



BS 5837:2012 Arboricultural Survey, Impact Assessment and Method Statement

Dig Gate Lane, Rochdale
for:

Rochdale Power Ltd.

3050-001-ENZ-XX-00-RP-AR-45-101



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1.0 Non-Technical Summary

1.1 Arboricultural Survey

1.1.1 The site is a broadly rectangular field immediately to the Northwest of the M62 motorway and Southeast of the Asda Distribution Centre off Dig Gate Lane in Rochdale.

1.1.2 A tree survey was carried out by Enzygo Ltd. in August 2022, recording two tree groups and two hedgerows along the northern boundary and Dig Gate Lane. They are semi-mature features of predominantly moderate landscape value. None of these features are protected by Tree Preservation Order, they are not located within a Conservation Area.

1.2 Development Proposals

1.1.1 The Client proposes the development of a Gas-Powered Reserve Energy Facility with access off Dig Gate Lane in the North, including a planted landscape buffer to the West, South and East.

1.3 Arboricultural Impact Assessment

1.1.1 Whilst the facility does not affect any trees within the site, the access road will require the removal of 8m of a low value hedgerow which is expected to have a negligible impact on the character of the site and the local landscape.

1.1.2 Operations linked to the development are further expected to have an adverse effect on any retained trees on site unless adequate protection measures are provided.

1.4 Arboricultural Method Statement

1.1.1 A protective barrier should be installed to protect all retained boundary vegetation to preserve the role it plays in screening the site from views from Dig Gate Lane.

2.0 Objectives

2.1 Introduction

- 2.1.1 Enzygo Limited [Enzygo] have been commissioned by Rochdale Power Ltd. to prepare an Arboricultural Survey Report in accordance with BS 5837:2012 *Trees in relation to design, demolition and construction* for the site at Dig Gate Lane in Rochdale in support of a planning application for the development of a Gas-Powered Reserve Energy Facility.
- 2.1.2 The report includes an assessment of the impact the development proposals may have on existing trees (Arboricultural Impact Assessment) including the expected loss of trees and potential impact on trees to be retained. Based on that it specifies methodologies which will minimise the potential effects on trees and makes recommendations on how any residual effects can be mitigated (Arboricultural Method Statement).

2.2 Site Description

- 2.2.1 The site is located approximately 2.5km south east of Rochdale and 6.5km north of Oldham in an industrial location. The M62 is located to the south of the site.
- 2.2.2 The site falls within the administrative boundary of Rochdale Borough Council.
- 2.2.3 The site currently does not appear to have a specific use but is maintained as a grass field. A Public Right of Way runs along the western boundary of the site, however, there is no public access into or across the site. Views into the site are open from the M62 and the footpath in the West, however, it is well screened by mature vegetation in the North, with a larger visual gap where it is proposed to create a new access into the site.
- 2.2.4 The application boundary for the site is approximately 4280m². It comprises rough grassland, fences along the external boundary and some scattered scrub within the field.

2.3 Project Description

- 2.3.1 It is understood the planning application is for the development of a Gas-Powered Reserve Energy Facility enclosed by a 2.4m high palisade fencing with gated access off Dig Gate Lane in the North.
- 2.3.2 Further details regarding the proposed development can be found in the information submitted with the planning application.

3.0 Planning background

3.1 National Planning Policy Framework

- 3.1.1 The National Planning Policy Framework (NPPF) published by the government and updated in 2021 sets out the framework objectives for development in England. These are used by Local Planning Authorities (LPA) both during the preparation of their local planning policies as well as to guide them in making individual decisions for Planning Applications.
- 3.1.2 The NPPF sets out several objectives concerning the natural environment, including trees, woodland and hedgerows. In addition to broad objectives addressing biodiversity and the challenges posed by climate change (e.g. flood resilience, species selection) it encourages the enhancement of the natural and local environment by *“recognising [...] the wider benefits from natural capital and ecosystem services including [...] of trees and woodland”*.
- 3.1.3 Paragraph 131 states that *“Trees make an important contribution to the character and quality of urban environments, and can also help mitigate and adapt to climate change. Planning policies and decisions should ensure (...) that existing trees are retained wherever possible.”*
- 3.1.4 In paragraph 175 the NPPF requests that *“Planning policies and decisions should contribute to and enhance the natural and local environment by (...) recognising (...) benefits (...) of trees and woodland”*.

3.2 Local Planning Policy

- 3.2.1 The site is located within Rochdale Borough Council administrative boundary and is allocated under Saved Policy EC/7 (Kingsway Business Park) of the Rochdale Unitary Development Plan (UDP) for employment uses.
- 3.2.2 The Rochdale Unitary Development Plan sets out the following policies regarding trees and development:]
- BE/2 Design Criteria for New Development

“Development proposals will be required to demonstrate good design by (...) retaining key natural features, including trees, as part of the landscaping of the site (...)”

- BE/8 Landscaping in New Development :

“All developments will be required, where appropriate, to incorporate landscape schemes of a high quality. Amenity landscaping will be required where, in the Council's opinion, it is necessary to: Retain and integrate existing trees (...)

“Landscaping schemes will be expected to (...) include, where appropriate, a survey of features of importance on the site, especially trees, hedges (...)”

- NE/3 Biodiversity and Development

“In areas not identified as SBIs, LNRs, SSSIs, SPAs or SACs, the effect of land use changes on existing features, species and habitats of ecological value e.g., flora, fauna, wetland, ponds, mill lodges, reservoirs, hedges and trees will be taken into account in assessing proposals. Any development should seek to retain such features and incorporate them into the development.”

- G/NE/5(Part One Policy) Landscape and Woodlands ‘

“The Borough has woodland cover of approximately 2.5% of the total land area, which is significantly lower than the England average of around 7% cover. This policy will support the aim of the Council's Woodland Strategy to increase significantly, the level of tree and woodland cover in the Borough. It also recognises the need to retain existing trees and woodland, in particular mature woodland important for nature conservation, and trees and woodland which form an important part of the local street scene or landscape character and structure.”

- NE/8 Development affecting trees, woodlands and hedgerows

“Development proposals will be permitted that do not adversely affect trees, woodland or hedgerows”

“Proposals on sites containing trees and woodlands should ensure:

a) Suitable space and conditions for the successful retention of trees, woodland and hedgerows;

b) That new tree planting is of an appropriate scale and species and that the impacts on the amenity of the development and surrounding area in the longer term e.g., root spread, stability, loss of daylight, leaf fall and personal safety have been fully considered;

c) Suitable care and protection of trees and their environment during construction;

d) The nature conservation value of existing hedgerows, trees and woodland has been safeguarded where appropriate including the incidence of protected species e.g., bat roosts, and the value of ground flora e.g. bluebells;

e) Hedgerows which meet the criteria set out in the Hedgerow Regulations 1997 and other hedgerows which are locally distinctive and valuable for their natural or historic value are fully safeguarded;

f) The requirement of the Forestry Commission for a felling licence to be obtained is met where appropriate;

g) Suitable arrangements for future maintenance and management of trees and woodland (which may need to be secured by means of a legal agreement); and

h) Replacement planting of trees in the event of death or failure during a 5 year period.

Development proposals often occur on land where there are individual trees, woodlands or hedgerows that have a value for local character and amenity, recreation and nature conservation. The policy advocates those healthy trees and hedges that can contribute to the design and quality of the development and the environmental quality of the area in general should be protected and retained through favourable management. It is important to impose appropriate safeguards to ensure that existing trees, woodlands and hedgerows are retained and that no damage takes place during development. Where necessary a full tree survey will be required to properly assess the effects of a proposal on trees.

The policy acknowledges that in some cases, the limited removal of trees may be unavoidable (e.g. to satisfy highway requirements) and replacement planting of trees of an appropriate species and scale and in a suitable location (within the site where possible) will be expected in order to compensate for the loss.

4.0 Arboricultural Survey

4.1 Overview

- 4.1.1 The arboricultural survey was carried out by Verena Meyer, MArborA, in August 2022.
- 4.1.2 All features- two groups and two hedgerows- are located along the northern site boundary, screening the site from Dig Gate Lane immediately to the North, with the exception of an open section in the centre of the northern boundary.
- 4.1.3 A full schedule of all trees and tree groups recorded can be found in Appendix 1 - Arboricultural Survey Schedule.

4.2 Tree species, age and condition

- 4.2.1 The trees along the northern boundary are predominantly native, comprising hawthorn (*Crataegus monogyna*), field rose (*Rosa arvensis*), privet (*Ligustrum ovalifolium*), elder (*Sambucus nigra*), Italian Alder (*Alnus cordata*) and silver birch (*Betula pendula*). They are generally young to semi-mature, unmanaged and in good condition.

4.3 Tree quality, value and significance on site and local landscape

- 4.3.1 The features provide a near-continuous screen along the northern and north-western boundary of the site and have therefore been assessed as having a moderate landscape value (BS Category B). The exception is hedgerow H01 which is a lower hedgerow section within the otherwise up to 8m high groups. Its screening value is therefore reduced, its retention category is C (low value).

4.4 Root Protection Areas (RPA)

- 4.4.1 The Root Protection Areas for each Category A to C tree and tree group has been calculated based on measured stem diameters. Both the radius and the area of each RPA are listed in Appendix 1 - Arboricultural Survey Schedule and shown on the plan included in Appendix 2 - Tree Survey and Tree Constraints Plan.

4.5 Tree Preservation Orders (TPO) and Conservation Areas

- 4.5.1 We understand that none of the trees included in this survey are protected by Tree Preservation Order. The site is not located within a Conservation Area.

5.0 Arboricultural Impact Assessment (AIA)

5.1 Development proposals

- 5.1.1 This AIA is based on the development proposals as shown on Clarke Energy's "General Arrangement of J624 Engine and Equipment" drawing ref. C5059-GA-001 (Tender Issue TC dated 5th August 2022).

5.2 Tree removal

5.3 Hard landscape installation

- 5.3.1 An approximately 8m section of low value hedgerow H01 will need to be removed to build the new access road and to allow for a 1m working area to both sides.
- 5.3.2 All moderate value features will be retained.
- 5.3.3 The partial removal of H01 is expected to have a negligible impact on the character of the site and the local landscape.

5.4 Residual impact of development on retained trees

- 5.4.1 Construction operations near retained trees are likely to cause accidental damage of tree trunks and low hanging branches along the northern boundary.
- 5.4.2 Vehicle and plant movement during construction may further cause ground compaction which could lead to irreversible damage of tree roots and the rooting environment within the RPA of retained trees.
- 5.4.3 Excavations for underground services may have an impact where they are proposed within the RPA of retained trees.

5.5 Recommendations

- 5.5.1 All methodologies specified in the Arboricultural Method Statement (AMS) in Chapter 6.0 should be implemented to ensure any retained trees are adequately protected during construction.
- 5.5.2 All site managers and site operatives should be aware of the potential impact of the works on retained trees and follow the protection methodologies specified in the AMS in Chapter 6.0.

6.0 Arboricultural Method Statement (AMS)

This AMS should be read in conjunction with Appendix 3 – Tree Protection Plan.

6.1 Tree Removal

- 6.1.1 A qualified Arboricultural Contractor will only remove the section of hedgerow H01 indicated as “to be removed” on the Tree Protection Plan in Appendix 3.
- 6.1.2 Any tree works should be carried out in accordance with BS 3998:2010- Tree works recommendations. To find a suitably qualified tree surgeon, please refer to the Arboricultural Association’s list of Registered Contractors.
- 6.1.3 Any tree works proposed in the respective survey season should be preceded by a nesting bird and roosting bat check carried out by a suitably qualified ecologist.

6.2 Protective Barrier

- 6.2.1 Where construction operations are likely to cause damage to above ground parts of retained trees or compaction of the Root Protection Areas (RPA), a protective barrier should be erected prior to commencement of any works on site to create a sacrosanct Construction Exclusion Zone (CEZ). The alignment of the fence should follow the canopy line of the trees or the edges of the RPA, whichever is greater.
- 6.2.2 Where possible, the CEZ should be extended to include any areas proposed for soft landscaping to minimise compaction in these areas and ensure new planting can establish successfully.
- 6.2.3 The alignment of the barrier, including indicative setting-out information, is shown on the drawing included in Appendix 3 – Tree Protection Plan.
- 6.2.4 The protective barrier should be installed in accordance with *BS 5837:2012 Figure 2 Default specification for protective barrier* which consists of a horizontal and vertical scaffold framework that should be braced to resist impact from construction plant and vehicles. Please refer to for further information and a detailed specification.
- 6.2.5 All weather notices should be firmly attached to the barrier to inform any site operatives of the purpose of the fencing, e.g. “Construction Exclusion Zone- No access”.
- 6.2.6 The protective barrier must not be removed or realigned unless in accordance with this report or until all construction work has been completed and all construction vehicles and plant have departed from site.

6.3 Level Changes

- 6.3.1 The reduction of ground levels and the skimming of ground within the RPA of retained trees is not permitted.
- 6.3.2 Where it is required to raise levels within the RPA of retained trees, this should be achieved by use of an inert granular material which remains gas- and water-permeable throughout its design life.

6.4 Installation of Boundary Treatments and Street Furniture

- 6.4.1 Where the installation of fence posts and street furniture is proposed within the RPA of retained trees, excavations should be kept to a minimum and be carried out carefully by hand.
- 6.4.2 If possible, fence posts should be supported by metal post support spikes. Alternatively, a semi-dry postcrete mix may be acceptable for both fence post foundations and foundations of proposed street furniture.
- 6.4.3 Fences should be aligned to ensure a minimum distance of 500mm between the fence and the stems of existing trees to allow for the future growth of the trees.

6.5 Installation of Utility Apparatus

- 6.5.1 Underground services which require excavations should be located outside the Root Protection Areas (RPA) of retained trees, or outside the Tree Protection Zone as shown in Figure 1 of the *National Joint Utility Group (NJUG) Volume 4- Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees* (NJUG Volume 4), whichever is greater. Refer to Appendix 5 - NJUG Tree Protection Zone.
- 6.5.2 Where the location of underground services within the RPA is justified, trenchless solutions should be applied in accordance with *BS 5837:2012 Clause 7.7.2* and *NJUG Volume 4*.

Above ground services, including CCTV cameras and lighting, should be sited and installed to avoid the need for detrimental tree pruning in the short and long-term. Installation of above-ground services should further be carried out in accordance with *BS 5837:2012 Clause 7.7.3* and *NJUG Volume 4*.

7.0 Appendix 1 - Arboricultural Survey Schedule

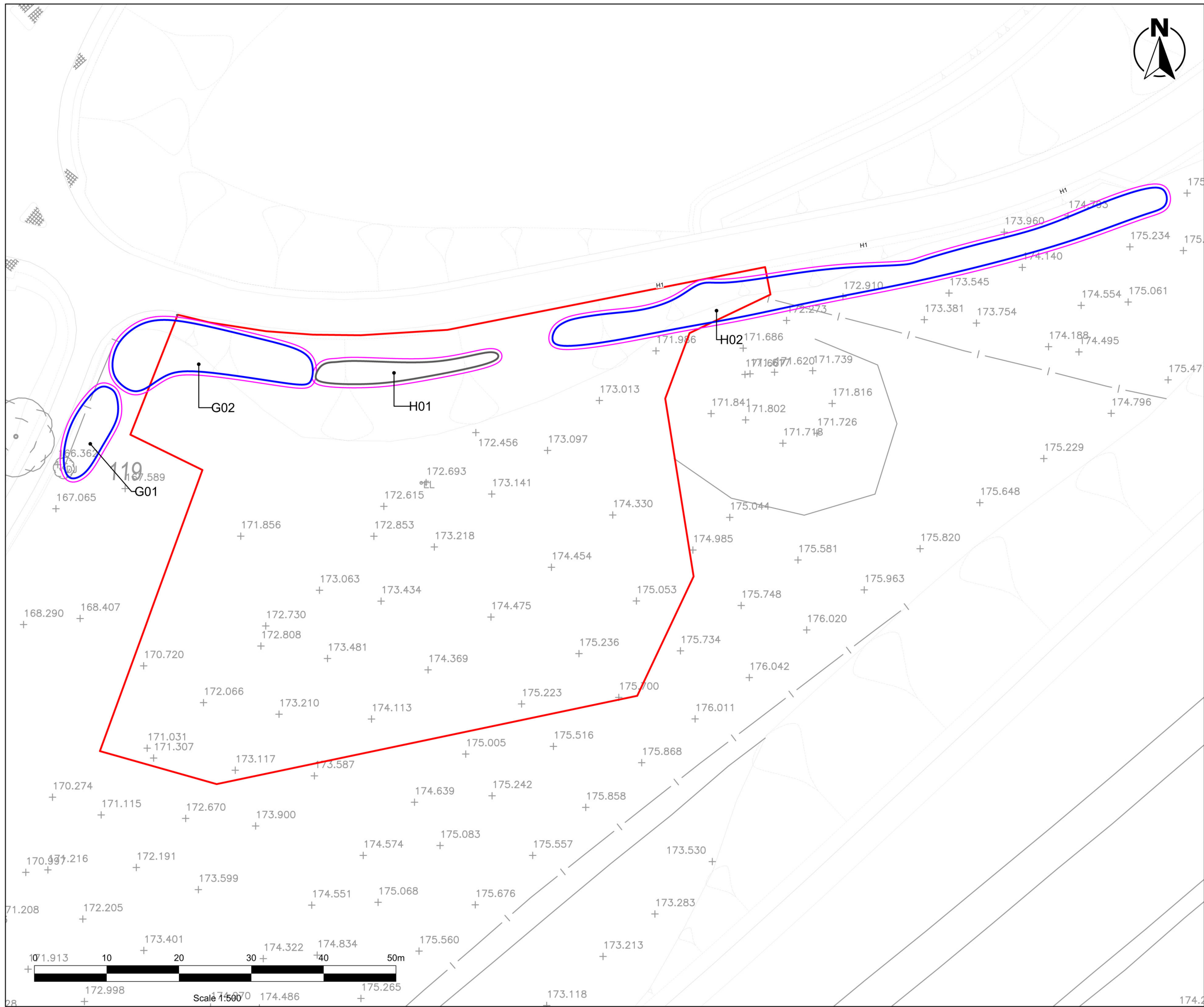
7.1 Information recorded and symbols used

Ref	- Sequential tree reference as per Tree Survey Plan
Species	- Common name (<i>Scientific name</i>)
Ht (m)	- Estimated tree height in metres
Stem dia (cm)	- Stem diameter measured in accordance with BS5837:2012 Annex C
Canopy Spread	- Estimated branch spread (in metres) at four cardinal points
Clear crown	- Height of the lowest branch(es) including cardinal point(s) where applicable
Life stage	- - YNG - Young - SM - Semi-mature - EM - Early mature - M - Mature - OM - Over-mature (including veteran trees)
RULE	- Remaining useful life expectancy estimated in years
Cond.	- Overall condition - - G - Good - F - Fair - P - Poor
Notes	- Including observations and notes on: Defects and other structural and physiological abnormalities, nesting birds, bat roost potential (where possible), notes on surrounding land incl. soil compaction, Tree Preservation Orders and Conservation Area (where information is available), notes on limited access/inspection, off site location and preliminary management recommendations (in <i>italics</i>)
BS Cat.	- Retention category and sub-category in accordance with BS5837:2012 - A - High Quality - B - Moderate Quality - C - Low Quality - U - Unsuitable for retention 1 - Mainly arboricultural value 2 - Mainly landscape value 3 - Mainly cultural value

RPA (m)	- Radius of Root Protection Area calculated in metres (Radius of RPA= 12x stem diameter) - This will usually be capped at 15m for trees with a stem diameter larger than 1.25m.
RPA (m ²)	- Area of Root Protection Area (relevant if RPA is not circular due to pre-existing site conditions, incl. water courses, retaining structures and building foundations). Rounded up to nearest m². - This will usually be capped at 707m² for trees with a stem diameter larger than 1.25m.
~	- estimated, used to indicate measurements which cannot be taken due to access restrictions (in particular stem diameters)

Ref	Species	Ht (m)	Stem dia (mm)	Canopy spread (m)				Clear crown	Life stage	RULE	Cond.	Notes <i>(Including preliminary management recommendations)</i>	BS Cat.	RPA (m)	RPA (m ²)
				N	E	S	W								
G01	Mixed group	3	150	See plan				0	EM	40+	G	Short section of dense hedgerow providing screening between site and Public Right of Way, native species including hawthorn and birch	B2	1.80	10.2
G02	Mixed group	8	200	See plan				0	EM	40+	G	Short tree belt comprising four standard Italian alder and dense understorey of hawthorn and other native species	C2	2.40	18.1
H01	Mixed hedgerow	1.5	100	See plan				0	EM	20+	F	Native hedgerow probably planted at the same time as G01, G02 and H02 but less well established. With gaps allowing open views into the site	B2	1.20	4.52
H02	Mixed hedgerow	7	150	See plan				0	EM	40+	G	Mature, unmanaged hedgerow comprising native species including birch and hawthorn.	B2	1.80	10.2

8.0 Appendix 2 - Tree Survey and Tree Constraints Plan



- NOTES**
- Do not scale from this drawing
 - All dimensions are in meters unless stated otherwise
 - This drawing is to be read in conjunction with all relevant drawings and documents associated with this project.
 - All surveyed information including levels and layout is provided by others
 - All existing and proposed dimensions, levels and locations to be checked and verified by the main contractor on site prior to the commencement of the works and any anomalies reported to the engineer.

KEY - Tree Survey and Tree Constraints Plan

Tree Categories BS 5837 (2012)

- Tree Category A (not applicable)
- Tree Category B
- Tree Category C
- Tree Category U (not applicable)
- Root Protection Area (RPA)

PL01	30/08/22	For Planning	GC	VM	RG
Rev	Date	Description	DRA	CHK	APP

Project
Dig Gate Lane, Rochdale

Client
Rochdale Power Ltd.

Drawing Title
Tree Constraints Plan

Status	Date	Scale
Preliminary	30/08/22	1:1,000 @ A3

Drawn	Designed	Checked	Approved
GC/VM	n/a	VM	RG

DWG No.	Revision
3050-001-ENZ-XX-00-DR-AR-45-101	PL01

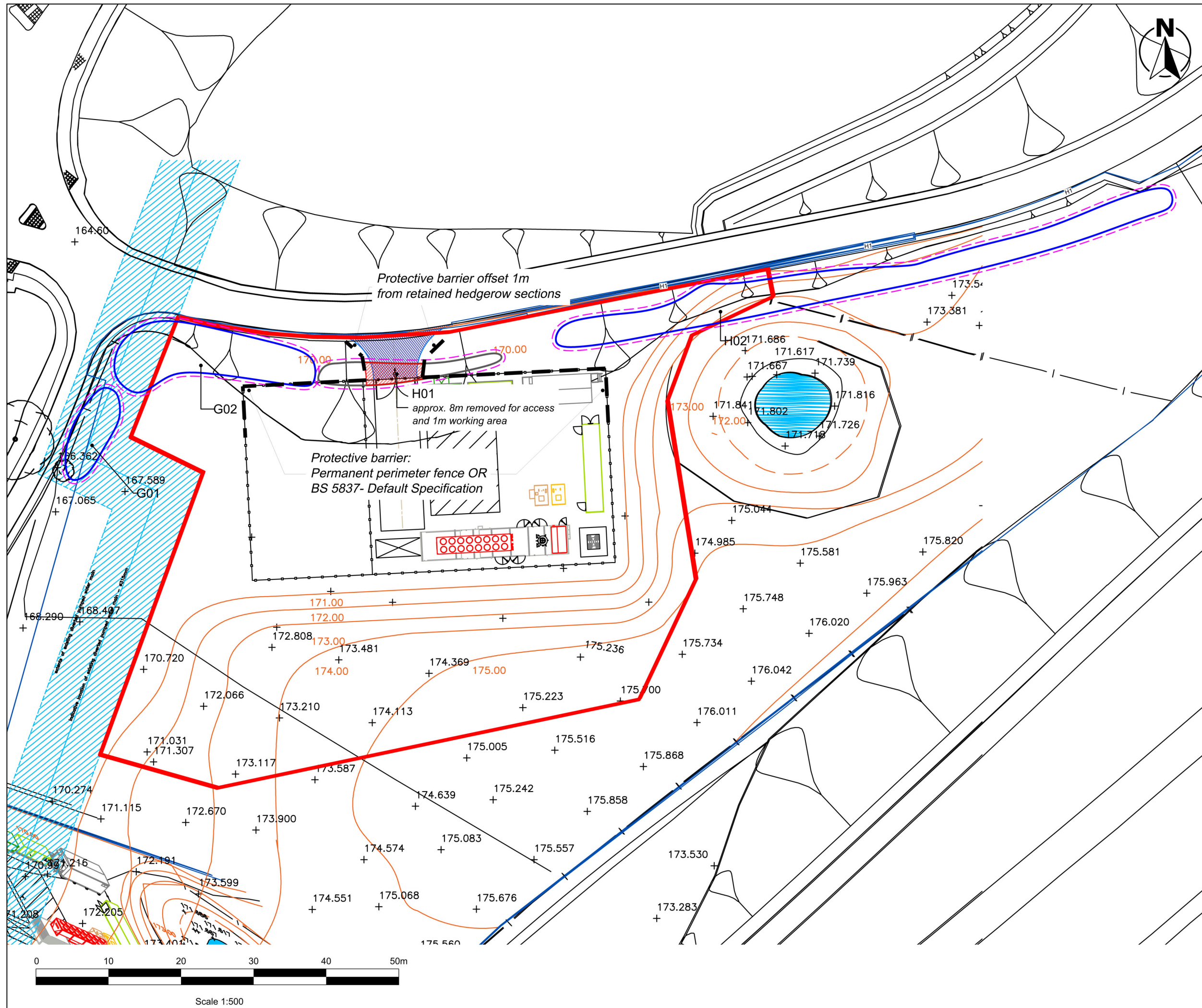
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9.0 Appendix 3 – Tree Protection Plan



- NOTES**
- Do not scale from this drawing
 - All dimensions are in meters unless stated otherwise
 - This drawing is to be read in conjunction with all relevant drawings and documents associated with this project.
 - All surveyed information including levels and layout is provided by others
 - All existing and proposed dimensions, levels and locations to be checked and verified by the main contractor on site prior to the commencement of the works and any anomalies reported to the engineer.

KEY - Tree Protection Plan

Tree Categories BS 5837 (2012)

- Tree Category A (not applicable)
- Tree Category B
- Tree Category C
- Tree Category U (not applicable)

Root Protection Area (RPA)

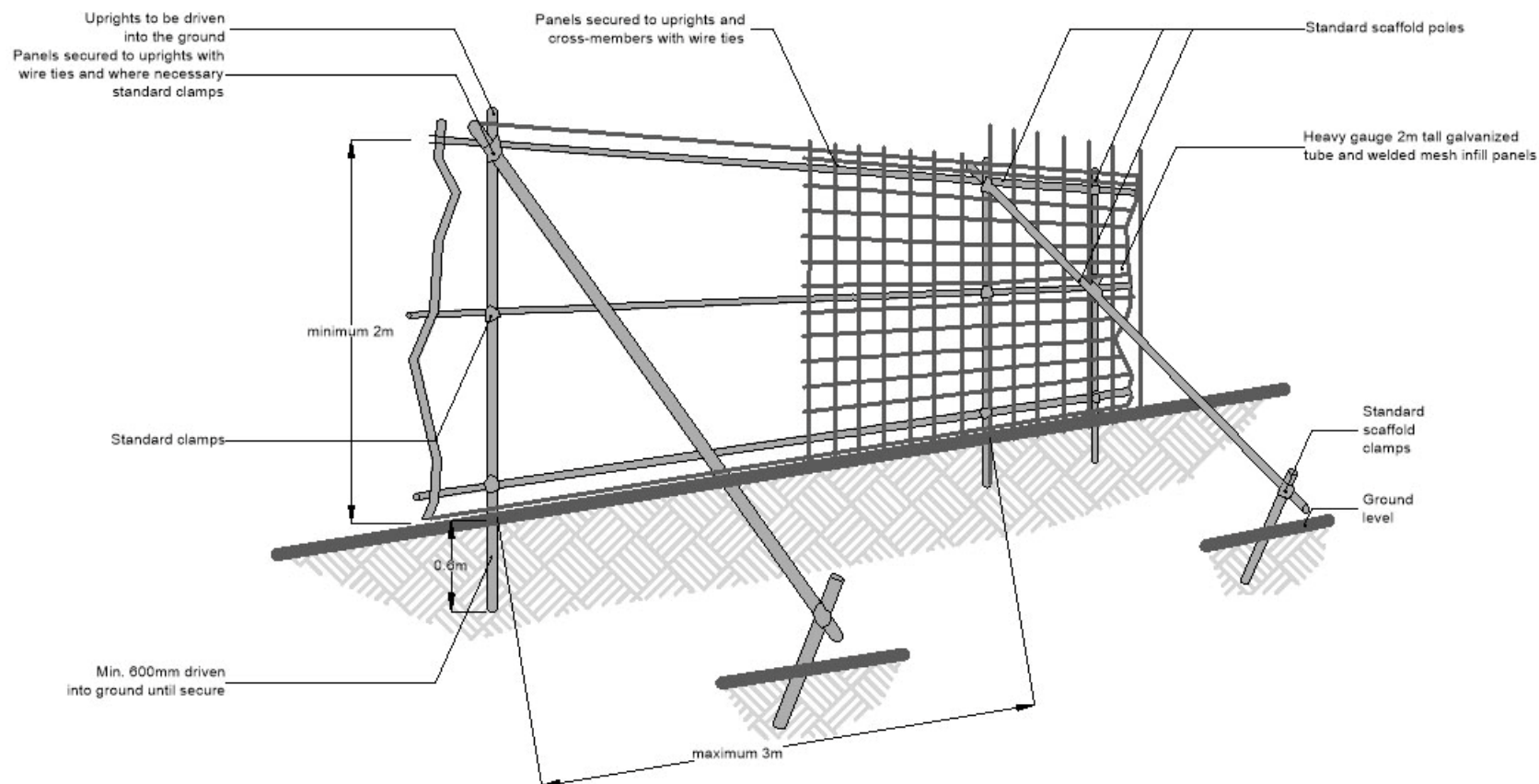
Tree to be removed

Protective barrier
BS 5837 (2012) Figure 2

PL01	30/08/22	For Planning	VM	VM	RG
Rev	Date	Description	DRA	CHK	APP
Project					
Dig Gate Lane, Rochdale					
Client					
Rochdale Power Ltd.					
Drawing Title					
Tree Protection Plan					
Status					
Preliminary		Date		Scale	
		30/08/22		1:1,000 @ A3	
Drawn					
GC/VM		Designed		Checked	
		VM		VM	
Approved					
RG					
DWG No.					
3050-001-ENZ-XX-00-DR-AR-45-102				Revision	
				PL01	

10.0 Appendix 4 - Default Specification of Protective Barrier to BS 5837 (2012)

10.1

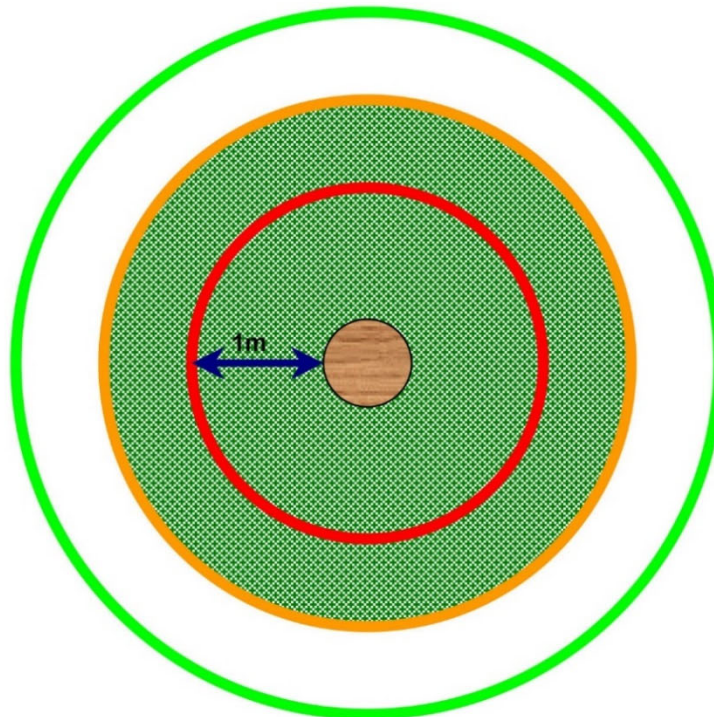


11.0 Appendix 5 - NJUG Tree Protection Zone



NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

FIGURE 1 – Tree Protection Zone



Key



Trunk of tree



Canopy or branch spread



PROHIBITED ZONE – 1m from trunk. Excavations of any kind must not be undertaken within this zone unless full consultation with the local authority Tree Officer is undertaken. Materials, plant and spoil must not be stored within this zone.



PRECAUTIONARY ZONE – 4 x tree circumference. Where excavations must be undertaken within this zone the use of mechanical excavation plant should be prohibited. Precautions should be undertaken to protect any exposed roots. Materials, plant and spoil should not be stored within this zone. Consult with the local authority Tree Officer if in any doubt.



PERMITTED ZONE – outside of the precautionary zone. Excavation works may be undertaken within this zone, however caution must be applied and the use of mechanical plant limited. Any exposed roots should be protected.

11.1



Enzygo specialise in a wide range of technical services:

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