



Project: 20_5837_11_35
Site: Land off from Edenfield Road, Rochdale, OL11 5TT
Client: Martin Hall



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Document Author:	Ffion Maguire
Project Manager:	Matt Harmsworth
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BS5837: 2012	Planning Only	N/A

Report no: 20_5837_11_35

Date: 8/12/2020

FAO: Martin Hall

eMail: mhall@olivemedia.co



Summary:

The tree survey for the land off from Edenfield Road contains the details of seven tree groups and two individual trees located adjacent to the site red line boundaries.

Our brief has been to obtain details of the tree population on site with a view to assessing any arboricultural constraints.

We understand that the site is to be redeveloped with a residential housing scheme and this report is to support an outline planning application.

The project will require the loss of a large number of self-set naturally regenerated specimens of poor arboricultural value and reasonable conservation value.

The site boundaries are populated by a large number of low quality specimens that will also require removal.

The project provides an opportunity to enhance the diversity and quality of the tree stocks through thinning to best stems and formative pruning. As such the scheme would be deemed to be arboriculturally defensible.

Once detailed proposals become available the project will require supporting method statements and protection plans.

Report Author.

Matthew Harmsworth attended Merrist Wood College in Guildford, Surrey in the late 1990's studying horticulture and arboriculture as well as a National Diploma in Countryside Recreation before gaining employment as a Countryside Ranger with Surrey County Council (later Surrey Wildlife Trust).

After a number of years Matthew started an Arboricultural Contracting business serving residential and commercial clients across the SE of England and also gained his aerial NPTC certificates.

Following the sale of this business in 2009 Matthew moved to North Wales as a junior self-employed consultant for Fairley Arboriculture and studied at Myerscough online to study an FDSc in Arboriculture and become a technician member of the Arboricultural Association.

ROAVR Environmental was formed in 2010 and since then has carried out arboricultural consultancy Nationwide with directly employed consultants. Matthew has written well in excess of 600 BS 5837 2012 tree reports.



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Arboricultural implications assessment to BS 5837 2012 of trees at: The land off from Edenfield Road, Rochdale, OL11 5TT.

1 Scope

- 1.1 We have recently been instructed to undertake an appraisal of mature tree cover at the land off from Edenfield Road, Rochdale, OL11 5TT.
- 1.2 The data was collected to the British Standard BS5837 'Trees in Relation to Design, Demolition and Construction - Recommendations' 2012.
- 1.3 The survey has been commissioned to offer guidance on the arboricultural constraints with a view to the future development of the site.
- 1.4 The trees were inspected on the 02/12/2020 following the guidance in the British Standard by Connor Harmsworth. The crowns and stems were inspected from the ground using the 'Visual Tree Assessment (VTA)' method; non invasive techniques were used at this stage. Although a sounding hammer was used to determine the presence of any decay.
- 1.5 The site was assessed and data was collected on seven tree groups and two individual trees. Trees were grouped or designated woodlands as per the allowance in the British Standard when the area in question was uniform in terms of species, age or geography.



Photographic Plates.



Aerial photographic plate showing the site and boundary woodland.





Photographic plate showing the boundary woodland.



Photographic plate showing self-set natural regeneration on the site boundary.



Photographic plate showing self-set natural regeneration on the site boundary.



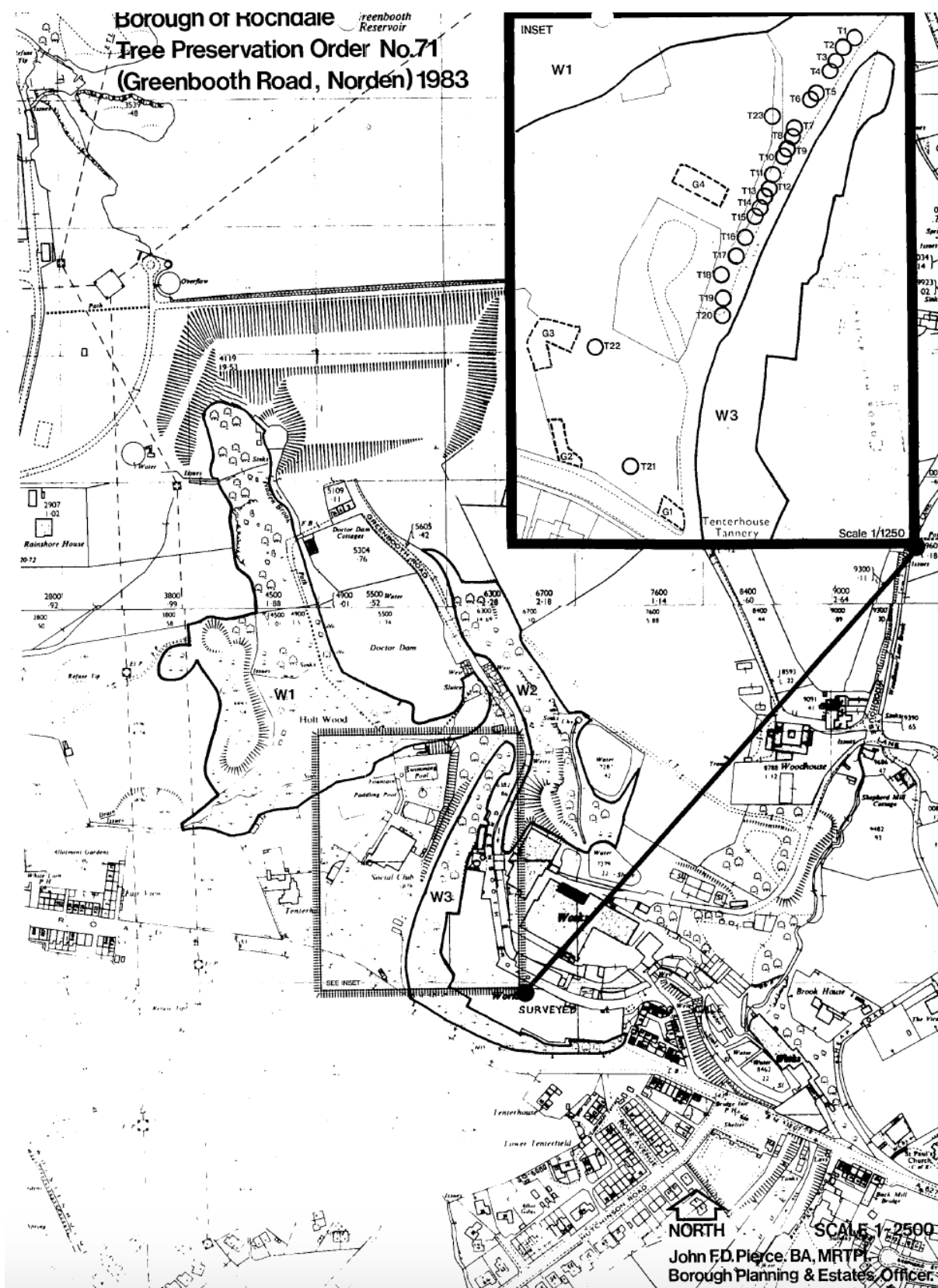
Photographic plate showing self-set natural regeneration and woodland.

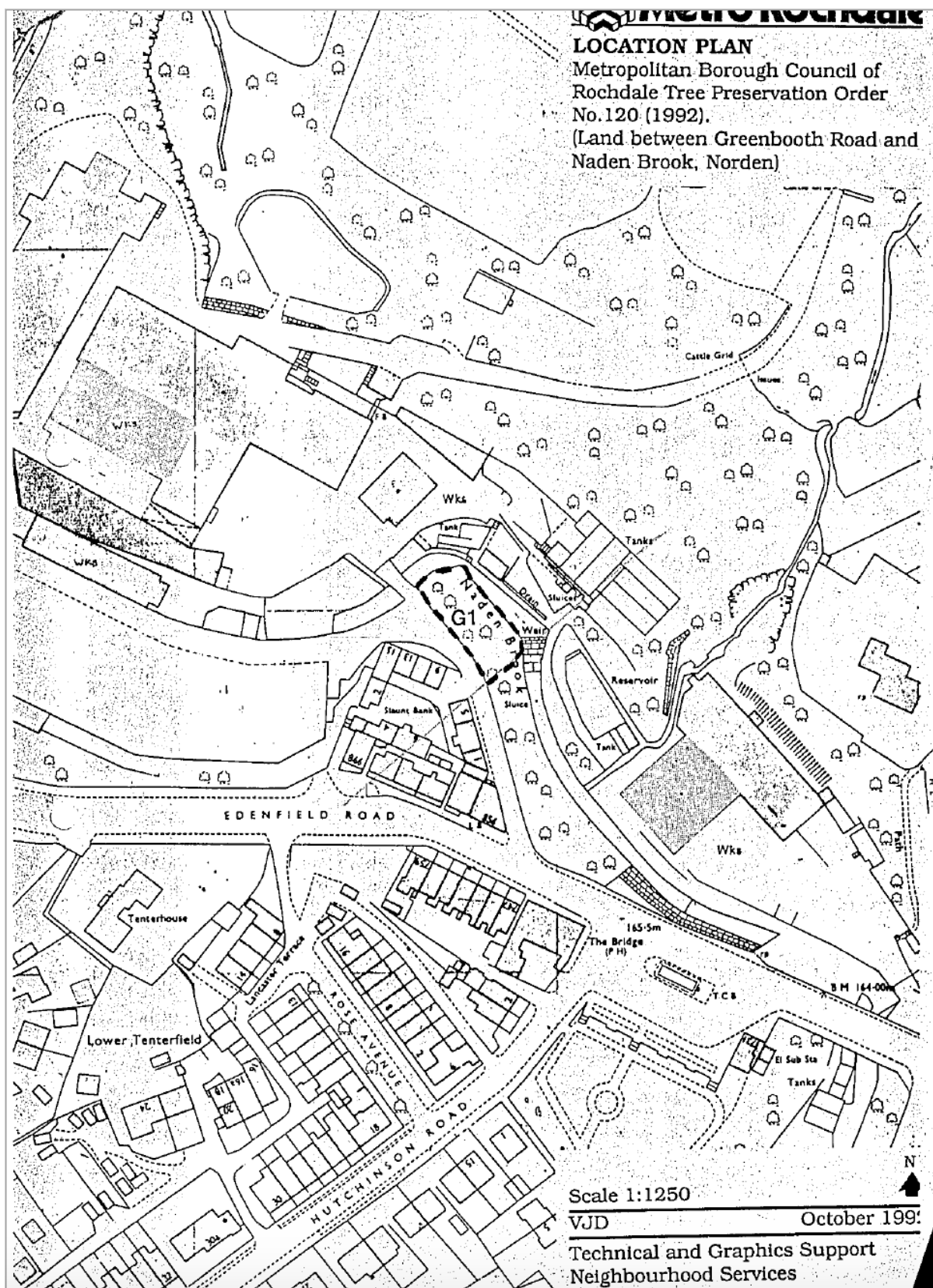


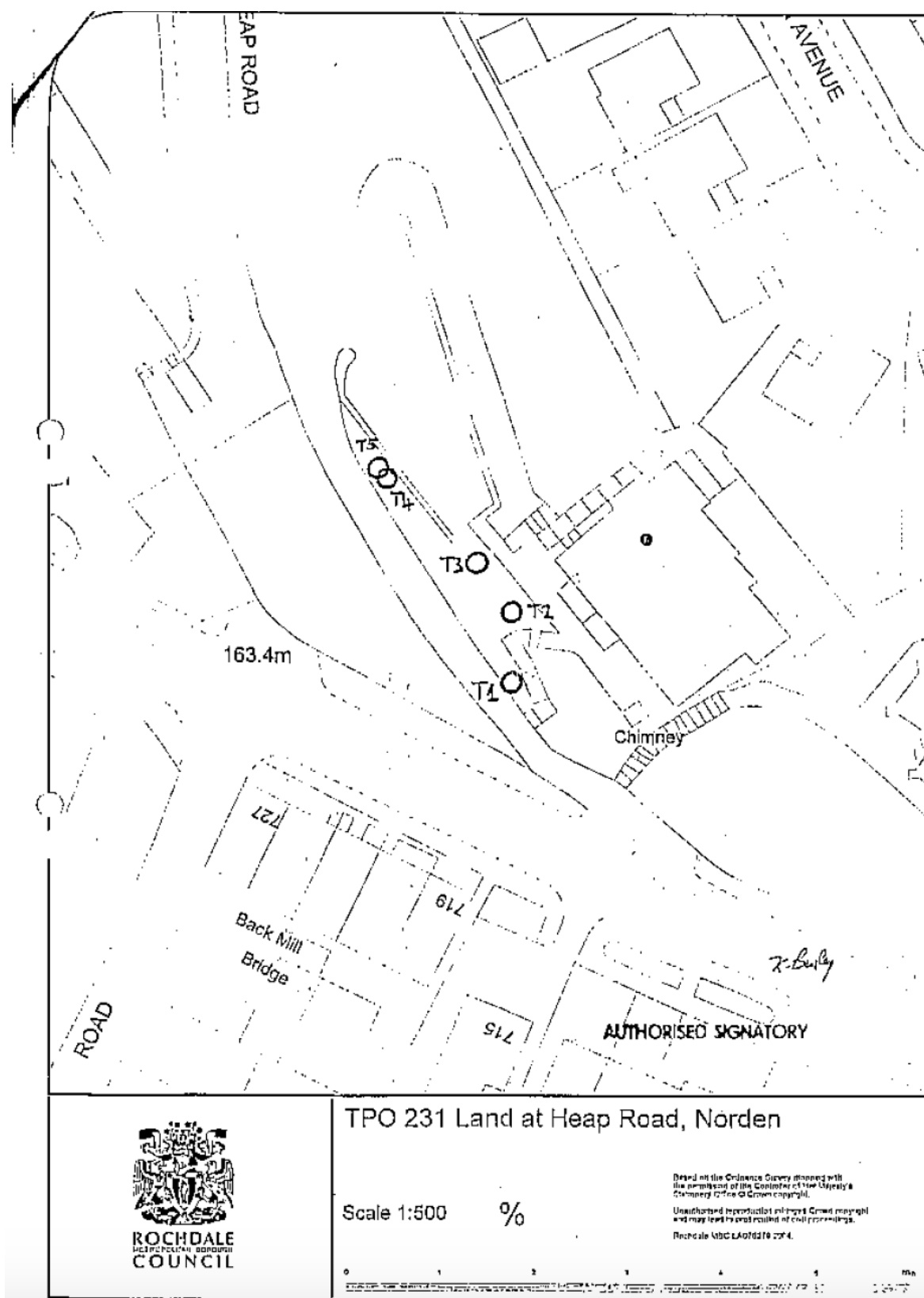
2. Site Conditions & Site Surroundings

- 2.1 The site is situated in Rochdale in the Rochdale Metropolitan Borough Council control area. The site is located on the north-west side of the town and has a rural feel.
- 2.2 Greenbooth Road is located in Norden, Rochdale (O.S. grid reference: SD 85744 14731 – see Figure 1). The site includes two large former industrial buildings, and consists of bare ground, scrub, broad-leaved woodland and neutral grassland. The boundaries are a combination of walls and a wet ditch.
- 2.3 The wider locality is predominantly residential and agricultural. The site is accessed via a private driveway, off from the adjacent public highway.
- 2.4 A desktop assessment has highlighted that the site is not within a Conservation Area. However, there are several TPO protected trees on, and adjacent to the site.
- 2.5 All desktop assessment data was cross checked and validated on the 02/12/2020 using the web portal provided by the local planning authority and cross checked with the DEFRA MAGIC database.

<http://www.rochdale.gov.uk/planning-and-building/heritage-and-conservation/Pages/tree-preservation-orders.aspx>







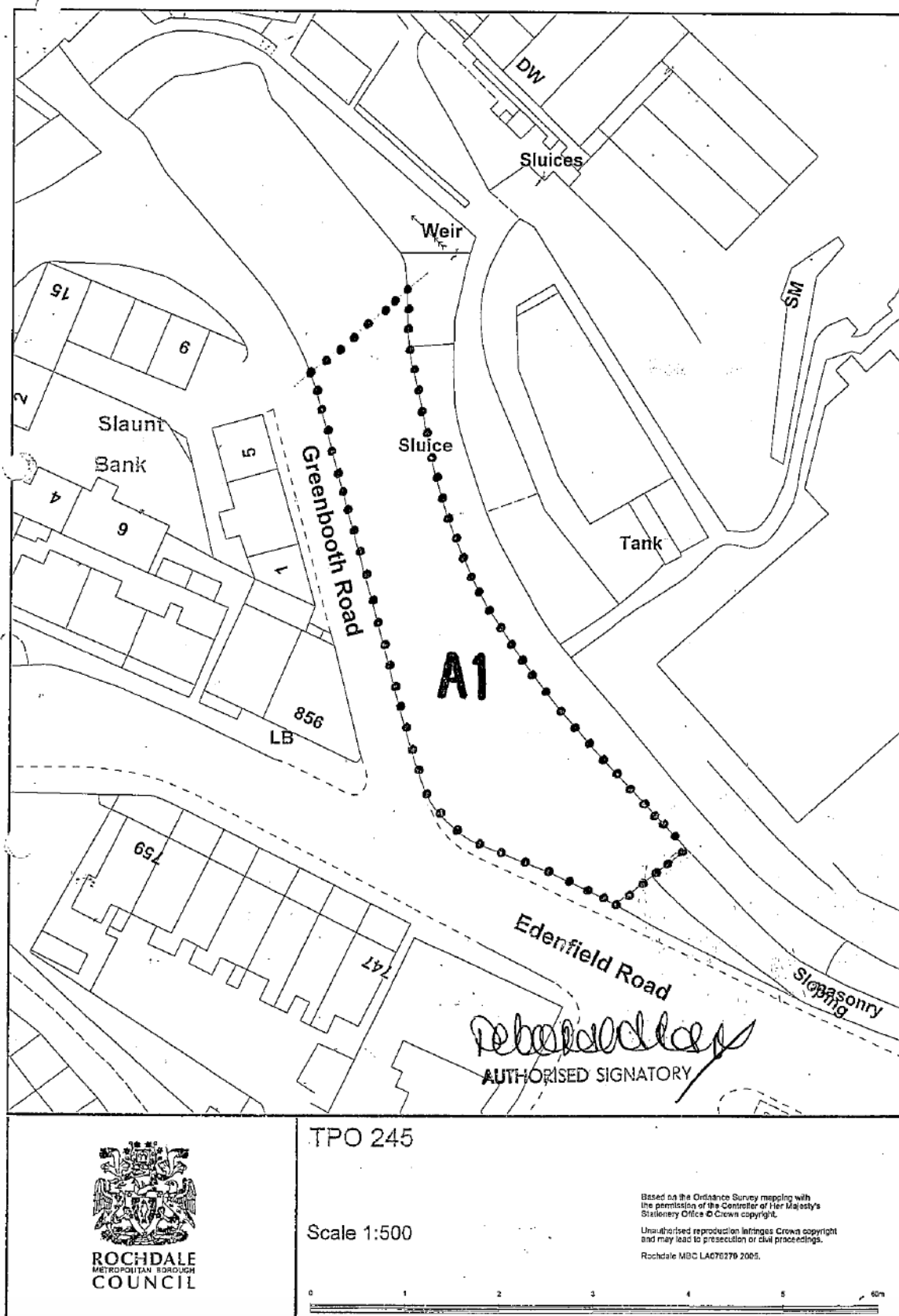


TPO 243

Scale 1:1500

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 Rochdale MBC LA076X79 2005.







<https://magic.defra.gov.uk/MagicMap.aspx?chosenLayers=sacPIIndex,sacIIndex,backdropDIIndex,backdropIndex,europeIndex,vmlBWIndex,25kBWIndex,50kBWIndex,250kBWIndex,miniscaleBWIndex,baseIndex&box=385009:414460:386399:415143&useDefaultbackgroundMapping=false>

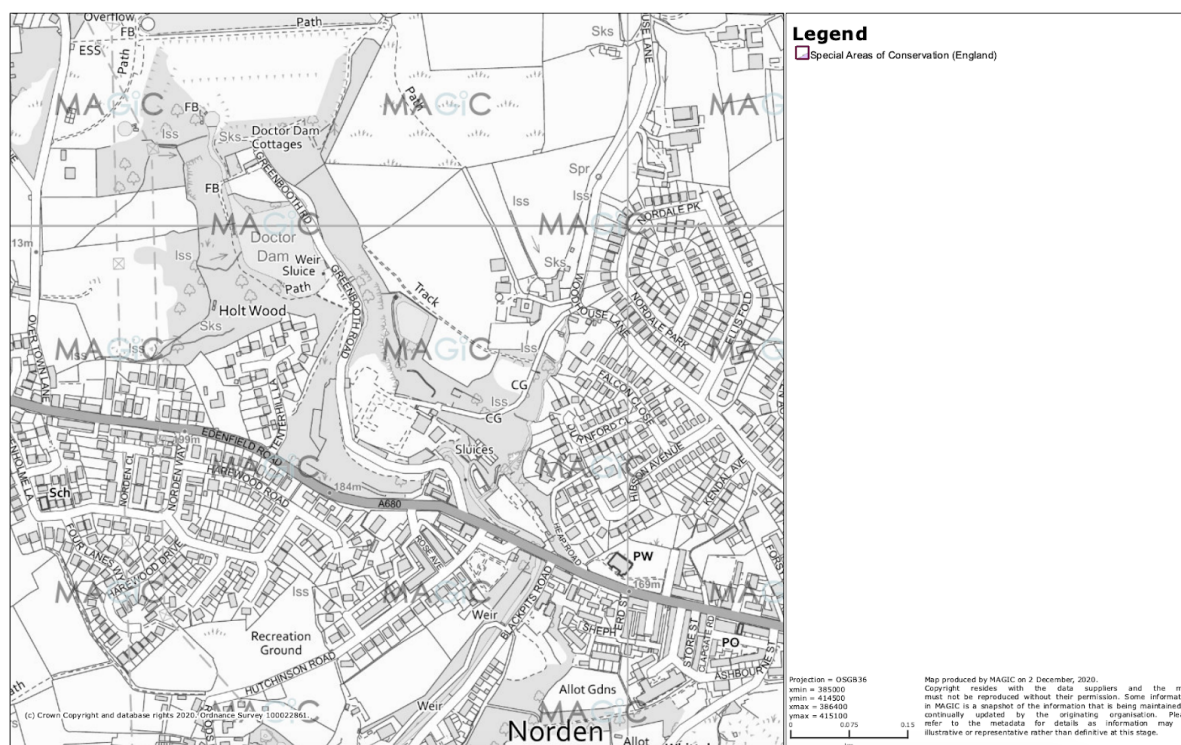


Image plate showing the desktop analysis results of the surveyed plot from DEFRA MAGIC.

- 2.6 Works to protected trees require consent from the local planning authority. In the case of TPO's an application must be made. In the case of conservation areas a notification must be made. TPO applications take up to eight weeks, conservation area notifications take six weeks.
- 2.7 Certain exemptions apply; for example the removal of deadwood. In the case of dangerous trees 5-days written notice should be given to the local authority (in the cases of immediate danger the work should proceed, but the local authority contacted as soon as possible afterwards) with the works evidenced by photographs and video where possible.
- 2.8 It should be noted that planning consent overrides protected trees, where the works or removal are necessary for development to proceed and have been highlighted in the tree survey documents.



3. Drawings

- 3.1 Appended to this report is drawing edenfield_1_TcP_A0_400.pdf.
- 3.2 The tree constraints plan has been produced using a client supplied topographical .dwg (AutoCAD) base plan. Tree positions and data have been applied using our survey handset as an onsite exercise with the constraints plan being produced as a PDF through AutoCAD.
- 3.3 An autoCAD .dwg file of the tree constraints is available on request for project stakeholders to utilise.
- 3.4 The *Tree Constraints Plan* shows the existing layout. For each tree the stem location is indicated and scaled according to its diameter, the canopy is indicated according to measurements taken along the four cardinal points of the compass. Root protection areas (RPAs) are indicated which are calculated according to the guidelines within BS 5837 (2012).
- 3.5 Where appropriate, the shapes of the RPAs have been amended to reflect actual site conditions or where trees have been heavily pruned. The 'original' RPAs are indicated as a dashed line whereas the amended RPAs are indicated as a solid line. Any variation to this approach will be highlighted on the appropriate plans.
- 3.6 The *Tree Assessment Plan* indicates the tree constraints with the proposals overlaid. Where applicable, this plan shows where works are proposed in Root Protection Areas and which trees are to be pruned or removed. This plan accompanies the Impact Assessment which is to be found in Section 8.



4. The Tree Population

4.1 BS5837: 2012 Tree Categorisation:

BS5837: 2012 sets out the methodology for surveying trees on potential development sites in order to identify them within a prioritised system of retention categories, as summarised below and given in full within the BS5837: 2012 Cascade Chart for Tree Retention.

A Category Trees of high quality and value in such a condition as to be able to make a substantial contribution for a minimum of 40 years.

B Category Trees of moderate quality and value in such a condition as to make a significant contribution for a minimum of 20 years.

C Category Trees of low quality and value currently in adequate condition to remain until new planting could be established and expected to remain for a minimum of 10 years, or young trees with a stem diameter less than 150mm measured at 1.5 meters above ground level.

U Category Trees in such a condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural or forestry management.

4.2 Additionally, BS5837: 2012 provides subcategories 1-3 within the category system outlined above which indicate the area(s) in which a tree or group retention value lies. An explanation of these values is given within the BS5837: 2012 Cascade Chart for Tree Retention.

1 - Retention values that are mainly arboricultural

2 - Retention values that are mainly landscape.

3 - Retention values that are mainly cultural, including conservation.

4.3 In line with BS5837: 2012, A and B category trees should be considered as a constraint on site and provide a substantial contribution to the site. As a result, A and B category trees should be retained and incorporated into the scheme where possible.

4.4 Generally C and U category trees are considered to be of low quality or are young specimens that can be readily replaced and therefore should not be a constraint in terms of future development.

4.5 However, it is generally considered desirable to retain trees wherever reasonably possible to ensure continuity of tree cover and to provide a mature landscape to the development.



- 4.6 The survey contains details of a number of trees. The comments including species, age, condition and the BS5837:2012 retention category for each individual tree and group of trees are provided in detail in the Tree Schedule (data tables). The full data collection methodology is appended behind the data tables.
- 4.7 The location of each individual tree and their associated constraints are illustrated on the appended Tree Constraints Plan.

Preliminary Management Recommendations - Regardless of the proposals.

- 4.8 The site is populated by self-set natural regeneration in and around the old built footprint. Beyond the footprint the site is bordered by mixed deciduous woodland which although of low arboricultural value has high conservation and landscape value.
- 4.9 The centre areas of the site can be cleared of scrub whilst the boundary woodland areas would most likely require tree safety works if the site is developed.

Future Management Recommendations - Regardless of the proposals.

- 4.10 The site will require tree safety and woodland management works. The site would benefit from thinning to best stems to improve the structure and form of the woodland blocks.
- 4.11 Self-set natural regeneration adjacent to fence lines and infrastructure will require learning back to prevent encroachment and damage to boundary fence lines.



5. Trees & Construction - General Issues

- 5.1 This report has been prepared to inform the design layout of an outline development for residential units and should be submitted with a planning application.
- 5.2 Due to the changing nature of trees and other site circumstances this report and recommendations are limited to a one year period. Similarly, this report could be invalidated if any alterations are made to the site that could change the conditions as seen at the time of inspection.
- 5.3 Under certain circumstances, roots can affect foundations, drains and other underground services. These issues have not been addressed by this report. Trees are dynamic structures that can never be guaranteed 100% safe; even those in good condition can suffer occasional damage under only average weather conditions. A lack of recommended work does not imply that a tree will never suffer damage.
- 5.4 Typically, about 80% of roots will be found in the upper 500mm of soil and often extending well beyond the canopy spread. The threat to the trees by development comes from:
 - (a) root severance or fracture
 - (b) compaction of the soil, preventing gaseous exchange and moisture percolation
 - (c) possible change to moisture gradients due to surface water run-off or interception
 - (d) physical damage to low branches and trunk.
 - (e) damage from chemical run-off from construction activities

The consequences for the tree of such damage are:

- (i) instability, if severe enough
- (ii) entry points for pathogenic fungi at wounds / fractures
- (iii) loss of vitality due to reduced oxygen, mineral and moisture take-up; all leading to
- (iv) root death, and
- (iv) a general decline or possible death of the tree.



6. Tree Constraints - Information

- 6.1 Constraints imposed by trees during development, both above and below ground need to be considered within the site layout design. Protection is afforded to the tree by defining a Root Protection Area (RPA) within which no development activity should take place. The size of the RPA is defined in the British Standard and relates to trunk diameter. The RPA is normally the minimum position for placement of tree protective fencing. The data tables hold a column figure as an offset in meters from the stem that the root protection area extends to.
- 6.2 Nominally the RPA is represented by a circle around the tree. The area of the RPA may however, subject to the consideration of the arboricultural consultant, and be altered to a polygon in order to reflect the site conditions and requirements. For example, existing hard surfaces and foundations are likely to restrict or limit root growth while good quality soil may promote and extend root growth.
- 6.3 Root Protection Areas primarily relate to below ground constraints (root protection). Other constraints that must be considered include:
- The current as well as ultimate height and spread of a tree
 - Large trees close to a building, particularly a dwelling, can cause apprehension to owners/occupiers that result in pressure for tree removal or inappropriate pruning. Buildings should be sited allowing for the species height, spread and overall habit
 - Species characteristics; i.e. density of foliage, fruit-fall, susceptibility to honeydew drip, or branch drop. Trees are shedding organisms. The leaves of some species may cause problems with blocking of gullies and gutters. Fruit may cause slippery patches and honeydew drop can affect surfaces (particularly cars).
If conflicts may arise, detailed design may address such issues, such as non-slip paths, use of car-ports, provision of leaf guards or grilles etc.
 - The potential impact on direct and diffuse light of a particular location of land; shading of buildings by trees can be a problem, especially where rooms require natural light, in addition open spaces such as gardens and sitting areas should be designed to meet requirements for direct sunlight (for at least part of the day)
 - Infrastructure requirements in relation to trees e.g. easements for underground or above ground apparatus and visibility splays
 - Space for the provision of new planting or landscaping
 - The proposed end use of space within Root Protection Areas
 - The requirement to protect overhanging canopies of trees that overhang or extend beyond Root Protection Areas



7. Structures within the RPA of trees - Information

- 7.1 In the development layout design structures should be positioned outside of RPAs as far as practicable. In some exceptional instances there may be an overriding justification for construction within the RPA. In such cases technical solutions may be available to minimise to an acceptable level of disturbance to the tree or trees. Where such technical solutions may be relied upon full details will need to be included within a method statement. Advice must be sought from a suitably qualified arboriculturalist to develop a solution.
- 7.2 In some cases it may be unavoidable to place permanent hard surfacing within an RPA (for example the placement of an access driveway or parking area). In such cases the following should apply:
- No excavation of the soil should take place, other than scraping of the turf/vegetation layer
 - Any design must avoid compaction, allowing an even distribution of weight
 - New hard surfacing should not exceed 20% of any existing unsurfaced ground within the RPA
If the proposed surface is likely to require de-icing salt then run-off should be directed away from the RPA
 - Permeable hard surfacing can result in soil moisture saturation for long periods (resulting in root death). Where there is a risk of water-logging a design should incorporate land drainage
- 7.3 Appropriate sub-base options for new hard surfacing include three-dimensional cellular confinement systems (cell-web). Piles, pads or elevated beams can support bridges over RPAs. In all cases full specifications and methodology must be included within a supporting method statement.



8. Arboricultural Impact Assessment - Site Specific

8.1 Overview

8.1.1. It is proposed to demolish the existing buildings and construct a residential scheme set into the landscape serviced from a central access road as shown on drawing 102 dated 09.12.2019.

8.1.2. A tree assessment plan has been produced to allow us to accurately assess the implications to the current tree stocks.

8.1.3. The project will require improvements to the access and egress point. This will require the removal of some low quality self-set specimens. Self-set scrub throughout the site will require removal to facilitate the project and tree safety works will be required on the northern, southern and western boundaries.

8.1.4. A precautionary approach will be required to ensure successful retention of the higher quality trees throughout the construction and demolition phases.

Tree Pruning:

It is likely boundary pruning works will be required to clear vegetation back from the fence lines and make safe some of the self-set natural regeneration that has colonised the walls and fence lines since the site fell derelict.

RPA:

RPA: The main area of the development site is flat and level and covered with an existing hard surface. Therefore RPA infringement is minimal across the site.

RPA: Soil Compaction Trees adjacent the construction area (preventable by installing tree protection measures).

8.1.6. Other potentially damaging activities often associated with construction sites include, demolition or the careless use of plant machinery, hazardous materials, or fires.

8.1.7. All of the above potential impacts are considered in detail throughout this section.



8.2 Tree Removal.

8.2.1. A number of tree removals will be required to facilitate the project and it is envisaged this would be clarified in a tree protection plan and arboricultural method statement as part of a planning condition.

8.2.2. Details specific to each tree can also be found in the Tree Data Schedule.

8.3 Mitigation Planting.

8.3.1. The trees to be removed are of such low amenity value that no mitigation planting is considered necessary. However, there is ample scope to plant more trees within the site to mitigate against tree loss.

8.4 Impact on Tree Canopies.

8.4.1. Boundary trees will invariably need some sympathetic pruning to facilitate the project.

8.5 Impact on Tree Roots.

8.5.1. The scheme avoids the higher quality woodland bands.

8.6 New Surfaces.

8.6.1. New surfacing is required throughout the site but this will involve the lifting of existing surfaces. Site investigations would indicate that the impacts on retained trees will be low once protection measures are in place.

8.7 Underground Services.

8.7.1. No underground services are to be installed through any Root Protection Areas.

8.8 Changes in Ground Levels.

8.8.1. Some boundary level changes may be required and this would be addressed once a detailed layout becomes available.



8.9 Soil Compaction.

8.9.1. The majority of tree roots lie within the upper soil horizons. This is because the availability of oxygen decreases with depth and roots need to breathe to stay alive. In addition, nutrients are more readily available in the form of organic matter close to the soil surface.

8.9.2. Healthy soils contain about 25% air space between solid particles. Increased loading of the soils caused by construction activity causes air to be squeezed out as the soil becomes compacted preventing roots from breathing. Even an increase in pedestrian activity may cause some soil compaction.

8.9.3. It is important therefore that ground compaction and soil disturbance over Root Protection Areas should be avoided during the construction phase. This may be done by installing protective fencing and ground protection measures as recommended within the tree protection plan.

8.10 Demolition Activities.

8.10.1. The tree protection measures specified within a TPP should be installed prior to the commencement of all demolition activities (including soil stripping) to prevent any detrimental impact on tree health. Where this is not practicable, demolition of structures within Construction Exclusion Zones shall be undertaken very early on in the demolition phase and the protective barriers installed immediately thereafter.

8.11 Hazardous Materials.

8.11.1. All hazardous materials (including cement and petrochemical products) will need to be controlled according to COSHH regulations in order to ensure there is no detrimental impact on tree health. Provision shall need to be made to ensure that cement and cement run-off are contained outside of all Root Protection Areas.

8.12 Cabins and Site Facilities.

8.12.1. Consideration should be given to the location of any site welfare facilities in terms of potential impact on trees. Where it is proposed to install cabins or site facilities in Root Protection Areas, the appointed arborist should be consulted and approval obtained from the local authority.



8.13 Boundary Treatments.

8.13.1. Extensive boundary changes will be required but no details on the specification is yet available.

8.14 Impact of Retained Trees on the Development.

8.14.1. Adequate space has been allowed between all retained trees and the proposed development works. Consequently the proposal shall not result in increased pressure to remove or prune any of the retained trees.

8.15 Summary.

8.15.1. In order to facilitate the outline proposals some self-set natural regeneration within the site will require removal and boundary tree safety works should be actioned.

8.15.2. The site is generally populated by low arboricultural value trees but collectively they offer useful conservation and landscape value.

8.15.3. The project provides an opportunity to improve the tree population through thinning and restructuring and arboricultural advice, consultancy and support will be key to ensuring the higher quality stems are retained.



9. Limitations

- 9.1 ROAVR Environmental has prepared this Report for the sole use of the above named Client/Agent in accordance with our terms of business, under which our services were performed. No other warranty, expressed or implied, is made as to the professional advice included in this Report or any other services provided by us.
- 9.2 This Report may not be relied upon by any other party without the prior and express written agreement of ROAVR Environmental. The assessments made assume that the land use will continue for their current purpose without significant change. ROAVR Environmental has not independently verified information obtained from third parties.
- 9.3 This report, video walkthrough, data tables and raw data remain the copyright of ROAVR until such time as any monies owed are settled in full and the report may be withdrawn at any time.

Should you require any further information, please do not hesitate to contact us at any time.

Mr. M Harmsworth tech.arbor.a, DipRS
Consultant Arborist

Matt Harmsworth



Prepared by: Matthew Harmsworth.
Checked by: Jill Taylor



Appendix 1: BS 5837: 2012 – Guidance Notes

This Standard prescribes the principles to be applied to achieve a satisfactory juxtaposition of trees and structures. It sets out to assist those concerned with trees in relation to design, demolition and construction to form balanced judgements.

It acknowledges the positive contribution trees may offer to a site, as well as the negative aspects of retaining inappropriate trees. It addresses the negative impacts that construction activity may have upon trees and offers mitigation strategies to minimise these impacts.

The Standard suggests a three stage approach to ensure best practice is followed when developing close to trees:

A1.1 Stage 1: Survey Details and Notes

A ground level visual survey was undertaken. No climbed inspections or specialist decay detection were undertaken. Only trees with a stem diameter over 75mm, which lie within the site boundary or relatively close to it, were included.

Where applicable, trees with significant defects have been highlighted and appropriate remedial works have been recommended. However, this report should not be seen as a substitute for a full Safety Survey or Management Plan which are specifically designed to minimise risk and liability associated with responsibility for trees.

Wherever practicable dimensions were obtained using diameter tapes, logger's tapes, distometers and clinometers. Where obstacles prevent accurate measurement, dimensions are estimated. Trees on privately owned third parties are surveyed from the best available vantage point and observations relating to the condition of these trees should be treated accordingly. All height measurements should be regarded as approximate.



Appendix 2: Survey Methodology

Ground level visual surveys are carried out using the Visual Tree Assessment technique described by Mattheck and Broeler (1994) and endorsed by the Arboricultural Association (LANTRA Professional Tree Inspection course, 2007).

Structural condition is assessed by inspecting the stem and scaffold branches from all angles looking for weak branch junctions or symptoms of decay. Particular attention is paid to the stem- base. Cavities are explored using a metal probe in order to assess the extent of any decay. If this is not possible further inspection is recommended in the form of a climbed inspection or using specialist decay detection equipment.

The physiological condition is assessed by inspecting the stem, branches and foliage for symptoms of disease. The overall vigour of the tree is also taken into account.

Where significant defects are observed, recommendations are made according to a scale of priority in order to reduce the likelihood of structural failure. The position of the tree and its potential targets are taken into account.

Measurements are obtained using a diameter tape, clinometer, distometer and loggers tape.

Where this is not practical measurements are estimated.

Some trees are surveyed as groups, though this is usually avoided close to areas likely to be developed.



Appendix 3: Site Location

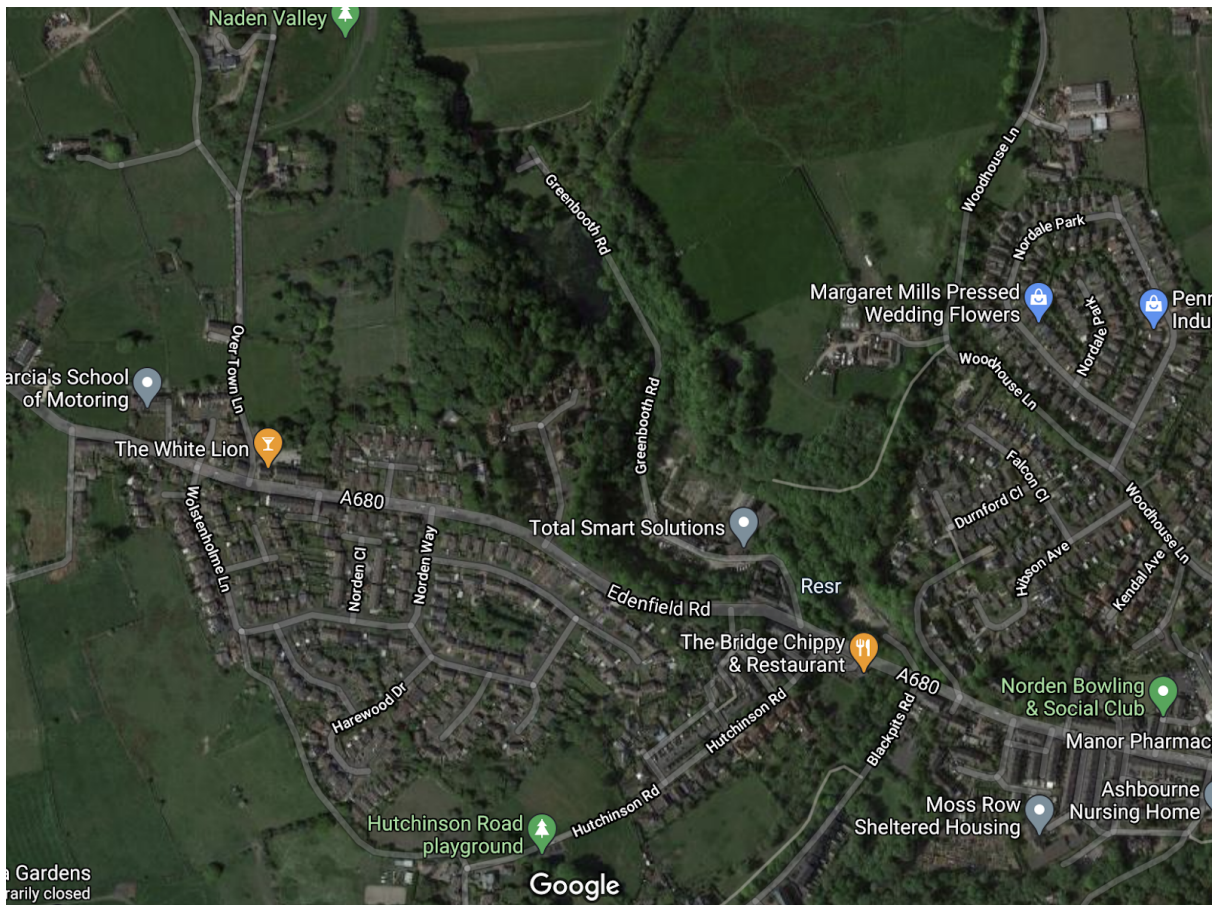


Image plate showing satellite mapping of the surveyed plot and surrounding area.



Appendix 4: Arboricultural Data Tables

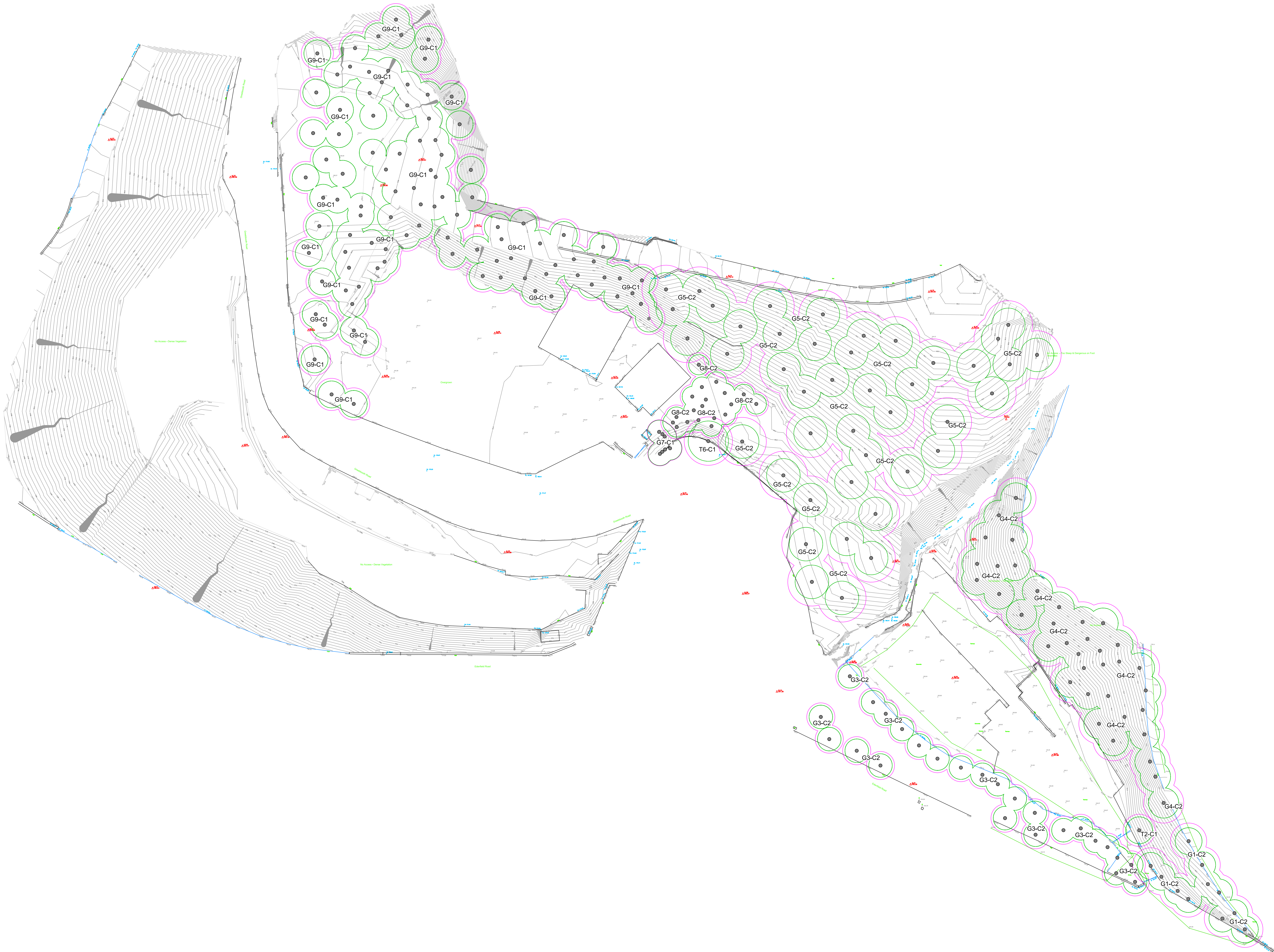
Tree Number	Species	Age Class	DBH	Height (crown height)	N	E	S	W	Condition	Life Expectancy	Physical Description	Comments	Management Recommendations	RPA offset from stem.	Category Rating
G1	<i>Acer pseudoplatanus</i> (Sycamore)	M	450	12(4)	4	4	4	4	Fair	10+	Poor shape & form. Declining. Tree located within hard surface area. Tree located within raised bed. Part of linear group. Leaning North-East. Leaning North-West. Leaning South-East. Leaning South-West. Epicormics on stem. Mechanical Damage. Low branches over road/footpath. Branches restricting highway light. Branches encroaching upon building.	Located at the entrance of site on a raised bank. Woodland feature.	Thin to best stems and crown reduction to improve light availability. Crown raise to clear road. Remove epicormic growth.	5.4	C2
T2	<i>Fraxinus excelsior</i> (Ash)	M	400	8(2)	4	4	4	4	Fair	10+	Poor shape & form. Tree located within hard surface area. Tree located within raised bed. Epicormics on stem. Mechanical Damage.	Located at the entrance of site on a raised bank. Woodland feature.	Inspect annually.	4.8	C1
G3	<i>Alnus glutinosa</i> (Common Alder), <i>Acer pseudoplatanus</i> (Sycamore), <i>Fraxinus excelsior</i> (Ash), <i>Fagus sylvatica</i> (Beech), <i>Quercus robur</i> (Common Oak)	EM	350	10(2)	3.5	3.5	3.5	3.5	Fair	10+	Poor shape & form. Declining. Tree located within hard surface area. Part of linear group. Ivy on tree. Unable to inspect stem due to undergrowth. Epicormics on stem. Stem divides at ground level. Stem divides below 1.5 m. Stem divides above 1.5m. Multiple stems at ground level. Multiple stems below 1.5m. Multiple stems above 1.5m. Mechanical Damage. Broken branches in crown. Low branches over road/footpath.	G3 follows main road down towards site B. Mixed woodland feature. Located on a steep bank.	Thin to best stems. Crown raise to clear road. Crown clean to remove major deadwood. Remove ivy.	4.2	C2
G4	<i>Acer pseudoplatanus</i> (Sycamore), <i>Fraxinus excelsior</i> (Ash), <i>Quercus robur</i> (Common Oak), <i>Fagus sylvatica</i> (Beech)	M	500	15(3)	4.5	4.5	4.5	4.5	Fair	10+	Poor shape & form. Tree located within raised bed. Part of linear group. Ivy on tree. Unable to inspect stem due to undergrowth. Mechanical Damage. Broken branches in crown.	Located on a raised bank. Woodland feature.	Thin to best stems. Crown clean to remove major deadwood. Remove ivy.	6	C2
G5	<i>Acer pseudoplatanus</i> (Sycamore), <i>Alnus glutinosa</i> (Common Alder), <i>Fraxinus excelsior</i> (Ash), <i>Quercus robur</i> (Common Oak), <i>Fagus sylvatica</i> (Beech), <i>Fagus sylvatica</i> 'Purpurea' (Copper Beech)	M	600	13(2)	5	5	5	5	Fair	10+	Poor shape & form. Declining. Tree located within raised bed. Part of linear group. Major bark wounding on stem. Epicormics on stem. Stem divides below 1.5m. Stem divides above 1.5m. Multiple stems below 1.5m. Multiple stems above 1.5m. Mechanical Damage. Broken branches in crown. Low branches over road/footpath.	Woodland feature located between sites A and B. Growing on a raised bank. Central verge.	This to best stems. Crown raise to clear road. Crown clean to remove major deadwood. Remove epicormic growth.	7.2	C2

Tree Number	Species	Age Class	DBH	Height (crown height)	N	E	S	W	Condition	Life Expectancy	Physical Description	Comments	Managment Recommendations	RPA offset from stem.	Category Rating
T6	<i>Acer pseudoplatanus</i> (Sycamore)	M	600	12(3)	6	6	6	6	Fair	10+	Tree located within hard surface area. Part of linear group. Epicormics on stem. Mechanical Damage. Broken branches in crown. Low branches over road/footpath.	Located at the entrance of site B. Dropped down onto bankment. Hard surface paving within the trees RPA.	Crown clean to remove major deadwood. Crown raise to clear road. Remove epicormic growth.	7.2	C1
G7	<i>Acer pseudoplatanus</i> (Sycamore)	EM	300	10(2)	3.5	3.5	3.5	3.5	Fair	10+	Poor shape & form. Declining. Tree located within hard surface area. Mechanical Damage. Low branches over road/footpath. Branches encroaching upon building.	Located at the entrance of site B. Growing from brick wall. Self-set. Limited long-term prospects due to location.	Consider removing.	3.6	C1
G8	<i>Fraxinus excelsior</i> (Ash), <i>Acer pseudoplatanus</i> (Sycamore), <i>Quercus robur</i> (Common Oak), <i>Alnus glutinosa</i> (Common Alder)	EM	300	11(2)	3	3	3	3	Fair	10+	Poor shape & form. Declining. Part of linear group. Mechanical Damage. Broken branches in crown. Major deadwood in crown.	Boundary feature of site B and the river. Mixed woodland.	Thin to best stems. Crown clean to remove major deadwood.	3.6	C2
G9	<i>Acer pseudoplatanus</i> (Sycamore), <i>Alnus glutinosa</i> (Common Alder), <i>Fraxinus excelsior</i> (Ash), <i>Quercus robur</i> (Common Oak), <i>Fagus sylvatica</i> (Beech), <i>Fagus sylvatica</i> 'Purpurea' (Copper Beech)	M	400	12(2)	4	4	4	4	Fair	10+	Poor shape & form. Part of linear group. Leaning North-East. Leaning North-West. Leaning South-East. Leaning South-West. Ivy on tree. Epicormics on stem. Stem divides below 1.5m. Stem divides above 1.5 m. Multiple stems at ground level. Multiple stems below 1.5m. Multiple stems above 1.5m. Mechanical Damage. Broken branches in crown.	Boundary feature of site B. Mixed woodland.	Thin to best stems. Crown clean to remove major deadwood. Remove ivy and epicormic growth.	4.8	C2

Arboricultural Data Tables Terms

Tree Number	Reference number (T1, T2 etc for trees / G1, G2 etc for tree groups / H1, H2 etc for hedgerows)
Species	Common name
Height	Height of tree to the nearest metre
DBH	Diameter of stem (mm) at breast height (1.5 metres above ground)
RPA radius (m)	The radial measurement of the Root Protection Area in metres indicating the minimum distance from the centre of the trees stem to the recommended position of the protective (Heras) fencing.
RPA (m2)	The Root Protection Area, measured in square metres. This measurement is directly proportional to and calculated from the trees DBH measurement as specified in section 4.6 of BS 5837 (2012) Trees in relation to design, demolition and construction – Recommendations.
Crown Spread	The maximum spread of the trees canopy measured from the stem in four directions (North, East, South, West)
Age class	The estimated age class of the tree (relative to species) ○ Y - Young ○ SM - Semi-mature ○ EM - Early-mature ○ M - Mature ○ LM - Late-mature
Comments	A brief description of the tree which refers to tree form, condition, health and significant defects. Comments regarding environmental conditions affecting the tree (e.g. ground conditions) will also be included where relevant.
Preliminary management recommendations	Recommendations (made with respect to the development proposals if available) for removal, retention and/or remedial arboricultural works.
Estimated remaining years	Estimated safe, usable life expectancy
Category grade	Tree categorisation based on section 4.5 of BS 5837 (2012) Trees in relation to design, demolition and construction – Recommendations. Four categories are used (A, B, C, U) with categories A, B & C being assigned one of three separate sub categories (1, 2 or 3): A – Trees of high quality with an estimated remaining life expectancy of at least 40 years. B – Trees of moderate quality with an estimated remaining life expectancy of at least 20 years. C – Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm Subcategories: 1: Mainly arboricultural & aesthetic qualities 2: Mainly landscape qualities 3: Mainly cultural values, including conservation U – 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

General Notes
Do not scale off drawing - refer to the tree data schedule for accurate crown spread measurements.
Depictions of tree canopies are based on measurements taken to four cardinal compass points.
No liability of any kind is accepted for any omissions or inaccuracies in respect of this plan.
The original of this drawing was produced in colour – a monochrome copy should not be relied upon.
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Tree Constraints Plan
showing existing layout with
tree categories and root
protection zones.

Key

- Category A**
Trees of high quality with an estimated remaining life expectancy of at least 40 years
- Category B**
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years
- 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
- Category U**
Trees in such a condition that they cannot reliably be retained as living trees in the context of the current land use for longer than 10 years
- BS 5837:2012 Road Protection Area**
Note: The RPA limits for some groups may be represented by a dashed/dotted category coloured line
- Tree**
Showing Canopy extent, category colour, tag number (with category) and optional orientation arrow showing bearing of first significant branch

Tree/Group/Hedge numbering: 1-9.



ROAVR Environmental
Finglack Farmhouse, Clava, IV2 5EN.
Office: 0845 265 8307
Mobile: 07545 255827
environmental@roavr.co.uk
www.roavr-environmental.co.uk

Client
Martin Hall

Project
Edenfield Road.

Drawing Title
Tree Constraints Plan

Scale
1:400@A0

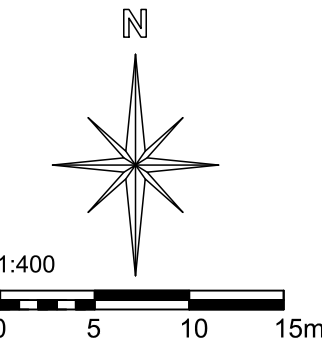
Date
Dec 2020

DR
CS

CA
MH

Drawing Number
20_5837_11_35

Rev
1



GROSS SITE AREA:	6.56 Acres
LANDSCAPED/UNDEVELOPABLE AREAS:	1.93 Acres
NETT SITE AREA:	4.63 Acres
GROSS DENSITY:	8.54 Units/Acre
NETT DENSITY:	12.10 Units/Acre
TOTAL FOOTAGE:	65571 Sqft
GROSS FOOTAGE:	9996 Sqft/Acre
NETT FOOTAGE:	14162 Sqft/Acre



eccleston
HOMES

DRAWING TITLE

PLANNING LAYOUT

JOB NUMBER			-	REV
DRAWING NUMBER			102	-
DRAWN	JSM	09.12.19	SCALE	A1
CHECKED	-	-	1:500	