



Unit 3, Link 56, Deeside Industrial Park CH5 2UA

Arboricultural Impact Assessment

November 2023



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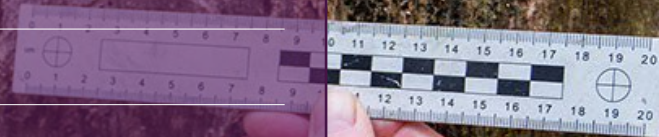
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Drawing(s)

TCP/5015/Y/100	Arboricultural Plan
ARB/5015/Y/200	Arboricultural Layout
TPP/5015/Y/300	Tree Protection Plan

Appendices

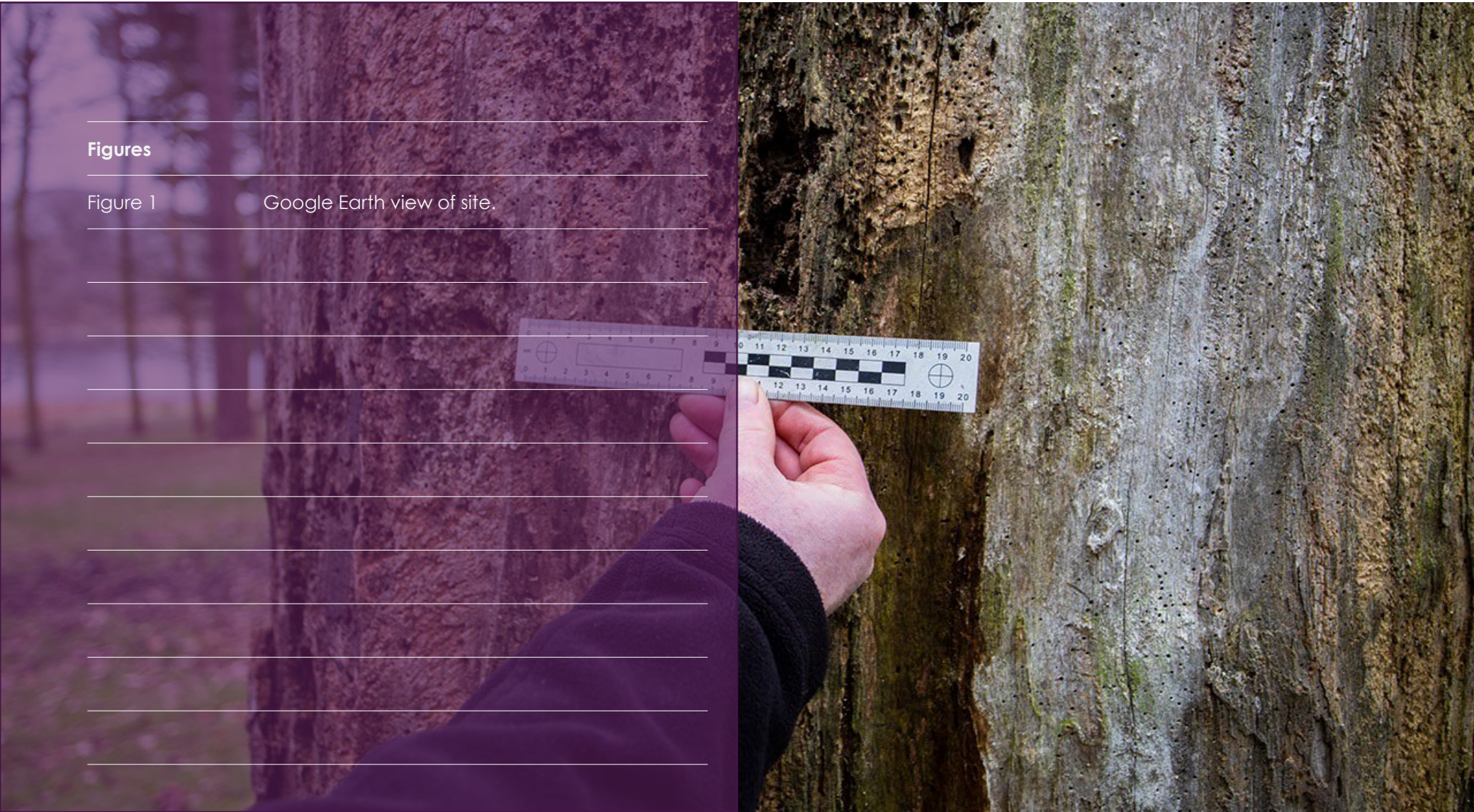
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Figure 1 Google Earth view of site.



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Chapter 1 Introduction

1.01

ACS Consulting is instructed by Legat Owen Ltd on behalf of Great Bear Distribution Ltd to report on trees and the implications for the proposed development at Unit 3, Link 56, Deeside Industrial Park CH5 2UA. The assessment and report was undertaken by Ian Murat, Registered Consultant of the Arboricultural Association.

1.02

In accordance with guidance on information requirements and validation for planning applications, this report fulfils the recommended national list criteria for tree survey/arboricultural information. More specifically, it contains the following:

- A full tree survey to the requirements of BS5837 (2012) Trees In Relation To Design, Demolition and Construction – Recommendations.
- A plan showing tree survey information, retention categorisation and root protection areas,
- An assessment of the arboricultural implications of development detailing trees to be retained/removed and appropriate protection measures,
- An Arboricultural Method Statement detailing a set of agreed principles for tree protection, implementation and phasing of works (where applicable).

1.03

The site was visited during September 2023. A survey of the trees was completed recording; species type, age, height, crown spread, diameter-at-breast-height and, condition.

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Chapter 2 Background

2.01 Location

The site is located in the Deeside Industrial Park, Deeside, Wales. The site is currently a warehouse with associated infrastructure. (Figure 1).

2.02 Application Site

The application site comprises an area of land currently a brownfield site with car parking.

2.03 Statutory Protection

The application is subject to the Flintshire LDP adopted by the Council on 24/01/23. Policy EN7: Development Affecting Trees, Woodland and Hedgerows is the extant policy. The site is not located in a Conservation Area. The trees are not the subject of a Tree Preservation Order. There are no sections of Ancient Woodland and there are no recorded ancient or veteran trees. The application site includes hedgerows that do not accord with the Hedgerow Regulations 1997.

2.04 Soils

BS 5837 – 2012 requires a basic assessment of the soils on site. An examination of the British Geological Survey site notes the superficial deposits as: Tidal Flat Deposits - Clay, silt and sand. Sedimentary superficial deposit formed between 11.8 thousand years ago and the present during the Quaternary period.

The Cranfield Soil and Agrifood Institute Soilscape viewer shows soils across the transect to be Loamy and clayey soils of coastal flats with naturally high groundwater.



Figure 1

Chapter 3 Tree Survey

3.01

The tree data can be found at Appendix A. There is no requirement in BS 5837 to repeat the details of the constraints information save for confirming that the trees were surveyed for species type, age, height, crown spread, diameter-at-breast-height, condition, and their suitability for retention from ground level. Each tree or group was assigned to one of the four retention categories [A,B,C,U] specified by BS5837. The individual descriptions and other relevant information are contained in the attached schedule and they are shown on the attached plans, based on the original topographical survey. Only trees with a stem diameter of 75 millimetres measured at 1.5 metres above the ground are required to be recorded.

3.02

The heights were measured with a digital Hypsometer and the diameters taken with a diameter tape to give an average stem measurement. Canopy spreads have been measured at the cardinal points or where they significantly extend in other directions.

3.03 Groups

The group classification is intended to identify trees that form cohesive arboricultural features either aerodynamically, visually or culturally. Where there are prominent trees within the group, these have been noted individually.

Chapter 4 Development Implications

4.01 Application

The application is: *full planning application for a new-build warehouse unit (Class B2/B8) up to 16,700sq.m gross, with 160 new car parking spaces, 7 motorcycle spaces, 16 bicycle spaces and 56 new HGV spaces; provision of a service yard and internal vehicular circulation; erection of covered cycle parking area; and perimeter fencing; associated drainage works, site levelling and landscaping [sic].*

4.02 Development Implications

The methodology for assessment is based on BS5837 – 2012 Trees in relation to design, demolition and construction – Recommendations. The guidance recommends that impacts on arboricultural assets should be assessed by considering:

1. Which arboreal assets are affected by the proposed development;
2. Understand what contribution the arboreal assets make to the significance of the site and location;
3. Identify what impact the loss of arboreal assets of the site might have on that significance;
4. Consider maximising enhancements and avoiding harm.

The development design is driven by prescriptive site width and depths which means that the proposed warehouse can only be accommodated on this site in the proposed location.

The development will require the replacement of trees and a section of informal hedgerow.

4.03 Loss for Development

The principal implications will be the replacement of T1, H1, T2, T3, G1, G2, G3, T4, T5, T6, T8, T9, T10, G4 and, G5. The impact for the replacement of the individual trees and hedgerow throughout the development footprint is considered to be slight. The trees provide a limited contribution to the significance of the site and its setting. Their removal will result in low harm to the significance of the setting and its treed character. The trees proposed for replacement within the application footprint cannot be considered a “major constraint” simply, their lower quality grading does not merit this description.

The development cannot be accommodated in other parts of the locale neither can it be accommodated in another configuration.

The proposals are accompanied by a detailed landscape that aims to provide gains and enhancements to ensure the long-term impacts from tree replacement are significantly off-set.

Chapter 4 Development Implications

4.04 Retained trees that may be affected by disturbance

None.

4.05 Pruning

None. There is no requirement for Access Facilitation Pruning.

4.06 Secondary Development Pressures

The proposal has been assessed against typical secondary development pressures associated with the genus at the site. The issues are centred around leaf litter, sap and falling debris. It is often claimed, anecdotally, that trees retained close to areas of amenity space or parking cause excessive nuisance preventing the reasonable use of the site leading to their premature felling or harsh pruning. It is my experience; these problems are not as frequent as they are thought to be and there is very little evidence that such pressures ever result in any significant diminution of the treescape. There is no published data to support the contention that trees are being excessively pruned or felled for these reasons. The proposal has been so located as to minimise secondary development pressures.

4.07 Planning Policy

The over-arching policy guidance in respect of the site is that contained within the Flintshire LDP adopted by the Council on 24/01/23 and those of Welsh Government.

EN7: Development Affecting Trees, Woodlands and Hedgerows
Development proposals that will result in significant loss of, or harm to, trees, woodlands or hedgerows of biodiversity, historic, and amenity value will not be permitted.

Where the impact of development affecting trees, woodlands or hedgerows is considered acceptable, development will only be permitted where:

- a. the development maximises their retention through sensitive design measures; and*
- b. where the removal of trees is considered necessary, suitable replacements shall be provided elsewhere within the site; and*
- c. it results in a net benefit in biodiversity. [sic]*

The impact of new developments on the natural environment has been kept to a minimum. The development design is driven by prescriptive site width and depths and the location of existing assets which means that the proposed development can only be accommodated on this site in the proposed layout. The development does not replace trees that are considered to be of biodiversity, historic or of amenity value. The trees cannot be considered a “major constraint”, their lower quality grading does not merit this description.

The arboricultural impact assessment is provided to BS5837:2012 standard (or subsequent revisions).

Areas of potential conflict in terms of site development are addressed by the method statement at Appendix B. The site has no ancient woodland, veteran trees or ancient/species-rich hedgerows.

Chapter 5 Conclusions

5.01

The application site is described in detail in the planning, design and access statement.

5.02

The impact of new developments on the natural environment has been kept to a minimum. The development design is driven by prescriptive site width and depths and the location of existing assets which means that the proposed development can only be accommodated on this site in the proposed layout.

5.03

None of the trees proposed for replacement within the application footprint can be considered "major constraints", their lower quality grading does not merit this description. In line with the advice set out in BS 5837, the Category C trees are not of such importance and sensitivity as to be a major constraint on development or, justify substantial modification of the proposals. They are unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories. They offer low or only temporary/transient landscape benefits.

5.04

The development has a satisfactory relationship with regards to secondary development pressures, both in terms of shading due to trees and issues with seasonal detritus.

5.05

A Method Statement is appended to demonstrate the scheme is feasible. Certain matters listed therein may alternatively be addressed satisfactorily by means of a condition(s). This requires detailed discussions with the LPA on the principle that conditions should always be used in the first instance as per government guidance and that contained in BS 5837 – 2012 Table B.1 Delivery of tree-related information into the planning system; the method statement fulfils the recommended criteria for arboricultural information.

Appendix A

Contents

Key

BS 5837 2012

Tree data

KEY

<p>Age</p>	<p>Y – Young: Out-planted trees that have not yet established SM – Semi-mature: Established trees up to 1/3 of expected height and crown EM – Early mature: Between 1/3 and 2/3 of expected height and crown M – Mature: Between 2/3 and full expected height and crown FM – Fully mature: Full expected height and crown OM – Over mature: Crown beginning to break-up and decrease in size S – Senescent: Crown in advanced stage of break-up</p>
<p>Physiological Condition</p>	<p>Good – Very few defects a reasonable long life expectancy depending on age class Fair – Some defects giving the tree a shortened life expectancy Poor – Limited life with major problems</p>
<p>Structural Condition</p>	<p>Good – Very few defects Fair – Some defects rectifiable with minor tree surgery Poor – Significant defects rectifiable with major tree surgery or felling</p>
<p>#</p>	<p>Estimated dimensions.</p>
<p>(a)</p>	<p>Average stem diameter across a group of trees.</p>
<p>*</p>	<p>Tree subject to TPO.</p>

Table 1 – Cascade chart for tree quality assessment

Category and definition	Criteria			Identification on Plan
<p>Category U</p> <p>Those 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.</p>	<ul style="list-style-type: none"> • Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other U category trees (i.e. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning). • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline. • Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality. <p><i>NOTE Category U trees can have existing or potential conservation value which might be desirable to preserve; see 4.5.7</i></p>			RED
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation.	
Trees To Be Considered For Retention				
<p>Category A</p> <p>Trees of high quality with an estimated remaining life expectancy of at least 40 years</p>	Trees that are particularly good examples of their species, especially if rare or unusual, or essential components of groups, or of formal or semi-formal arboricultural features (e.g. the dormant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features.	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	GREEN
<p>Category B</p> <p>Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.</p>	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation.	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality.	Trees with material conservation or other cultural value.	BLUE
<p>Category C</p> <p>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.</p>	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value, and/or trees offering low or only temporary/transient landscape benefits.	Trees with no material conservation or other cultural benefits	GREY

Tree Ref No.	Species	Height M	Stem Diameter MM	Branch Spread M				Height of Crown Clearance M	Clear Branch Height M	Age Class	Physiological Condition	Structural Condition	Comments/Preliminary Management Recommendations	Estimated Remaining Contribution Years	Category Grading	RPA Radius (M)	RPA Area (M ²)
				N	E	S	W										
H1	Hedge	<6	<150	1	1	1	1	0	0	EM	Good	Good	Hawthorn hedge with occasional rosa as a screen hedge along the boundary.	10+	C1/2	1.8	10
1	Birch	15	#500	5	5	5	5	0	0	M	Good	Good	Located off-site on the railway embankment. Located 6m from the boundary fence at a lower level. A tree of moderate quality and value in the landscape.	20+	B1/2	6	113
G1	Hawthorn	2	75	1	1	1	1	0	0	Y/SM	Good	Good	Sporadic hawthorn on a brownfield site. A group of low quality and value in the landscape.	10+	C1/2	0.9	3
2	Malus	8	#300	3	4	4	5	1	1	M	Good	Good	Located next to fixed assets. A tree of low quality and value in the landscape.	10+	C1/2	3.6	41
3	Hawthorn	5	120	2	2	2	2	1	1	SM	Good	Good	Growing adjacent to assets Self-set tree of low quality and value in the landscape.	10+	C1/2	1.4	7
G2	Group	<15	<400	2	2	2	2	1	1	SM/ EM	Good	Good	Group of black pine, poplar, buckthorn, alder, birch, cypress and Scots pine within a fenced area with no access. A group of low quality and value in the landscape.	10+	C1/2	4.8	72
G3	Group	<15	<400	3	3	3	3	0	0	SM/ EM	Good	Good	Densley planted screen of poplar, birch, pine, sorbus and maple on a slight slope. Overfilling of roots and restricted root development to the north east due to a pond. A group of low quality and value in the landscape.	10+	C1/2	4.8	72
4	Pine	15	500, 450	5	6	5	5	1	1	M	Good	Good	2 trees as one visual unit in the landscape. Overfilling in the root zone. Broken branches. Trees of moderate quality and value in the landscape. Work if Retained Crown clean.	20+	B1/2	8.1	205
W1	Broad-leaved Shelter-belt	<16	400	5	5	5	5	0	0	EM	Good	Good	Copse around a water feature. Poplar, prunus, sycamore, sorbus and alder. Located mostly off-site. A copse of moderate quality and value in the landscape.	20+	B1/2	4.8	72
5	Alder	15	400, 300	5	5	6	6	0	0	M	Good	Good	Twin stemmed. Numerous maturing epicormic growth suckers from the roots. A tree of moderate quality and value in the landscape.	20+	B1/2	6.0	113

Tree Ref No.	Species	Height M	Stem Diameter MM	Branch Spread M				Height of Crown Clearance M	Clear Branch Height M	Age Class	Physiological Condition	Structural Condition	Comments/Preliminary Management Recommendations	Estimated Remaining Contribution Years	Category Grading	RPA Radius (M)	RPA Area (M ²)
				N	E	S	W										
6	Goat Willow	5	150 Average	2	2	2	1	1	1	SM/EM	Fair	Fair	Multi-stemmed. Self-set tree of low quality and value in the landscape.	10+	C1/2	1.8	10
7	Goat Willow	8	250, 200	3	3	3	3	0	0	EM	Fair	Fair	Multi-stemmed. A tree of low quality and value in the landscape.	10+	C1/2	2.4	18
8	Goat Willow	3	100 Average	2	2	2	2	0	0	SM	Poor	Poor	Damage to roots.	<10	U	-	-
9	Poplar	16	430, 360	6	3	6	6	2	3	EM	Good	Poor	Twin stemmed with included stem union. Leans. Damage to surface roots. Large limb removal.	<10	U	-	-
10	Pine	10	385	3	3	3	3	2	2	SM/EM	Fair	Fair	Extensive compaction and root disturbance. Soil erosion. A tree of low quality and value in the landscape.	10+	C1/2	4.6	67
G4	Group	<5	<150	2	2	2	2	0	0	SM	Good	Fair	Mixed group of screen planting. Birch, field maple, goat willow, hawthorn, white willow and prunus. Part has been maintained regularly. A group of low quality and value in the landscape.	10+	C1/2	1.8	10
G5	Broad-leaved Group	<10	<250	2	2	2	2	1	1	SM	Good	Good	Linear group of 3 birch and 5 cherry along the edge of the access road. A group of low quality and value in the landscape.	10+	C1/2	3.0	28

Appendix B

Contents

Method Statement

Arboricultural Method Statement

Arboricultural Supervision

The general purpose is to ensure compliance with planning conditions. It is anticipated that arboricultural input is likely to be needed for the following operations:

- Pre-commencement meeting;
- Tree/vegetation removal;
- Tree Protection measures;
- Removal of protection measures.

All supervisory visits will be logged and a copy of the minutes circulated to all team members including the LPA. A number of the operations named above can be undertaken in a single visit.

The pre-commencement site meeting is to be held before any work is undertaken. All tree protection measures, haul routes, site storage, contractor parking, deliveries, working methods are to be freely discussed and agreed in writing. Initial site visits may be intense to ensure measures are implemented.

General site visits will be undertaken once the site is 'live' at intervals agreed with the team. Our role will be to initially to act in a compliance capacity to ensure the protective measures are fit for purpose and meet or exceed the council's requirements and the tree works are undertaken to the required standard.

Once this has been completed, our role will be one of monitoring and 'troubleshooting'.

Targets

- Pre-commencement site meeting to agree roles, responsibilities and duties in relation to tree protection. Details to be minuted and distributed.
- Appointment of an Arboricultural Clerk of Works (ACoW) to oversee works.

Arboricultural Method Statement

Construction Methods and Sequence

A Construction Method Statement and Timetable is to be drafted on the appointment of a construction firm. As noted in BS5837 – 2012 5.5.6 it is sufficient to list a heads of terms summary of the issues requiring more detailed consideration once consent is issued. On this site, those issues are likely to include:

- site construction access;
- the intensity and nature of the construction activity;
- phasing of construction works;
- the space needed for foundation excavations and construction works;
- the location and space needed for all temporary and permanent apparatus and service runs, including, electricity or other communication cables;
- working space for cranes, plant, scaffolding and access during works;
- space for storing (whether temporary or long-term) materials, spoil and fuel and the mixing of cement and concrete;
- the effects of slope on the movement of potentially harmful liquid spillages towards or into protected areas.

Arboricultural Method Statement

Tree Felling/Stump Removal/Tree Pruning

The following precautions are to be taken.

Targets

- Trees to be removed shall be felled so as to fall away from tree protection zones and to avoid pulling and breaking of roots of trees to remain. Brush can be chipped into the tree protection zone to a depth of 150 mm.
 - The roots shall be removed by severing the major woody root mass before extraction. This may be accomplished by Hydro Vacuum & Suction Excavation or Compressed Air Displacement and then, cutting through the roots by hand, with a vibrating knife, rock saw, narrow trencher with sharp blades, or other approved root pruning equipment.
 - Trees to be removed within the tree protection zone shall be removed by qualified tree contractors.
 - All felled brush and trees shall be removed from the tree protection zone either by hand or with equipment sitting outside the tree protection zone. Extraction shall occur by lifting the material out or by 'skidding' it across the ground.
 - Exposed roots to be kept moist with hessian sacking.
- Site inspections to be reported to the development team and the LPA.
 - Tree pruning to BS3998 – 2010. No deviation from the specification.

Arboricultural Method Statement

Construction Exclusion Zone Root Protection – Site Wide

Due to the nature of the works, standard BS 5837 fencing will be used. The Construction Exclusion Zone fence will be heras fence panels fixed to a scaffold framework. Alternatively, heras panels fixed to timber posts. The location will be marked on site by the Arboricultural Consultant and are also shown on the Drawing No. – TPP/5015/Y/300. The requirement will be assessed on a weekly basis by the ACoW.

Targets

- Heras fencing fixed to a scaffold framework or timber posts as illustrated.
- Fencing installed at locations shown on the plan (TPP/5015/Y/300) and marked on site.
- Location and adequacy signed off by Arboricultural Consultant and LPA advised.
- Tool Box Talk – make construction staff aware of the importance of areas by site manager.
- Signs to be erected advising of the area's importance.
- Fence to be adjusted as noted in the Construction Timetable.



Arboricultural Method Statement

General Precautions

The retention of trees requires a number of general precautions to be taken. Compliance is to be maintained on site by the Arboricultural Consultant. The site visits are detailed at criterion 1 – Timing of Works.

Targets

- Spoil from the foundation pits or other excavations shall not be placed within the Construction Exclusion Zone.
- No materials, equipment, spoil or washout water may be deposited, stored or parked within the Root Protection Area/ Construction Exclusion Zone.
- On-site inspections to be undertaken by the Arboricultural Clerk of Works with the Arboricultural Consultant visiting during critical operations. The aim of the visits is to maintain on-going liaison with all personnel involved in the site development, Local Planning Authority and its Tree Officer.
- Any defects requiring rectification shall be notified to the Contractor/Site Manager/Arboricultural Consultant and the client.
- A site logbook for tree protection measures is kept to record all stages of the development from the erection of the protective fencing, right through to the completion of the project. This will be made available to the Arboricultural Consultant and the Local Planning Authority, if required, to show evidence of continuous site monitoring.

Protection and Emergency Procedure/Contacts

Adherence to the method statement, appointment of the Arboricultural Consultant and their involvement, at the critical demolition and construction phases, should negate any incident. The contact page details those personnel who should be contacted if an incident involving a retained tree should take place.

Targets

- Spill kit available.
- On site fuels to be located away from RPA/CEZ and contained in a bunded tank at 110% capacity.
- All incidents involving trees to be reported by telephone and email.
- Bunded storage of oil/fuels.
- Refuelling points for machinery at distance to the watercourse.
- Use of drop trays under plant/machinery overnight.
- Availability of spill kits on site – and training of site staff in their use.
- No excavation during periods of heavy rain.
- Regular maintenance and inspection of plant – engines and hydraulic systems.

Arboricultural Method Statement



Contact List

Title	Name	Address	Telephone	Email
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Arboricultural Clerk of Works (ACoW)	TBA			
Design	TBA			
Project Manager	TBA			
Arboricultural Consultant (Council)	TBA			

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