



Norden, Rochdale

Arboricultural Impact Assessment

June 2023

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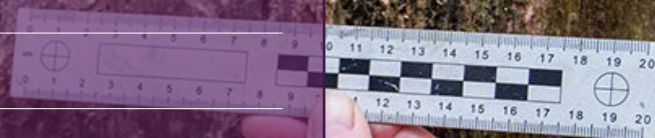
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Drawing(s)

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Chapter 1 Introduction

1.01

ACS Consulting is instructed by Shaw Energi Ltd to report on trees and the implications for the proposed development at Clay Lane, Norden, Rochdale. 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 July 2022. 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 The Site

The site is a low-quality grazing field close to Naden Brook on the western outskirts of Rochdale. The site is generally triangular in shape and slopes from north to south. The land has very little agricultural use (Figure 1).

2.02 Statutory Protection/Planning Policies

The application is subject to the Planning Policies of Rochdale Council. The site is not located in a Conservation Area. The trees are not the subject of a Tree Preservation Order.

2.03 Soils

BS 5837 – 2012 requires a basic assessment of the soils on site. An examination of the British Geological Survey site records the superficial deposits as: Till, Devensian - Diamicton. Superficial Deposits formed up to 2 million years ago in the Quaternary Period. Local environment previously dominated by ice age conditions (U).

2.04 Topographical Survey

The arboricultural survey is based on the supplied plan. Where trees have been missed, they have been added with a reasonable degree of accuracy.



Figure 1

Chapter 3 Tree Survey

3.01

I have identified trees as individuals or groups. The group classification is intended to identify trees that form cohesive arboricultural features either aerodynamically, visually or culturally. Off-site trees and groups that could influence the development potential of the site, have been noted. Their attributes have been approximated.

3.02

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 tree was surveyed for species type, age, height, crown spread, diameter-at-breast-height, condition, and its suitability for retention from ground level.

The height was measured with a digital Hypsometer and the diameter 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.

Chapter 4 Development Implications

4.01 Application

The application in simple terms is a Battery Storage facility.

4.02 Development Implications

Loss for Development

The development will retain the site's principal arboreal specimens. There will be one replacement for development. Tree T3 (sycamore) will be replaced to allow the construction access track and the cable to be installed. The tree is a very poor specimen having been topped for other management reasons.

The tree provides a limited contribution to the significance of the site and its setting. Its replacement will result in low harm to the significance of the setting and treed character.

The tree proposed for replacement within the application cannot be considered a "major constraint". Its lack of quality does not merit the description. Overall, the removal of tree to facilitate the development has only a low implication for the tree cover at the site.

Retained trees that may be affected by disturbance

The alignment of the cable slightly passes through the Root Protection Area of T6. The barn that houses the battery units and inverters is slightly located in the RPA of G2.

There are a number of studies on the impact of the root severance. Studies¹ have shown the RPA calculated by the simplistic mathematical formula does not correspond to the wider root system correlations.

At the current site, the impacts would be significantly less than the parameters cited. There is little correlation between the percentage RPA and root impairment or loss. Most RPAs tend to exceed canopy spread suggesting that RPA encroachment understates root loss. The informal reduction noted in BS5837 – 2012 of 20% may actually equate to a higher percentage loss. Studies¹ suggest that between 30% and 50% root loss can be tolerated by trees though there may be some slight corresponding die back.

The tree genus involved is of an age where it is capable of tolerating such root loss. In accordance with BS 5837 – 2012, there is ground contiguous to the RPA for compensatory root growth for the trees.

Overall, the impact of the installation of the cable is not considered wholly detrimental to the retention of the tree. The installation of the barn foundations are not considered wholly detrimental to the retention of the group G2. The Method Statement at Appendix B details the precautions to be taken.

1) Thomas, P., (2014). Trees Their Natural History

Chapter 4 Development Implications

Pruning

The canopy of G2 will require minor crown reduction to accommodate the barn. The reduction is within current advice on pruning canopies. The pruning will be controlled under an Arboricultural Watching Brief.

Secondary Development Pressures

None.

4.03

The over-arching policy guidance in respect of the site is that contained within the Planning Policies of Rochdale Council and those of Central Government (131, 2021). 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 which means that the proposed development can only be accommodated on this site in the proposed layout. The development retains trees regardless of their quality.

Areas of potential conflict in terms of site development are addressed by the method statement at Appendix B

Chapter 5 Conclusions

5.01

The Arboricultural Layout Plan indicates the location of the development.

5.02

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

The development, in terms of trees, retains the site's principal arboreal features with a good spatial relationship. The specimen proposed for replacement within the application cannot be considered a "major constraint". Its lack of quality does not merit the description. Overall, the removal of one tree to facilitate the development has only a low implication for the tree cover at the site. The proposal, in terms of trees, does not result in the unacceptable loss or harm to features of landscape importance or amenity value. The method statement at Appendix B details the protection measures to be used.

5.03

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

Age	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
Physiological Condition	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
Structural Condition	Good – Very few defects Fair – Some defects rectifiable with minor tree surgery Poor – Significant defects rectifiable with major tree surgery or felling
#	Estimated dimensions.
(a)	Average stem diameter across a group of trees.
*	Tree subject to TPO.

Table 1 – Cascade chart for tree quality assessment

Category and definition	Criteria			Identification on Plan
Category U 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.	- 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. <i>NOTE Category U trees can have existing or potential conservation value which might be desirable to preserve; see 4.5.7</i>			RED
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation.	
Trees To Be Considered For Retention				
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	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
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.	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
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.	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	Stem Diameter	Branch Spread M				Height of Crown Clearance	Clear Branch Height	Age Class	Physiological Condition	Structural Condition	Comments/Preliminary Management Recommendations	Estimated Remaining Contribution Years	Category Grading
		M	MM	N	E	S	W	M	M						
H1	Cypress Hedge	8	200	2	2	2	2	0	0	EM	Good	Good	Located in third party property as a screen to the ménage. Damage by horses. A hedge of low quality and value in the landscape.	10+	C1/2
H2	Hawthorn Hedge	2	75	1	1	1	1	0	0	M	Good	Good	Hawthorn hedge along the boundary with the lane. A hedge of moderate quality and value in the landscape.	20+	B1/2
1	Ash	15	#450	4	4	4	4	2	2	EM	Fair/Poor	Good	Located in the hedgerow with holly. Die back on the twigs – possible Ash Dieback Chalara. Retainable. A tree of low quality and value in the landscape.	10+	C1/2
2	Sycamore	12	250, 300	3	3	3	3	2	2	SM/ EM	Good	Good	2 trees as one visual unit. Located in the hedgerow. Trees of moderate quality and value in the landscape.	20+	B1/2
3	Sycamore	8	500, 400	1	1	1	1	0	0	M	Good	Fair/Poor	Twin stemmed tree that has been topped away from the power line. Multiple attachment of regenerative growth. A tree of low quality and value in the landscape.	10+	C1/2

Tree Ref No.	Species	Height	Stem Diameter	Branch Spread M				Height of Crown Clearance	Clear Branch Height	Age Class	Physiological Condition	Structural Condition	Comments/Preliminary Management Recommendations	Estimated Remaining Contribution Years	Category Grading
		M	MM	N	E	S	W	M	M						
G1	Group	<5	200	2	2	2	2	0	0	SM	Good	Good	Linear group of self-set holly, hawthorn, elderberry and sycamore. A group of low quality and value in the landscape.	10+	C1/2
4	Oak	14	600, 400	6	6	6	6	2	2	M	Good	Good	A tree of high quality and value in the landscape.	40+	A1/2
5	Sycamore	10	200	0	0	4	0	2	2	SM	Good	Good	Severely suppressed by oak. Damage from horses. Self-set tree of low quality and value in the landscape.	10+	C1/2
6	Ash	8	150, 200	2	2	2	2	2	2	SM	Good	Good	Extensively bark stripped by horses. Wound wood at the wound margins. A tree of low quality and value in the landscape.	10+	C1/2
G2	Group	15	420	5	5	5	5	0	0	SM/EM	Good	Good	Group of holly, hawthorn with an ash. The ash has dead twigs – possibly Ash Dieback Chalara. A group of moderate quality and value in the landscape.	20+	B1/2

Tree Ref No.	Species	Height	Stem Diameter	Branch Spread M				Height of Crown Clearance	Clear Branch Height	Age Class	Physiological Condition	Structural Condition	Comments/Preliminary Management Recommendations	Estimated Remaining Contribution Years	Category Grading
		M	MM	N	E	S	W	M	M						
7	Oak	14	650	7	7	7	7	3 (N)	4.5 (N)	M	Good	Fair	Located in the hedgerow. Cavity at the base and cavity at the first branch junction to the north. Located in third party property. A tree of moderate quality and value in the landscape. Work Crown lift to give 5.5m clear canopy height over the lane.	20+	B1/2

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 felling;
- Installation of protective fencing/surfaces;
- Installation of cabling/foundations;
- Removal of protective 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

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/4897/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/4897/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.



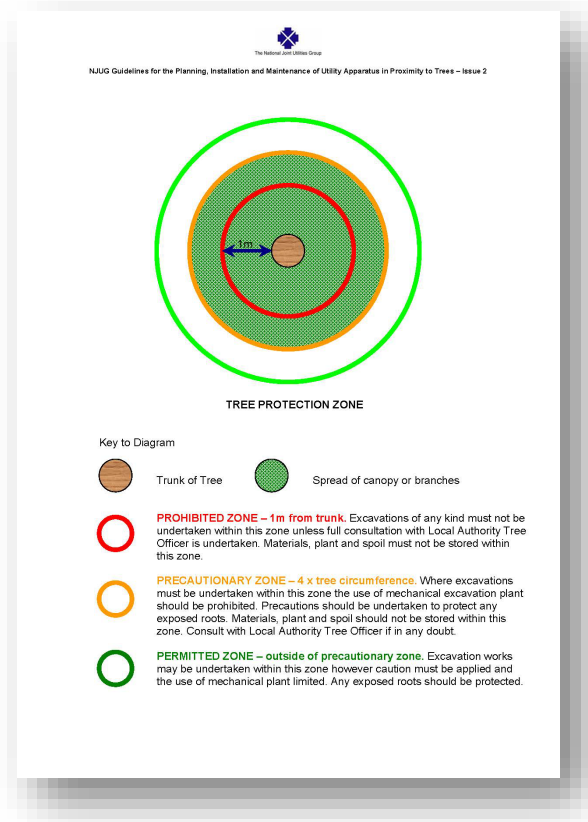
Arboricultural Method Statement

Services - NJUG 4.2

Work area to be marked out in accordance with NJUG 4.2.

Targets

- The precautionary area is to be identified.
- Suitable method of service installation to be identified this may include Hydro Vacuum & Suction Excavation or Compressed Air Displacement.
- Location and adequacy signed off by the ACoW and the LPA advised.
- Works to be monitored by ACoW.



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
Arboricultural Consultant	TBA			
Arboricultural Clerk of Works (ACoW)	TBA			
Design	TBA			
Project Manager	TBA			
Arboricultural Consultant (Council)	TBA			

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