

ARBORICULTURAL IMPACT ASSESSMENT (AIA)

MARCH 2026

Sandy Brow Lane
Kirkby
L33 3AP

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 Balance Power Projects Limited to carry out an Arboricultural Survey to British Standard 5837: 2012 guidelines at Sandy Brow Lane, Kirkby, L33 3AP and produce our findings in a report.
- 1.1.2. It is proposed to develop a portion of the site into an outdoor, high-powered battery energy storage facility, alongside an access track and soft landscaping. Full details of the proposed site layout can be seen on the plans included in Appendix 4.
- 1.1.3. Access to Knowsley Metropolitan Borough Council's online interactive mapping facility on 11/04/2025 indicated there are no TPOs currently in effect at the site, nor does the site reside within a Conservation Area.
- 1.1.4. The proposed development would necessitate the removal of two individual trees within the site boundary. It is recommended this tree removal should be mitigated against through onsite replacement tree planting and the production of a robust soft landscaping scheme.
- 1.1.5. Urban Green have also carried out a Preliminary Ecological Appraisal (PEA) of the site (UG_2142_ECO_PEA_02). This report should be read and adhered to in conjunction with the PEA report.
- 1.1.6. 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.
- 1.1.7. Areas within the site beyond the distance of influence from the proposed development will constitute a Construction Exclusion Zone, as indicated on the Tree Protection Plan, within which no onsite operations of any kind are to be undertaken.
- 1.1.8. Information regarding the layout of new utilities and drainage and final site levels have been submitted to the Arboricultural Consultant and the impact of these on the retained trees has been assessed.

2. Introduction

2.1. Instructions and References

- 2.1.1. Urban Green have been instructed by Balance Power Projects Limited to carry out an Arboricultural Impact Assessment (AIA) in accordance with BS 5837: 2012 '*Trees in relation to design, demolition and construction – Recommendations*' at Sandy Brow Lane, Kirkby, L33 3AP 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 the Site Context plan below. The Ordnance Survey (OS) Grid Reference is SJ 44231 98394.



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Legend: Red Line Boundary		1 Kilometers		N
Client: Balance Power		Issue: 01	Figure: 01	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
Project: Sandy Brow		Scale @ A4 1:12,000		
Title: Site Context		Approved by: CL	Checked by: SP	
Drawing Ref: UG_2142_SITE_CONTEXT		Author: CL	Date: 01/04/2025	

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 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 in order to assess the potential impacts.

2.4. Limitations

- 2.4.1. This report is based upon a visual inspection carried out from ground level 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 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 to reduce the associated risks to an acceptable level.

2.5. The Site

- 2.5.1. The site is located off Perimeter Road, Kirkby, Merseyside and comprises agricultural land. The site is void of any discerning features, apart from the existing vegetation, a centrally located access track, and two electricity pylons to the west. The site is bounded by additional agricultural land to the north, east, and south, and a Knowsley Industrial Park to the west.

2.6. Soil Profile

- 2.6.1. Reference to the Cranfield Soil and Agrifood Institute's Soilscape Viewer suggests there are two distinct soil profiles in the site vicinity. The first soil type, which covers the eastern portion of the site, is characterised as a raised peat bog soil, described as being naturally wet and low in fertility. This soil type is typical of bog, grassland, and some arable environments. The second soil type, which covers the western portion of the site, is characterised as a sandy, loamy, naturally wet, and highly acidic soil, described as being naturally wet and very low in fertility. This soil type is typical of arable, horticultural, and some wet lowland heath 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. Access to Knowsley Metropolitan Borough Council's online interactive mapping facility on 11/04/2025 confirmed there are no TPOs currently in effect at the site, nor does the site reside within a Conservation Area. There are two TPOs in effect in the site vicinity – Tree Preservation Order No. 2-2006 (ref: 06/00002/TPO) is in effect to the west of the site, and Tree Preservation Order No. 1 1991 (ref: 91/00001/TPO) is in effect to the northwest of the site, however, these TPOs are beyond the distance of influence from the site and the proposed development.
- 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 five cubic metres 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. Ecological Considerations

- 3.2.1. Prior to the commencement of any tree works, the trees should be assessed for the presence of protected species, many of which are protected under the *Wildlife and Countryside Act 1981* (as amended) and/or the *Conservation of Habitats and Species Regulations 2017* (as amended).
- 3.2.2. Where there is evidence that roosting bats, nesting birds, or other protected species are present, works in these areas should pause and the advice of a suitably qualified ecologist should be sought about how best to proceed.
- 3.2.3. If tree works are carried out during the bird nesting season (March to September, inclusive), trees should be inspected by a qualified ecologist to confirm likely absence, no more than forty-eight hours prior to the commencement of works.
- 3.2.4. Urban Green has also been appointed to complete a Preliminary Ecological Appraisal (PEA) of the site (UG_2142_ECO_PEA_02), which should be read and adhered to should any tree work be required. The objectives of the PEA are to identify habitats on site and determine the suitability for any 'protected and/or notable' species, including proximate designated sites, in the context of the development proposals. This report should be read and adhered to in conjunction with the PEA report.

4. Arboricultural Impact Assessment (AIA)

4.1. Summary of the Development

- 4.1.1. It is proposed to develop a portion of the site into an outdoor, high-powered battery energy storage facility, alongside an access track and soft 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. The tree survey plan has been transposed 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 Root Protection Area (RPA) is an area of ground around the base of a tree indicated on the plans included in Appendix 4 as an ochre yellow circle centred around the stem which is calculated in relation to the stem diameter.
- 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.
- 4.3.3. BS 5837: 2012 states that the default position for proposed structures should always be outside the RPA. It is recognised that this may not always be possible, yet tree retention would be desirable. In this instance, technical solutions might be available that prevent damage to the retained tree(s).

4.4. Surveyed Trees

- 4.4.1. The survey assessed four individual trees and eleven tree groups, the quality and value of which are summarised below. Full details of the surveyed trees and trees groups can be viewed in the Tree Data Schedule in Appendix 1.
- 4.4.2. Five tree groups were assessed as BS 5837: 2012 'High Quality' Retention Category 'A'; two individual trees and five tree groups were assessed as BS 5837: 2012 'Moderate Quality' Retention Category 'B'; and two individual trees and one tree group were assessed as BS 5837: 2012 'Low Quality' Retention Category 'C'.
- 4.4.3. All the surveyed trees and tree groups lie within the site or on the boundaries.
- 4.4.4. The tree cover comprises mainly of moderate-to-high quality boundary screening groups, apart from T3, T4, T9 & T10, which are individual trees of moderate and low quality, respectively.
- 4.4.5. Tree groups G1, G2, G5, and G12-G15 are visually important in terms of their contribution to the character and appearance of the area. Trees and tree groups 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 two individual trees (T3 and T4) assessed as BS 5837: 2012 'Moderate Quality' Retention Category 'B' within the site redline boundary, as detailed in the Tree Removal Plan and Tree Works Schedule in Appendix 4.
- 4.5.2. The removal of this tree would have only a low and localised impact on the wider character and appearance of the site. It is recommended the removal of this tree be mitigated through onsite replacement tree planting and the production of a robust soft landscaping scheme.
- 4.5.3. The remaining trees and tree groups are to be retained and can be protect throughout the proposed development in accordance with the standards and practices detailed in BS 5837: 2012 and in this document.
- 4.5.4. Temporary tree protective fencing will need to be installed at the alignment indicated on the Tree Protection Plan in Appendix 4 before any construction activity takes place. Guidance at section 4.7. of this report should be adhered to when positioning protective fencing around retained trees.
- 4.5.5. The distance of trees and tree groups G6-G15 negates the need for temporary tree protective fencing. However, as indicated on the Tree Protection Plan, the areas in which these trees and tree groups are located will constitute a Construction Exclusion Zone (CEZ). Under no circumstances should any onsite operations be carried out in the CEZ, including any construction activities, or delivery and/or storage of materials.

4.6. Tree Surgery Works

- 4.6.1. Tree works that are recommended within the Tree Works Schedule in Appendix 4 are works required to facilitate development and include details of remedial works. Tree works stated in the Tree Data Schedule 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.
- 4.6.4. All specified tree work is to be carried out in accordance with the standards and practices detailed in BS 3998: 2010 '*Tree work – Recommendations*'.

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/repared immediately with appropriate fencing.
- 4.7.3. The required specification for protective fencing is illustrated in the Tree Protection Index (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 Index (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 Local Planning Authority (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. Information regarding the layout of new utilities and drainage and final site levels have been submitted to the Arboricultural Consultant and the impact of these on the retained trees has been assessed.

4.10. Recommendations

- 4.10.1. 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 onsite operations.
- 4.10.2. 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.

Appendix 1 - Tree Data Schedule

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

Reference T = Tree G = Group H = Hedge W = Woodland	Age & Species (Common Name) (Botanical Name)	Height (m)	Crown Ht (m)	Lowest Branch Height (m)	Lowest Branch Direction	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	av 12	av 1.5	2	M	av 400	av 5 3 3 3 each	1: Mixed group of alder, silver birch, cherry, black pine, hawthorn and blackthorn. 2: Wooded area to rear of fence on southern boundary. 3: Minor decline visible in alder. 4: Overhangs site by approximately 3m.	No action required.		Good	40+	4.80
	Species								n/a	3	Good	A2	
G2	Semi-Mature Mixed	av 10	av 1.5	2	M	av 300	av 6 3 3 3 each	1: Mixed group of alder, silver birch, cherry, osier, hawthorn and blackthorn. 2: Dense linear group to rear of fence on southern boundary. 3: Predominantly alder with some signs of crown decline. 4: Common osier present with several stems significantly overhanging the site. 5: Several young alder stems have seeded within the field side at the eastern end.	No action required.		Good	40+	3.60
	Species								n/a	3	Good	A2	
T3	Semi-Mature Silver Birch	7	1.8	2	M	170	3 3 3 3	1: An individual specimen exhibiting good form and vigour.	Remove for development - see Tree Removal Plan.		Good	20-40	2.04
	<i>Betula pendula</i>								n/a	n/a	Good	B1	
T4	Early-Mature Hawthorn	4.5	1	1.5	M	210	4 4 4 4	1: An individual specimen exhibiting good form and vigour. 2: Typical dense crown structure.	Remove for development - see Tree Removal Plan.		Good	20-40	2.52
	<i>Crataegus monogyna</i>								n/a	n/a	Good	B1	
G5	Semi-Mature Mixed	av 14	av 1.5	2	M	av 300	av 5 5 5 5 each	1: A dense mixed group forming a wooded copse area. 2: Predominantly alder and silver birch with bird cherry, hawthorn, larch, crack willow and black pine. 3: Located to the rear of fenced area. 4: No significant overhang into site.	No action required.		Good	40+	3.60
	Species								n/a	3	Good	A2	
G6	Semi-Mature Mixed	av 8	av 1	1.5	M	av 200	av 4 4 4 4 each	1: Mixed group containing apple, osier, bird cherry, hawthorn and blackthorn. 2: A linear group along the southern boundary forming a dense thicket.	No action required.		Good	20-40	2.40
	Species								n/a	3	Good	B2	

Reference T = Tree G = Group H = Hedge W = Woodland	Age & Species (Common Name) (Botanical Name)	Height (m)	Crown Ht (m)	Lowest Branch Height (m)	Lowest Branch Direction	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 Mixed Species	av 12	av 1.8	2	M	av 400	av 8 6 6 6 each	1: Mixed group of poplar and willow. 2: A small clump of larger fast growing trees in front of G6.	No action required.		Good	20-40	4.80
									n/a	3	Good	B2	
G8	Early-Mature Silver Birch <i>Betula pendula</i>	av 3	av 2	2	M	av 500	av 5 5 5 5 each	1: A scattered group either side of eastern boundary fence down a bank area with minor hawthorn present. 2: Mostly multi-stemmed specimens. 3: More densely populated towards southern end.	No action required.		Good	20-40	6.00
									n/a	3	Good	B2	
T9	Over-Mature Goat Willow <i>Salix caprea</i>	9	4	1	M	1360	6 7 7 7	1: A large specimen located on eastern boundary at top of bank area. 2: Bifurcates at 1m forming multiple stems. 3: Significant decay in forks at scaffold limbs. 4: An old scrub field specimen.	No action required.		Good	10-20	15.00
									n/a	3	Poor	C1	
T10	Over-Mature Goat Willow <i>Salix caprea</i>	8	1	1.5	M	1500	8 7 8 7	1: An old multi-stemmed scrub field specimen located on eastern boundary at top of bank area. 2: Typical decay in scaffold limbs and forks.	No action required.		Fair	10-20	15.00
									n/a	3	Poor	C1	
G11	Mature Mixed Species	av 8	av 1	1.5	M	av 500	av 6 6 6 6 each	1: Mixed group of goat willow and silver birch. 2: A clump of multi-stemmed trees on bank area sloping down to fence. 3: Decay in forks and scaffold limbs of goat willow. 4: Scrub trees.	No action required.		Good	10-20	6.00
									n/a	3	Fair	C2	
G12	Semi-Mature Mixed Species	av 12	av 2	2.5	M	av 300	av 4 4 4 4 each	1: Predominantly silver birch and alder with hawthorn, elderberry and osier. 2: Located on the northern boundary behind fence at bottom of bank area. 3: Linear group exhibiting good vigour. 4: Overhangs the site by approximately 3m.	No action required.		Good	40+	3.60
									n/a	3	Good	A2	

Reference T = Tree G = Group H = Hedge W = Woodland	Age & Species (Common Name) (Botanical Name)	Height (m)	Crown Ht (m)	Lowest Branch Height (m)	Lowest Branch Direction	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)
G13	Semi-Mature Mixed Species	av 6	av 1	1.5	M	av 200	av 3 3 3 each	1: A young wide scrub group of goat willow, ash, and elderberry located on bank area adjacent to northern boundary. 2: Acceptable condition at present.	No action required.		Good	20-40	2.40
									n/a	3	Good	B2	
G14	Early-Mature Mixed Species	av 14	av 1	1.5	M	av 400	av 6 6 6 each	1: Mixed group containing alder, ash, goat willow, hawthorn, blackthorn and silver birch. 2: A linear wooded area on northern boundary to rear of fence. 3: Gap in group under high voltage wires. 4: Located at bottom of bank area.	No action required.		Good	40+	4.80
									n/a	3	Good	A2	
G15	Early-Mature Mixed Species	av 10	av 1.8	2	M	av 500	av 5 5 5 each	1: Linear group of two silver birch, one hawthorn and one goat willow adjacent road. 2: Acceptable condition at present.	No action required.		Good	20-40	6.00
									n/a	3	Fair	B2	

Appendix 2 – Tree Data Schedule Definition of Terms

Tree Referencing:	Individual Trees T (+number) Grouped Trees G (+number) Hedgerows H (+number) Woodlands W(+number)
Age Category/Life Stage:	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
Lowest Branch Height & Orientation:	Height above ground level and direction of growth of the lowest lateral branch extending from the main tree stem ('M' denotes stems arising from multiple orientations).
Crown Spread:	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.
RPA Radius:	Radial length in metres from the centre of the tree stem to the extent of the Root Protection Area (RPA), calculated in relation to the stem diameter.

Appendix 3 – Tree Retention Categories

The following table provides an explanation of the BS 5837: 2012 Tree Retention Categories and Subcategories used during the survey and in the report.		
Trees to be Removed:		Colour on Plan
BS 5837: 2012 Category U Includes trees of very low quality that offer little or no amenity value.	Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.	RED
Trees to be Considered for Retention:		
BS 5837: 2012 Retention Category A Trees of a high quality, with an estimated life 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
BS 5837: 2012 Retention Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.	Trees which 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
BS 5837: 2012 Retention 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
BS 5837: 2012 Tree Retention Subcategories:		
BS 5837: 2012 Retention Subcategory 1	Trees possessing mainly Arboricultural qualities.	n/a
BS 5837: 2012 Retention Subcategory 2	Trees possessing mainly landscape qualities.	n/a
BS 5837: 2012 Retention Subcategory 3	Trees possessing mainly cultural values, including conservation.	n/a
NOTE 1: Trees may be assessed as belonging to more than one BS 5837: 2012 Tree Retention Subcategory depending on their perceived value and/or contribution, i.e., A1.2; B2.3 etc. NOTE 2: 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 Index

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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Graphical representations of equipment on this drawing have been co-ordinated, but are approximations only. Please refer to the specifications and / or details for actual sizes and / or specific contractor construction information.

Notes:-

- BS 5837: 2012 Retention Category A Tree, Group or Hedge
- BS 5837: 2012 Retention Category B Tree, Group or Hedge
- BS 5837: 2012 Retention Category C Tree, Group or Hedge
- BS 5837: 2012 Category U Tree, Group or Hedge
- Root Protection Area (RPA)
- Position Estimated on Site
- Site Ownership Boundary

01	11/04/25	UPDATED PROPOSAL	AH	GM
REV.	DATE	DESCRIPTION	DRAWN	CHK'D

URBAN GREEN

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

T: +44 (0) 161 312 3131

weareurbangreen.co.uk

Client:
BALANCE POWER PROJECTS LIMITED

Project:
SANDY BROW LANE, KIRKBY

Title:
TREE CONSTRAINTS PLAN

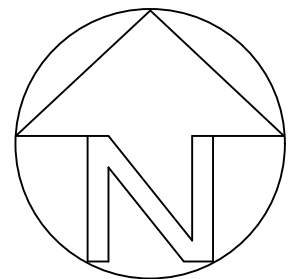
Issue:
PLANNING

Drawn: AH	Checked: AB	Approved: AB
Project: UG2142	Scale @ A0: 1:1000	Date: 15/09/23
Dwg No: UG_2142_ARB_TCP_01		Revision: 01



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Notes:-



	BS 5837: 2012 Retention Category A Tree, Group or Hedge
	BS 5837: 2012 Retention Category B Tree, Group or Hedge
	BS 5837: 2012 Retention Category C Tree, Group or Hedge
	BS 5837: 2012 Category U Tree, Group or Hedge
	Retained Tree
	Removed Tree
	Position Estimated on Site
	Site Ownership Boundary
	Redline Site Boundary

04	06/03/26	UPDATED PROPOSAL	AH	HL
03	02/06/25	UPDATED PROPOSAL	AH	HL
02	21/05/25	UPDATED PROPOSAL	AH	GM
01	22/04/25	UPDATED PROPOSAL	AH	GM
REV.	DATE	DESCRIPTION	DRAWN	CHK'D



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Client: BALANCE POWER PROJECTS LIMITED		
Project: SANDY BROW LANE, KIRKBY		
Title: TREE REMOVAL PLAN		
Issue: PLANNING		
Drawn: AH	Checked: AB	Approved: AB
Project: UG2142	Scale @ A0: 1:1000	Date: 15/09/23
Dwg No: UG_2142_ARB_TRP_01	Revision: 04	

Tree Works Schedule				
Tree Number	BS 5837: 2012 Retention Category	Species	Works Required	Reason
T3	B	Silver birch	Fell to ground level	To facilitate the proposed development
T4		Hawthorn		
All specified tree works are to be carried out in accordance with BS 3998: 2010 ' <i>Tree work - Recommendations</i> '				

03	02/06/25	UPDATED PROPOSAL	AH	HL
02	21/05/25	UPDATED PROPOSAL	AH	GM
01	22/04/25	UPDATED PROPOSAL	AH	GM
REV.	DATE	DESCRIPTION	DRAWN	CHK'D

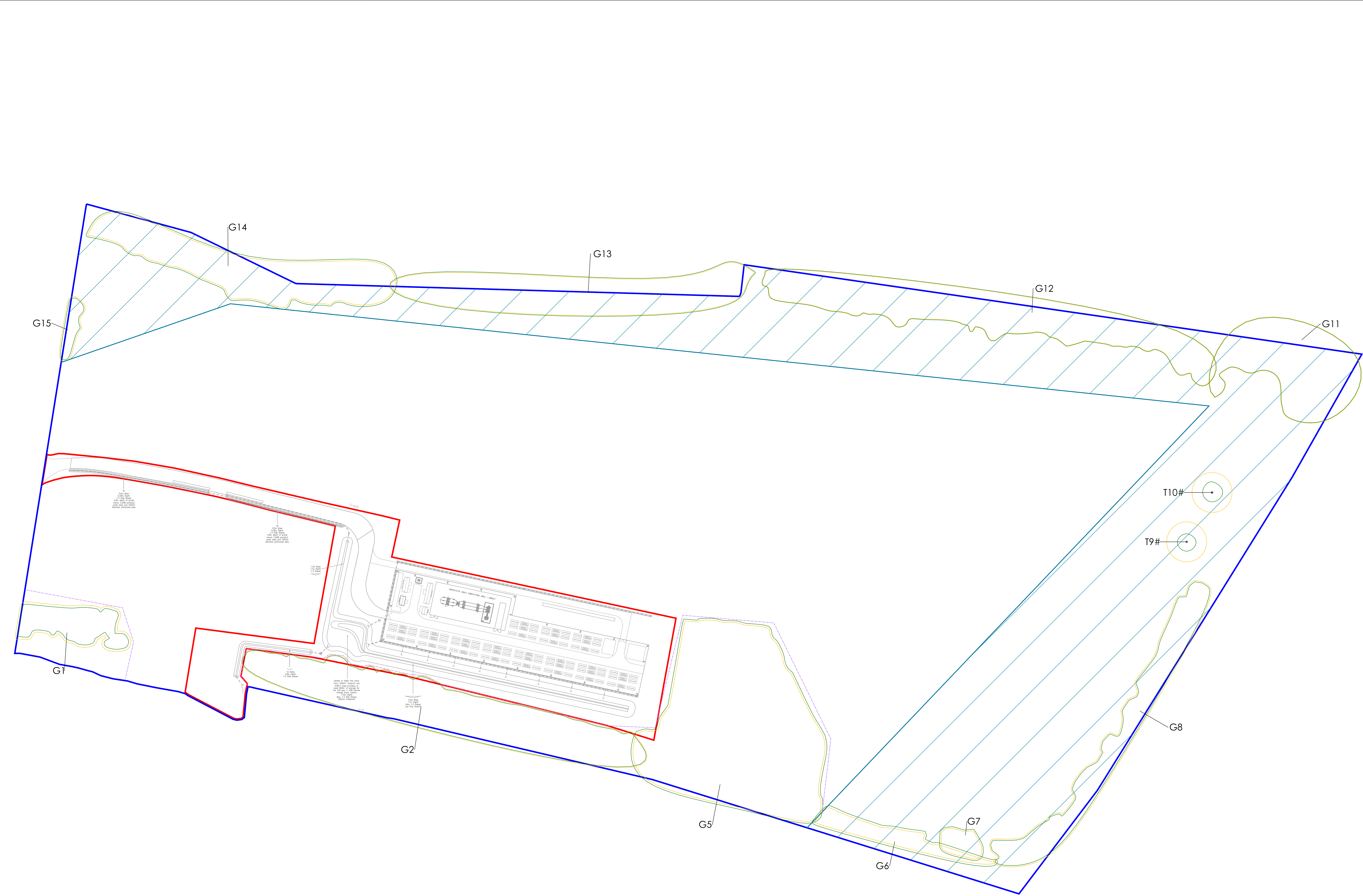


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Client:	BALANCE POWER PROJECTS LIMITED		
Project:	SANDY BROW LANE, KIRKBY		
Title:	TREE WORKS SCHEDULE		
Issue:	PLANNING		
Drawn:	AH	Checked: AB	Approved: AB
Project:	UG2142	Scale @ A0: N/A	Date: 15/09/23
Dwg No:	UG_2142_ARB_TWS_01		Revision: 03



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Notes:-

BS 5837: 2012 Retention Category A Tree, Group or Hedge

BS 5837: 2012 Retention Category B Tree, Group or Hedge

BS 5837: 2012 Retention Category C Tree, Group or Hedge

BS 5837: 2012 Category U Tree, Group or Hedge

Retained Tree

Root Protection Area (RPA)

#

Position Estimated on Site

Site Ownership Boundary

Redline Site Boundary

Protective Fencing (See TPI Inserts 1 & 2)

Construction Exclusion Zone (CEZ)

04	06/03/26	UPDATED PROPOSAL	AH	HL
03	02/06/25	UPDATED PROPOSAL	AH	HL
02	21/05/25	UPDATED PROPOSAL	AH	GM
01	22/04/25	UPDATED PROPOSAL	AH	GM
REV.	DATE	DESCRIPTION	DRAWN	CHK'D

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G R E E N

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Client:

BALANCE POWER
PROJECTS LIMITED

Project:

SANDY BROW LANE,
KIRKBY

Title:

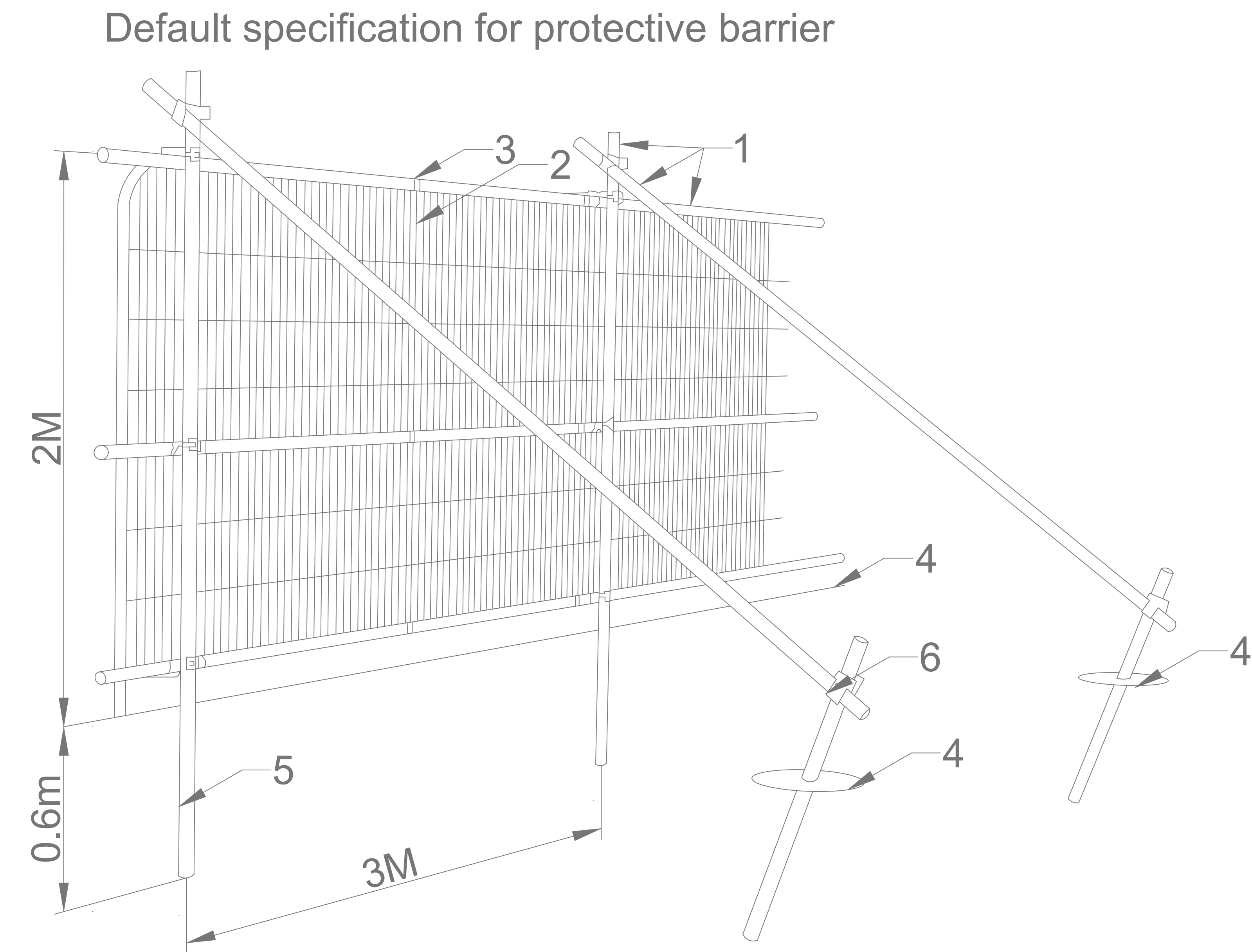
TREE PROTECTION PLAN

Issue:

PLANNING

Drawn:	AH	Checked:	AB	Approved:	AB
Project:	UG2142	Scale @ A0:	1:1000	Date:	15/09/23
Dwg No:	UG_2142_ARB_TPP_01	Revision:	04		

Insert 1: Tree Protective Fencing Specification



- Key
- 1 Standard scaffold poles
 - 2 Heavy gauge 2m tall galvanised tube and welded mesh infill panels
 - 3 Panels secured to upright and cross-members with wire ties
 - 4 Ground level
 - 5 Uprights driven into the ground untill secure (minimum depth 0.6m)
 - 6 Standard scaffold clamps

Insert 2: Tree Protection Notice



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Notes:-

01	22/04/25	UPDATED PROPOSAL	AH	GM
REV.	DATE	DESCRIPTION	DRAWN	CHK'D

URBAN GREEN A: Ground Floor, The Tower, Deva City Office Park, Trinity Way, Manchester M3 7BF T: +44 (0) 161 312 3131 weareurbangreen.co.uk		
Client: BALANCE POWER PROJECTS LIMITED		
Project: SANDY BROW LANE, KIRKBY		
Title: TREE PROTECTION INDEX		
Issue: PLANNING		
Drawn: AH	Checked: AB	Approved: AB
Project: UG2142	Scale @ A0: N/A	Date: 15/09/23
Dwg No: UG_2142_ARB_TPI_01	Revision: 01	