boundary.	No action required.		Good	40+	5.04
							n/a	3	Good	B2	
G30	Semi-Mature Cherry Prunus spp	av 10	av 2	av 350	av 5 4 each	1: Located outside red line boundary. 2: Acceptable condition. 3: Closely spaced pair.	No action required.		Good	20-40	4.20
							n/a	3	Good	C1	

Reference T= Tree G = Group H = Hedge W = Woodland	Age & Species	Height (m)	Crown Ht (m)	DBH (mm)	Crown Spread (m) W N E S	Notes	Recommendations		Physiological Condition	Life Expectancy (yrs)	RPA Radius
							Priority	Inspect Freq (yrs)	Structural Condition	Retention Category	(m)
T31	Semi-Mature Larch Larix decidua	0	4	350	2 2 2.5	1: Located outside red line boundary. 2: Previously pruned 3: Acceptable condition at present	No action required		Good	20-40 B1	4.20
							n/a	3	Good		
G32	Semi-Mature Birch Betula spp	av 15	av 2	av 350	av 3 3 each	1: Located outside red line boundary. 2: Acceptable condition 3: Occluded stem damage present on all trees 4: Decay cavity present on most eastern tree	Monitor identified defect		Good	40+ B1	4.20
							n/a	3	Good		
T33	Semi-Mature Lime Tilia spp	10	2	570	4 4 4	1: Located outside red line boundary. 2: Acceptable condition 3: Multiple included unions present at stem base	Monitor identified defect		Good	40+ C1	6.84
							n/a	1.5	Fair		
T34	Semi-Mature Sycamore Acer pseudoplatanus	15	2	450	6 6 6	1: Acceptable condition 2: Minor stem lean	No action required		Good	40+ B2	5.40
							n/a	3	Good		
W35	Semi-Mature Mixed Broadleaved	av 16	av 1	av 460	av 6 6 each	1: Acceptable condition 2: Stream bed running from east to west through centre of group 3: Predominantly Sycamore crown from stools, ie multi-stemmed, with Oak sporadically located throughout group 4: Deadwood present throughout 5: Approximately 150 trees	No action required		Poor	40+ B2	5.52
							n/a	3	Good		
G36	Young Oak Quercus spp	av 14	av 8	av 190	av 1 1 each	1: Acceptable condition 2: Very close proximity planting 3: Approximately 200 trees 4: Will require silvicultural thinning works undertaken in the short-mid term	No action required		Good	40+ C2	2.28
							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)
G37	Young Mixed Broadleaved	av 14	av 8	av 180	2 2 2 each	1: Acceptable condition 2: Area of closely spaced planting 3: Approximately 150 trees 4: Species include Oak, Birch, Sycamore 5: Three mature trees located at the eastern edge of the group.	No action required		Good	40+	2.16
							n/a	3	Fair	B2	
T38	Early-Mature Ash Fraxinus excelsior	12	1	450	5 5 5	1: Trifurcated stem at base, with included bark unions present 2: Multiple pruning wound present within lower canopy 3: Canopy displaying early symptoms of Ash Dieback Disease (Hymenocyphus fraxineus)	Re-survey in full leaf		Good	40+	5.40
							L	1	Fair	B2	
T39	Early-Mature Sycamore Acer pseudoplatanus	8	4	450	5 5 5	1: Trifurcated stem at base, with included bark unions present 2: Pruning wounds from previous crown lift 3: Situated within greater extent of hedgerow and subsequently not accessed for detailed inspection	No action required		Good	40+	5.40
							n/a	3	Fair	B2	
G40	Early-Mature Leyland's Cypress Chamaecyparis lawsoniana	av 9	3	av 290	2 2 2 each	1: Twin stemmed at a height of approximately 1m 2: Pruning wounds from previous crown lift 3: Approximately 50 trees	No action required		Good	20-40	3.48
							n/a	3	Fair	C2	
G41	Semi-Mature Laurel Prunus laurocerasus	6	1	180	2 2 2	1: Planted boundary screen	No action required		Good	40+	2.16
							n/a	3	Good	C2	
H42	Semi-Mature Mixed Species	av 3	1	300	1 1 1	1: Managed boundary hedgerow 2: Species include Oak, Ash, Sycamore, Hawthorn, Laurel	No action required		Good	10-20	3.60
							n/a	3	Good	C2	

Reference T= Tree G = Group H = Hedge W = Woodland	Age & Species	Height (m)	Crown Ht (m)	DBH (mm)	Crown Spread (m) W N E S	Notes	Recommendations		Physiological Condition	Life Expectancy (yrs)	RPA Radius
							Priority	Inspect Freq (yrs)	Structural Condition	Retention Category	(m)
G43	Early-Mature Leyland's Cypress Chamaecyparis lawsoniana	av 9	3	av 290	av 3 3 3 each	1: Acceptable condition at present 2: Recently pruned	No action required		Good	10-20	3.48
							n/a	3	Fair	C2	
G44	Early-Mature Monterey cypress Cupressus macrocarpa	av 8	av 2	av 420	av 3 3 3 each	1: Acceptable condition at present 2: Located on neighbouring land and subsequently not inspected in detail 3: Evidently planted boundary screen	No action required		Good	10-20	5.04
							n/a	3	Fair	C2	
G45	Early-Mature Birch Betula spp	av 12	av 1	av 250	av 5 5 each	1: Acceptable condition at present 2: One failed tree within group 3: Approximately eight trees 4: Historically topped at a height of approximately 5m	recommended tree owner(s) remove failed tree		Good	10-20	3.00
							n/a	3	Fair	C2	
T46	Early-Mature White Poplar Populus alba	15	1	670	8 8 8	1: Acceptable condition at present 2: Twin stemmed at a height of approximately 2m 3: Crossing branches in crown 4: Pruning wounds from previous crown lift	No action required		Good	40+	8.04
							n/a	1.5	Good	B2	
T47	Early-Mature Pine Pinus sp	12	1	540	5 5 5	1: Located at edge of adjacent group 2: Low hanging canopy 3: Acceptable condition at present	No action required		Good	40+	6.48
							n/a	3	Good	B1	
G48	Early-Mature Mixed Coniferous	av 12	av 1	av 400	av 4 4 each	1: Acceptable condition at present 2: Leyland, Lawson cypress 3: Approximately 15 trees 4: Historically topped at a height of approximately 4m	No action required		Good	20-40	4.80
							n/a	3	Fair	C2	

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)	
H49	Early-Mature Hawthorn Crataegus monogyna	av 2	3	100	1 1 1	1: Dense Hawthorn hedge maintained at a height of 2m	No action required		Good	20-40	C2	1.20
	n/a	3	Fair									
H50	Early-Mature Hawthorn Crataegus monogyna	av 5	3	120	1.5 1.5 1.5	1: Dense Hawthorn hedge 2: Previously pruned	No action required		Good	20-40	C2	1.44
	n/a	3	Fair									
H51	Early-Mature Hawthorn Crataegus monogyna	av 1	3	90	1 1 1	1: Broken Hawthorn hedge situated along eastern boundary	No action required		Fair	20-40	C2	1.08
	n/a	3	Fair									
G52	Young Birch Betula sp	av 10	av 1	av 150	av 2 2 2 each	1: Area of natural colonisation 2: Acceptable condition at present	No action required		Good	40+	C2	1.80
	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 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

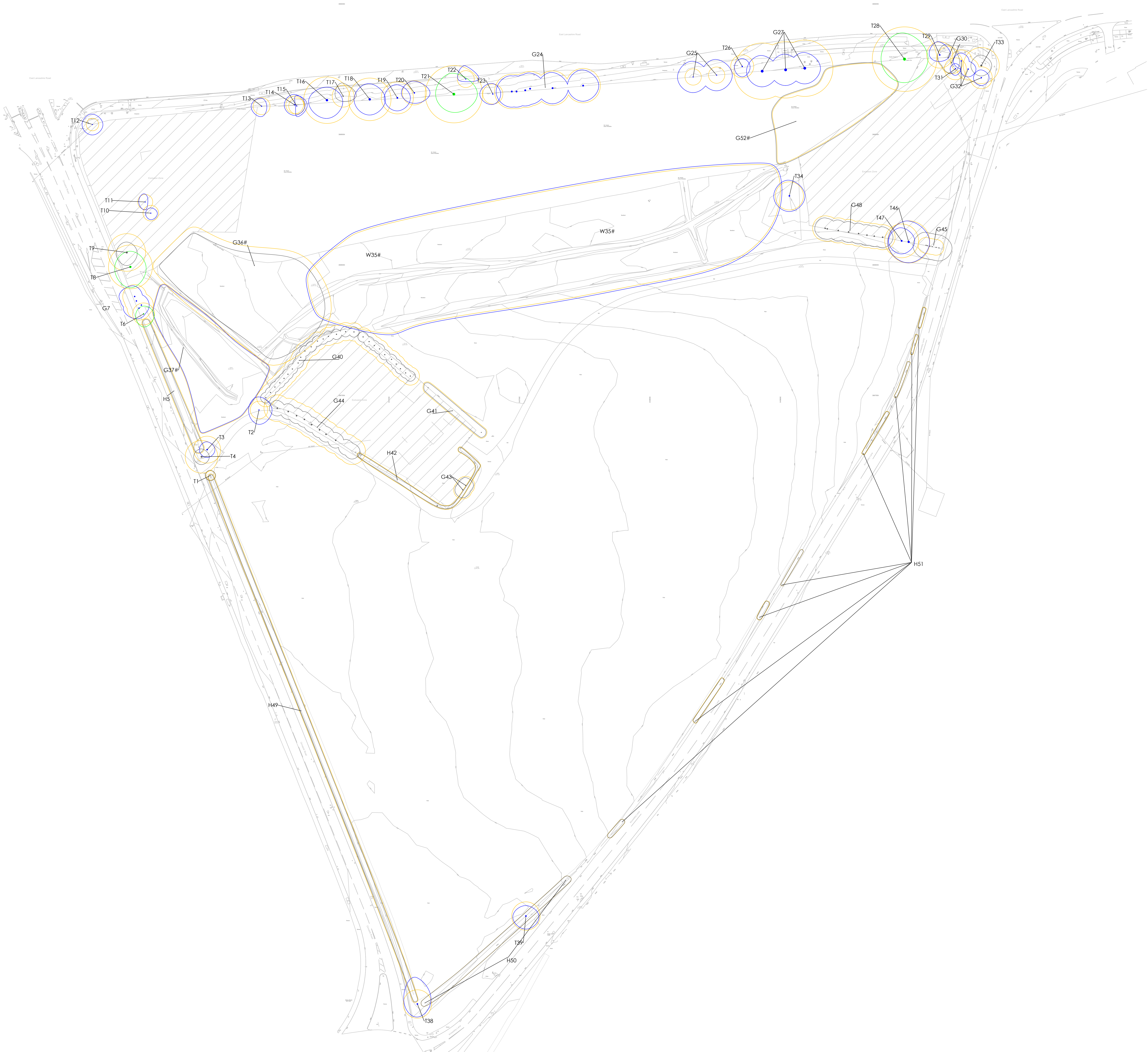
The following table provides an explanation of retention categories used.		
Trees to be removed		Colour on Plan
Category U Includes trees of very low quality that offer little or no amenity value.	Trees that are in such a condition that they should be removed as a matter of good arboricultural practice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

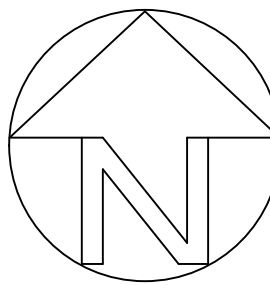
- Tree Constraints Plan
- Tree Removal Plan
- Tree Works Schedule
- Tree Protection Plan
- Tree Protection Inserts

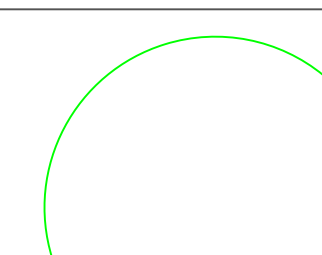
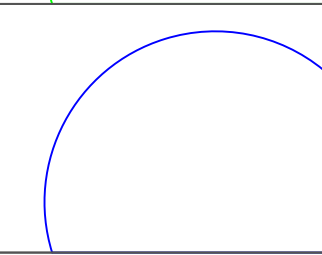
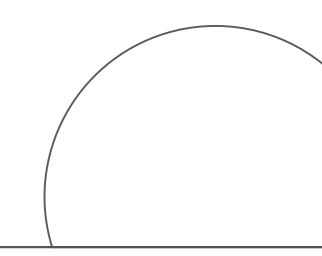
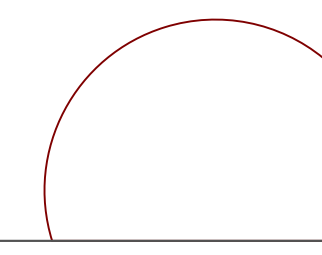
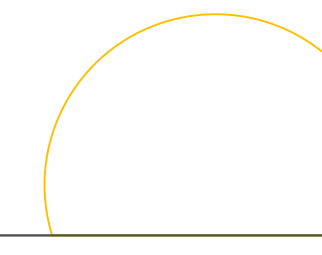
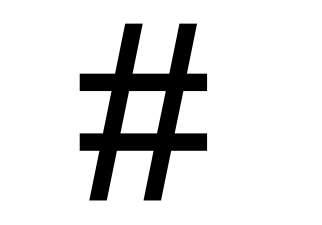
Although included plans are usually to scale, they are only intended to indicate positions of surveyed trees and dimensions should not be taken from these drawings.



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Notes:-



-  Category A tree, group or hedge
-  Category B tree, group or hedge
-  Category C tree, group or hedge
-  Category U tree, group or hedge
-  Root Protection Area (RPA)
-  Position estimated on site

REV.	DATE	DESCRIPTION	DRAWN	CHK'D



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

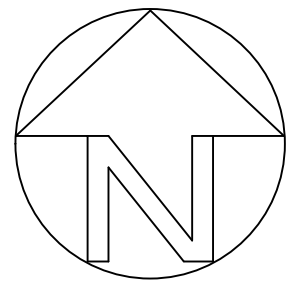
T: +44 (0) 161 312 3131
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Client: CADDICK DEVELOPMENTS		
Project: ORMSKIRK ROAD, KNOWSLEY		
Title: TREE CONSTRAINTS PLAN		
Issue: PLANNING		
Drawn: WS	Checked: AB	Approved: AB
Project: UG45	Scale @ A0: 1:500	Date: 14/03/2022
Dwg No: UG_45_ARB_TCP_01	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
	Position estimated on site

02	15/11/22	TREE/HEDGE REMOVAL UPDATED	AB	AH
01	30/05/22	UPDATED PROPOSAL	EA	AB
REV.	DATE	DESCRIPTION	DRAWN	CHK'D



A: Ground Floor, The Tower,
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Client: **CADDICK DEVELOPMENTS**

Project: **ORMSKIRK ROAD,
KNOWSLEY**

Title: **TREE REMOVAL PLAN**

Issue: **PLANNING**

Drawn: WS	Checked: AB	Approved: AB
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Project: UG45	Scale @ A0: 1:500	Date: 25/03/2022
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Dwg No: UG_45_ARB_TRP_01	Revision: 02
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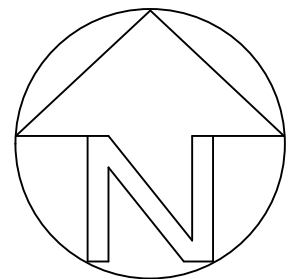
Tree Works Schedule			
Tree Number	Species	Works Required	Reason
T1	Hawthorn	Fell to ground level, grind/grub out the stump	To facilitate construction of new footway/carriageway
T4	Lawson cypress		
W35	Mixed	Removal approximately 90%	To facilitate construction of building unit 3 of proposal
H49	Hawthorn	Remove	Facilitate construction of new footway/carriageway

01	15/11/22	TREE/HEDGE REMOVAL UPDATED	AB	AH
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: CADDICK DEVELOPMENTS				
Project: ORMSKIRK ROAD, KNOWSLEY				
Title: TREE WORKS SCHEDULE				
Issue: PLANNING				
Drawn: WS		Checked: AB		Approved: AB
Project: UG45		Scale @ A0: N/A		Date: 14/03/2022
Dwg No: UG_45_ARB_TWS_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
- Root Protection Area (RPA)
- Position estimated on site
- Redline Site Boundary
- Protective fencing (See Insert 1 & Insert 2)

02	15/11/22	TREE/HEDGE REMOVAL UPDATED	AB	AH
01	30/05/22	UPDATED PROPOSAL	EA	AB
REV.	DATE	DESCRIPTION	DRAWN	CHK'D



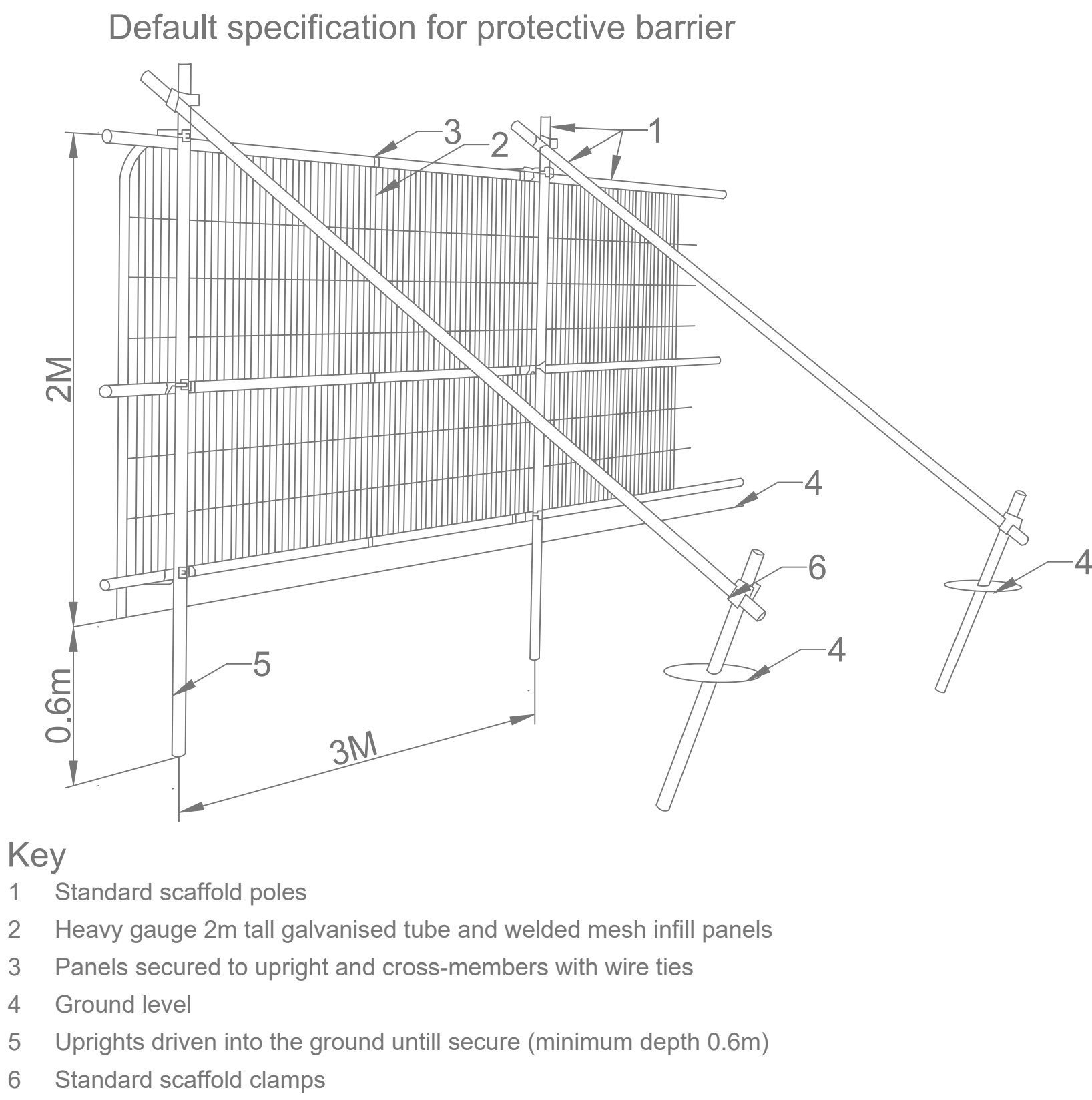
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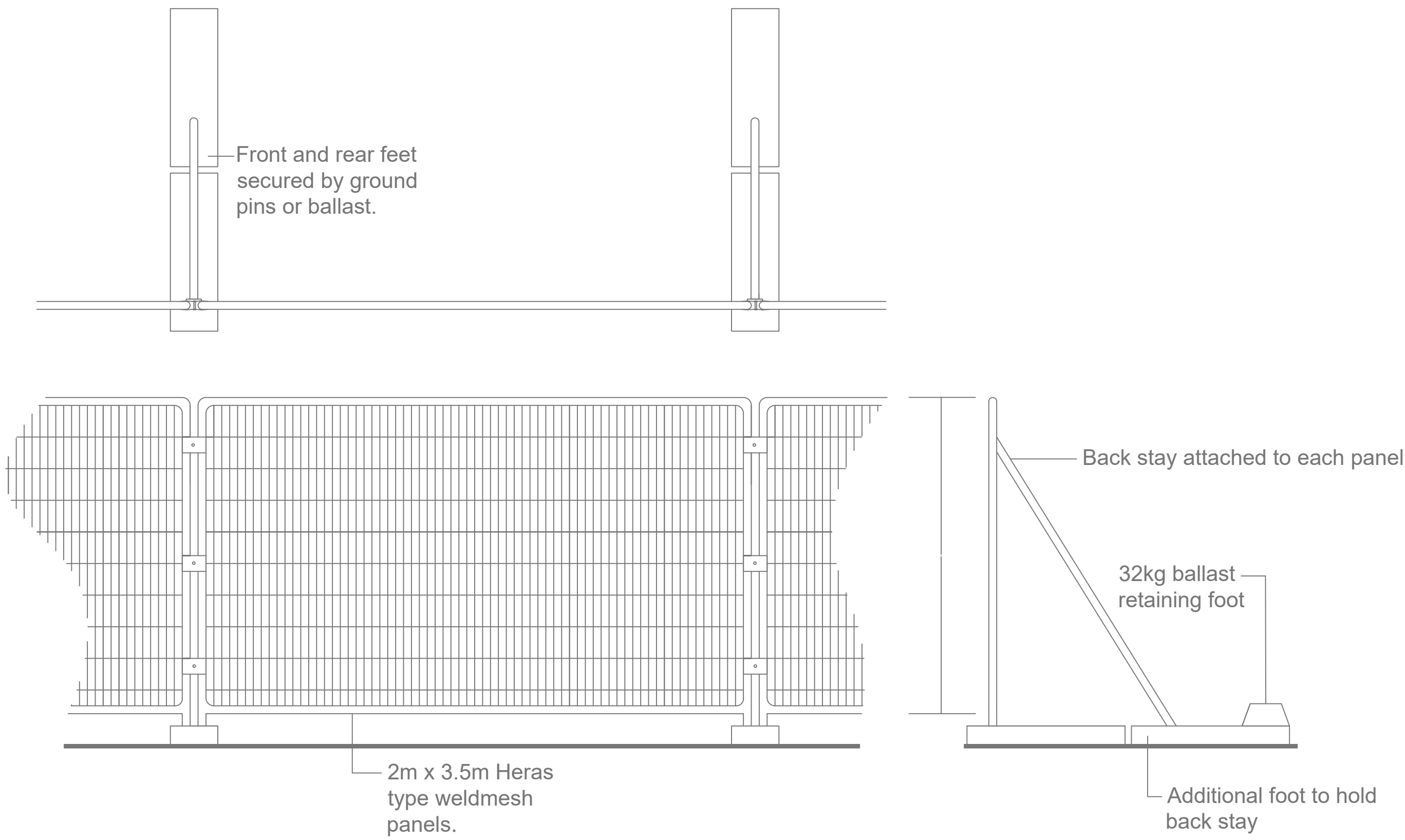
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Client: CADDICK DEVELOPMENTS				
Project: ORMSKIRK ROAD, KNOWSLEY				
Title: TREE PROTECTION PLAN				
Issue: PLANNING				
Drawn:	WS	Checked:	AB	Approved: AB
Project:	UG45	Scale @ A0:	1:500	Date: 25/03/2022
Dwg No:	UG_45_ARB_TPP_01			Revision: 02

Insert 1: Tree protective fencing specification



Back-stay support



Insert 2: Tree protection notice



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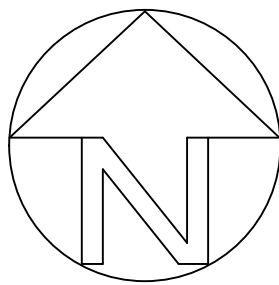
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Notes:-



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Client:
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Project:
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KNOWSLEY**

Title:
TREE PROTECTION INDEX

Issue:
PLANNING

Drawn:	WS	Checked:	AB	Approved:	AB
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Project:	UG45	Scale @ A0:	N/A	Date:	14/03/2022
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Dwg No:	UG_45_ARB_TPI_01	Revision:	00
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