BS 5837:2012 Arboricultural Survey

Wood Walk, Hoyland, Barnsley

Presented to **Yelcon Ltd.**

Issued: July 2021

Delta-Simons Project No. 16-0406.06

deltasimons

Delta-Simons Environmental Consultants Limited
Head Office: 3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR
Tel: 01522 882555 | www.deltasimons.com

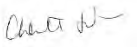
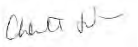
recycle

INOGEN® ALLIANCE

Report Details

Client	Yelcon Ltd.
Report Title	BS 5837:2012 Arboricultural Survey - DRAFT
Site Address	Wood Walk, Hoyland, Barnsley
Project No.	16-0406.06
Delta-Simons Contact	Pete Morrell (pete.morrell@deltasimons.com)

Quality Assurance

Issue No.	Status	Issue Date	Comments	Author	Technical Review	Authorised
2	Final	15th July 2021				
				Pete Morrell Principal Arboriculturist	**Charlotte Sanderson-Lewis Associate and Ecology Team Leader**	**Charlotte Sanderson-Lewis Associate and Ecology Team Leader**

About us

Delta-Simons is a trusted, multidisciplinary environmental consultancy, focused on delivering the best possible project outcomes for customers.

Specialising in Environment, Health & Safety and Sustainability, Delta-Simons provide support and advice within the property development, asset management, corporate and industrial markets. Operating from across the UK we employ over 120 environmental professionals, bringing experience from across the private consultancy and public sector markets.

Delta-Simons is proud to be a founder member of the Inogen Environmental Alliance, enabling us to efficiently deliver customer projects worldwide by calling upon over 5000 resources in our global network of consultants, each committed to providing superior EH&S and sustainability consulting expertise to our customers. Inogen Environmental Alliance offers its clients more consultants, with more services in more countries than the traditional multinational consultancy.

Delta-Simons is a '***Beyond Net-Zero'*** company. We have set a Science-Based Target to reduce our Scope 1 and Scope 2 carbon emissions in line with the Paris Agreement and are committed to reducing Scope 3 emissions from our supply chain. Every year we offset our residual emissions by 150% through verified carbon removal projects linked to the UN Sustainable Development Goals. Therefore, our consultancy services to you are carbon positive.

If you would like support in calculating your carbon footprint and playing your part in tackling the global climate crisis, please get in touch with your Delta-Simons contact above who will be happy to help.

Executive Summary

Purpose	Delta-Simons Environmental Consultants Ltd was instructed by Yelcon Ltd. ('the Client'), to undertake a Tree and Hedgerow Survey to BS 5837:2012 standard of an area of land north of Wood Walk, in Hoyland, Barnsley ('the Site'). The survey was undertaken on 24th June 2021. The survey was undertaken to inform a planning application for the Site.
Current Site Status	The Site comprises an arable field, left fallow, with improved grassland margins, and boundary hedgerows and lengths of fencing. There were two mature broadleaved trees in the southern area of the Site. A plantation broadleaved woodland and dense scrub defined the eastern extent of the Site, with a clearing with apiaries accessed along an improved grassland track with ruderals on either side.
Proposed Development	It is understood that the proposed development will comprise the construction of 84 residential houses and associated infrastructure at the Site. All trees within the Site are to be retained, though management works may be required.
Results	A total of two trees, four tree groups and a shrub group were identified and assessed as part of the Tree Survey. The results of the desk search undertaken on Barnsley Metropolitan Borough Council website on 29/06/21, indicate that no trees on-Site or immediately adjacent are covered by Tree Preservation Orders (TPOs), or lie within a Conservation Area (CA). A total of six hedgerows were recorded on-Site and surveyed. Four were found to be species-poor and intact, and the other two were recorded to be species-poor and defunct, and none were assessed to be 'Important' under the Hedgerow Regulations (1997) criteria.
Recommendations	<u>Recommendation 1 (Adequate Tree Protection)</u> Those trees identified within the proposed development plan for retention will need to be adequately protected during any construction works. Measures to protect trees should follow the best practice principles set out in BS 5837: Trees in Relation to Design, Development and Construction (2012). Prior to any construction or development work proceeding, the Root Protection Area (RPA) of individual trees to be retained should be marked out. Marking out should be completed by a competent person with arboricultural expertise. All trees that could be impacted should be protected by barriers or ground protection around the calculated RPA, and as indicated on the Tree Constraints Plan (TCP) produced in association with this Assessment. <u>Recommendation 2 - BRP Tree</u> Low BRP Tree ▲ Any proposed felling or management works to the tree (Tree 6), assessed as having low BRP should be completed under a method statement which could include a single dawn survey completed during the active bat season (April-October, inclusive) on the morning prior to the works being undertaken; or ▲ Alternatively, a licenced bat ecologist trained to use specialist tree climbing equipment could undertake a thorough inspection of the potential roost features immediately prior to works commencing.
This Tree Survey Executive Summary is intended as a summary of the assessment of the Site based on information received by Delta-Simons at the time of production. This Executive Summary should be read in conjunction with the full Report.	

Table of Contents

1.0 INTRODUCTION 1
1.1 Purpose and Scope of the Survey 1
1.2 Site Description 1
1.3 Proposed Development 1
2.0 LEGISLATION 2
2.1 Trees 2
3.0 METHODOLOGY 3
3.1 Trees 3
3.2 Tree Plans and Tree Schedules 5
3.3 Root Protection Area 5
4.0 RESULTS 7
4.1 Data Search 7
4.2 Survey Details 7
4.3 Semi-mature and Young Trees 7
4.3.1 Species and their Arrangement in the Landscape 7
4.3.2 Height and Significance in the Landscape 7
4.3.3 Age and Condition 7
4.3.4 Environmental Condition 8
4.4 Tree Schedule 8
4.5 Hedgerows 10
4.5.1 Hedgerow H1 10
4.5.2 Hedgerow H2 10
4.5.3 Hedgerow H3 10
4.5.4 Hedgerow H4 10
4.5.5 Hedgerow H5 10
4.5.6 Hedgerow H6 10
5.0 TREE MANAGEMENT 12
5.1 Arboricultural Assessment 12
5.2 Recommendations 12
6.0 LIMITATIONS OF THE TREE SURVEY 15

Figures

Figure 1 Site Location Map
Figures 2a-b Tree Survey
Figures 3a-b Tree Constraints Plan

Drawings

Drawing 1 00-001 - Site Plan_rev P4

Appendices

Appendix A References
Appendix B Guidance on Assessing the Potential Suitability of Development Sites to Support Bats
Appendix C Site Photographs

1.0 Introduction

1.1 Purpose and Scope of the Survey

Delta-Simons Environmental Consultants Ltd was instructed by Yelcon Ltd (the 'Client') to undertake an Arboricultural Survey to BS 5837:2012 standard. The survey was undertaken of land north of Wood Walk, in Hoyland, Barnsley, West Yorkshire (hereafter referred to as 'the Site'). The survey was undertaken on 24th June 2021. The Site location and the area surveyed are shown in Figure 1. The survey was undertaken to inform a planning application for the Site.

The aims of the Tree Survey were to:

- Identify the individual tree species present at the Site by means of visual inspection;
- To define the approximate age, condition and canopy spread of all individual mature trees identified and the value of these within the development;
- To identify any trees that present a risk to existing or proposed foundations or other structures that may be constructed on the Site and recommend actions to remove this risk; and
- Recommend tree management or mitigation measures where appropriate.

1.2 Site Description

The Site is centred at Ordnance Survey (OS) grid reference SE 37360 01717, to the north of Wood Walk, in Hoyland, Barnsley. The Site covers an area of 3.6 ha hectares (ha) and comprises an arable field, left fallow, with improved grassland margins, and boundary hedgerows and lengths of fencing. There were two mature broadleaved trees in the southern area of the Site. A plantation broadleaved woodland and dense scrub defined the eastern extent of the Site, with a clearing with apiaries accessed along an improved grassland track with ruderals on either side. The Site did not support standing water at the time of the survey.

The Site is surrounded by a wooded embankment and Dearne Valley Parkway to the north, with the A6195 and agricultural land beyond. Wombell Wood roundabout was located immediately east of the Site with a continuation of Dearne Valley Parkway and a combination of woodland and farmland beyond. Wood Walk bordered the Site to the south, with farmland to the west, and residential housing associated with the village of Hoyland to the south-west of the Site. To the north-west of the Site was a woodland strip with amenity grassland beyond.

The Site layout is shown in Figures 2a-b.

1.3 Proposed Development

It is understood from the drawing provided by Enjoy Design (Drawing 1 - 00-001 - Feasibility_Site Plan_revH) that the proposed development comprises the construction of 84 residential houses and associated infrastructure at the Site.

2.0 Legislation

2.1 Trees

Local planning authorities look upon trees as being highly beneficial to the locality. To ensure that any important specimens, or significant groups of trees are retained, they may place Tree Preservation Orders (TPOs) on them. In other situations, villages or whole districts may be classified as conservation areas. In these instances, certain trees in the designated area will be protected. When trees are protected, legal procedures must be followed before any work is carried out.

When trees are protected by Preservation Orders, no work should be carried out on them without prior written consent from the Local Planning Authority (LPA). Once an application is made, the Authority personnel must inspect the trees, and make a decision within a statutory eight-week period as to whether work can go ahead. If no decision is made within the eight weeks period, the appellant can appeal for non-determination. If the Local Authority (LA) refuses the application the appellant still has the right to appeal.

If a tree protected by a Preservation Order is either killed or wilfully destroyed, the owners of the tree, and the contractor who did the work, can both be prosecuted. The fines for killing or wilfully destroying a tree can be high, i.e. the current maximum is £20,000 per tree, and there is an automatic requirement to re-plant. The current maximum for minor unlawful infringements, such as pruning, is £2,500.

Trees which are dead, dying, or dangerous are exempt from the legislation, although if such trees are removed, the onus on proving they fell into one of these categories lies with the tree owner. Whenever possible it is strongly recommended that the LA be given at least five days' notice before any work on such trees is carried out.

Trees in a conservation area that are already protected by a TPO are subject to the normal procedures and controls for any tree covered by such an Order.

Trees in a conservation area that are not protected by a TPO are protected by the provision in Section 211 of The Town and Country Planning Act (1990). These provisions require people to notify the LPA, using a 'section 211 notice', six weeks before carrying out certain works on such trees, unless an exception applies. The works may go ahead before the end of the six-week period if the LPA gives consent. This notice period gives the Authority an opportunity to consider whether to make an Order on the tree.

2.2 Hedgerows

The Hedgerows Regulations 1997 applies to any hedgerow which has a continuous length of, or exceeding, 20 m, or is less than 20 m but adjoins another hedgerow at each end. A hedgerow can be categorised as 'important' if it is 30 years old or older and satisfies at least one of the criteria listed in Part II of Schedule 1 of the Regulations. The removal of a hedgerow which is protected under these criteria is prohibited without appropriate measures being taken and it is an offence to intentionally or recklessly remove, or cause or permit another person to remove, a hedgerow in contravention of Regulation 5(1) or (9).

3.0 Methodology

The methodology set out below is a detailed summary of the suggested approach to tree assessment as described in British Standard 5837:2012. This Report has applied the methodology to all significant individual trees or groups of trees present at or near to the Site. Trees below 15 cm trunk diameter were generally excluded from the survey. All floral names follow the nomenclature of Stace (2010).

3.1 Trees

Trees have been broadly assessed based on guidance set out within the British Standard BS 5837:2012 Trees in Relation to Design, Development and Construction. This standard provides recommendations and guidance on the principles to be applied to achieve successful integration of development with trees, shrubs and hedgerows. Where development is to occur, the standard provides guidance on the approach needed to decide which trees are appropriate for retention, and the means for protecting these trees during the development (including demolition and construction works) and the means of incorporating trees into the developed landscape.

Trees on or adjacent to the Site have been divided into one of four categories (based on the cascade chart for tree quality assessment). These are classed as A, B, C or U (Section 4 of BS 5837) within Table 1. This gives an indication as to the tree's importance in relation to the Site, the local landscape and, also, the value and quality of the existing trees on-Site. This assists informal decisions concerning which trees should be removed or retained should development occur. For a tree to qualify under any given category it should fall within the scope of that category's definition (see below).

Categories A, B and C cover trees that should be a material consideration in the development process, each with three further sub-categories (i, ii, iii) which are intended to reflect arboricultural, landscape and cultural (nature conservation) values. Category U trees may have no significant landscape value but it is not presumed that there is any overriding need to remove these unless stated otherwise in the description and recommendations. They are for this reason not considered as being significant within the planning process. In assigning trees to the A, B or C categories, the presence of any serious disease or tree–related hazard is taken into account. If the disease is considered fatal and/or irremediable, or likely to require sanitation for the protection of other trees it may be categorised as U with a recommendation for work or even removal, even if they are otherwise of considerable value.

Category (A): Trees whose retention is most desirable and are of high quality and value. These trees are considered to be in such a condition as to be able to make a lasting contribution (a minimum of 40 years) and may comprise:

- Trees which are particularly good examples of their species, especially rare or unusual, or essential components of groups or of formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue);
- Trees, or groups of trees, which provide a definite screening or softening effect to the locality in relation to views into or out of the Site, or those of particular visual importance (e.g. avenues or other arboricultural features assessed as groups); and
- Trees or groups of significant conservation, historical, commemorative or other value (e.g. Veteran or wood-pasture trees).

Category (B): Trees whose retention is considered desirable and are of moderate quality and value. These trees are considered to be in such a condition as to make a significant contribution (a minimum of 20 years) and may comprise:

- Trees that might be included in the high category but because of their numbers or slightly impaired condition (e.g. presence of remediable defects including unsympathetic past management and minor storm damage), are downgraded in favour of the best individuals;
- Trees present in numbers such that they form distinct landscape features and attract a higher collective rating than they would as individuals. Individually these trees are not essential components of formal or

semi-formal arboricultural features, or trees situated mainly internally to the Site and have little visual impact beyond the Site; and

- Trees with clearly identifiable conservation or other cultural benefits.

Category (C): Trees that could be retained but are considered to be of low quality and value. These trees are in an adequate condition to remain until new planting could be established (a minimum of ten years) or are young trees with a stem diameter below 150 mm and may comprise:

- Trees not qualifying in higher categories;
- Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value and or trees offering low or only temporary screening benefit; and
- Trees with very limited conservation or other cultural benefits.

Category (U): Trees that are considered to have no significant landscape value but it is not presumed that there is any overriding need to remove these unless stated otherwise in the description and recommendations. They are for this reason not considered as being significant within the planning process. These trees will be in such a condition that any existing value would be lost within 10 years and which should in the current context be ignored or removed for reasons of sound arboricultural management. Trees within this category are:

- 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 category U trees;
- Trees that are dead or are showing signs of significant, immediate or irreversible overall decline; and
- 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.

Species have been recorded by common and scientific name. Height has been estimated in metres and stem diameter measured in centimetres unless impractical, taken at a height of 1.5 m from the base of the tree.

In the assessment particular consideration has been given to:

- The health, vigour and condition of each tree;
- The presence of any structural defects in each tree and its life expectancy;
- The size and form of each tree and its suitability within the context of the proposed scheme; and
- The location of each tree relative to existing Site features, e.g. its value as a screen or as a skyline feature.

Age class is assessed according to the age class categories referred to in BS 5837.

- Y: Young trees age less than 1/3 life expectancy;
- SM: Middle age trees 1/3 – 2/3 life expectancy;
- M: Mature trees over 2/3 life expectancy; and
- OM: Over mature – declining or moribund trees of low vigour.

The overall condition of any individual tree, or group of trees, has been referred to using one of the definitions listed below. A more detailed description of condition has been noted in the Tree Schedule:

- G **Good:** A sound tree or trees needing little, if any, attention;
- F **Fair:** A tree or trees with minor but rectifiable defects or in the early stages of stress, from which it may recover;
- P **Poor:** A tree or trees with major structural and physiological defects or stressed such that it would be very expensive and inappropriate to retain; and
- D **Dead:** A tree or trees no longer alive. However, this could also apply to those trees that are dying and will be unlikely to recover, or are becoming or have become dangerous.

Major defects or diseases and relevant observations have also been recorded. Dead wood has been defined as the following:

Twigs and small branch material	-	Up to 5 cm in diameter.
Minor dead wood	-	5 cm to 10 cm in diameter.
Major dead wood	-	10 cm in diameter and above.

The survey was completed from ground level only. Aerial inspections were not undertaken. Evaluations of tree conditions given within this assessment apply to the date of survey and cannot be assumed to remain unchanged, and it may be necessary to review these within 24 months, in accordance with good arboricultural practice.

3.2 Potential for Protected Species

Potential bat roost locations are described within this Report using the methodology as that recommended by the Bat Conservation Trust (BCT), see Collins J. (ed) (2016) in references (Appendix A). Each tree of significant size assessed within this survey has also been assessed for the potential to provide roosts for bats and the table in Appendix B includes reference to this.

3.2 Tree Plans and Tree Schedules

The extent and positions of significant individual trees or groups of trees close to the Site are shown on the Arboricultural Survey Plan (Figures 2a-b). The Root Protection Areas (RPA) of the key trees of value identified for, or recommended for, retention have been marked within the Constraints Plan (Figures 3a-b) using the RPAs provided in the Tree Schedule within Table 1.

A summary that includes the trees identified on or near to the Site is included in the Tree Assessment Report detailing information on each group of trees. This is also provided in Table 1. Within the summary table maximum RPAs (m^2) for estimated tree diameters have been included where appropriate, as well as a calculated corresponding radius of the circle for that RPA. The RPAs are formulated as described below and assist when designing layouts in relation to trees.

3.3 Root Protection Area

Below ground constraints to development are represented by the root plate around a tree, which needs protecting in order for the tree to be incorporated into a proposed scheme without adverse harm to the tree or structural integrity of any proposed foundation structures.

This area is illustrated by the RPA and is calculated according to the formula set out in BS 5837:(2012). This area is equivalent to a circle with a radius 12 x the stem diameter for single stem trees or the basal diameter for trees with more than one stem arising less than 1.5 m above ground level.

RPA (m^2) = (stem diameter (mm) x 12/1000) ^{2} x 3.142

This figure should be capped to 707 m^2, that is, equivalent to a circle with a radius of 15 m, or a square with approximately 26 m sides

Taken from Table 2: Calculating the RPA, BS 5837 (2005).

3.5 Hedgerows

An assessment of any hedgerows present at the Site, which may be adversely affected by the proposed development, was undertaken using the standard hedgerow surveying methodology outlined in the Hedgerow Regulations 1997. The purpose of the assessment was to ascertain whether the hedgerows are classified as 'nationally important' and, therefore, protected under the Hedgerow Regulations 1997. The assessment involves a scoring system which relies on particular features, number of woody and floral species present within the hedgerow habitat, and the age of the hedgerow.

The following hedgerow features were recorded:

- A bank or wall supporting the hedgerow for at least half its length;
- Gaps in the hedgerow not exceeding 10% of its length;
- An average of at least one standard tree per 50 m of hedgerow;
- The number of woodland plant species (as defined);
- A ditch along at least half the hedgerow;
- Connections (as defined by the Regulations) scoring four points or more; and
- A parallel hedge within 15 m of the hedgerow.

An assessment of a 30 m section was undertaken per 100 m of hedgerow length, which involved recording the number of woody species present. Where two or more sections of each hedgerow were surveyed, the average number of the species was calculated.

3.6 Limitations of the Survey

There were no limitations to the survey in terms of timing and weather conditions. Where access to trees within off-Site land was not possible approximations of the dimensions of the trees were made, including of the stem diameter at breast height. As most trees were clearly visible from the Site this is not anticipated to be detrimental to the survey.

4.0 Results

4.1 Data Search

The results of the desk search undertaken on Barnsley Metropolitan Borough Council website on 29/06/21, indicate that no trees on-Site or immediately adjacent are covered by Tree Preservation Orders (TPOs), or lie within a Conservation Area (CA).

4.2 Survey Details

The tree inspection took the form of a walkover inspection completed by Peter Morrell TechArborA on 24th June 2021. Each individual semi-mature or young tree of significance that could be impacted upon by any proposed development was identified and visually inspected and classified. The trees identified during the survey at the Site have been individually noted and identified within this Report and are shown in the Tree Survey Plan within Figures 2a-b, and within the Photograph Section of this Report (Appendix B).

4.3 Semi-mature and Young Trees

A total of two trees and four tree groups, together with a single scrub group, have been identified and assessed as part of the tree survey. All but the two individual trees, a tree group and a section of the scrub group were within the Site boundary, with the remainder of tree groups located immediately beyond the boundary, supporting canopies that extend into the Site.

4.3.1 Species and their Arrangement in the Landscape

There are a range of tree species on and adjacent to the Site, with no dominant species. Sycamore *Acer pseudoplatanus*, hazel *Corylus avellana*, cherry *Prunus* sp., field maple *Acer campestre*, silver birch *Betula pendula*, grey poplar *Populus* × *canescens*, blackthorn *Prunus spinosa*, dogwood *Cornus sanguinea*, ash *Fraxinus excelsior,* goat willow *Salix caprea,* osier *Salix viminalis* and hawthorn *Crataegus monogyna* are present in multiple numbers.

The distribution of the trees at the Site is limited to being randomly dispersed on and inside the southern boundary, with a tree group and scrub group present at the eastern extent. Linear groups are present off-Site along the northern, eastern and western boundaries of the Site.

4.3.2 Height and Significance in the Landscape

The tallest tree within the Site, T1, standing at a height of 18 m on the south-eastern boundary of the Site, is highly visible from Wood Walk. Standing at a slightly lesser height of 17 m and set back from the southern boundary, T6 is also prominent, though its contribution to the wider landscape is limited due to adjacent hedgerows. Both have been placed within Category B (Table 1).

Similarly, TG2, TG3, TG4 and TG5 that stand on and adjacent to the eastern , northern and western boundaries respectively, at heights of up to 12 m are in elevated positions in comparison to the surrounding land and are prominent when viewed from adjacent roads, but have restricted views within the wider area. The aforementioned tree groups fall within Category B and form screening to the Site.

The scrub group present on-Site while prominent within the Site, has limited visibility in the wider landscape, due to low height together with the contours of the land. As such, this group have been placed within Category C.

Any trees retained will require protection measures to ensure no impact occurs as a result of any development.

4.3.3 Age and Condition

The trees present within the Site range between young and semi-mature, with the two individual trees being semi-mature. Both T1 and T6 display signs of historic crown lifting, while T1 also appears to be crown reduced over Wood Walk. Trees within TG4 that stand below power lines appear to have been reduced in height. No further evidence of past management was noted. All on-Site trees appear to be in fair condition, with the

exception of the ash trees within TG4 and TG5 with several trees dead or displaying signs of ash dieback *Hymenoscyphus fraxineus*. Trees towards the centre of TG2 and TG5 display phototropic growth.

4.3.4 Environmental Condition

Given the Site's former agricultural use and the young age of the majority of the trees, it is surmised that limited damage to the root system of on-Site trees has been sustained through any recent on-Site working practices, with the majority trees standing at the boundaries of the previously worked field. However, where the root system of T1 and T6 extends into previously ploughed land it can be assumed roots within the upper soil horizon have been impacted and that the soil has been compacted to some degree.

The trees on, and immediately adjacent to, the Site are in an exposed position from prevailing winds however, there is no evidence this has impacted the shape or structure of the trees with the exception of a ripped-out limb on T6.

Groundwater conditions are not assessed to be a significant factor in the present or future growth or health of trees since the generally flat areas of the Site, where trees are present to be well drained and this situation will probably improve further following completion of any development.

4.3.5 Bat Roost Potential

A single tree (T6) was assessed as offering Low BRP. The tree appeared to be in generally in good condition; however, broken limbs and rot holes were noted on the southern aspect of the main trunk, at a height of approximately 4 m.

4.4 Tree Schedule

Table 1 – BS 5837:2012 Tree Schedule

	Tree Species		Measurements				Crown (m)					Tree Condition								Management
Tree Number	Common Name	Latin Name	Maturity	Height (m)	Stems	Stem Diameter (mm)	Average Height	N	E	S	W	Roots	Stem	Crown	Comments	Structural	Life Expectancy (yrs)	Category	RPA (m)	Works
T1	Sycamore	*Acer pseudoplatanus*	S M	18	1	Est 850	4	8	8	8	8	No visual defects	Single stem. Vertical	Rounded canopy. Historic lifting to 4 m and reduction to the south over road. Scattered deadwood.		F	>40	B 2	10.2	
TG2	Hazel Cherry Field maple	*Corylus avellana* *Prunus* sp. *Acer campestre*	Y	Av 12	S / M S	Av 150	0	4	4	4	4	No visual defects	Single and multiple stems from base. Vertical	Dense rounded canopies that read as one.	Spreading scrub group	F	>40	B 2	1.8	Consider selective thinning
TG3	Silver birch	*Betula pendula*	Y	Av 12	1	Av 150	0	4	4	4	4	No visual defects	Single stem. Vertical	Rounded open canopies.	Linear group on embankment	F	20 - 40	B 2	1.8	
TG4	Osier Silver birch Hawthorn Goat willow Field maple Grey poplar Ash	*Salix viminalis* *Betula pendula* *Crataegus monogyna* *Salix caprea* *Acer campestre* *Populus × canescens* *Fraxinus excelsior*	Y	Av 6	S / M S	Av 150	0	3	3	3	3	No visual defects	Single and multiple stems from base. Vertical	Dense rounded canopies that read as one. Reduced under powerlines.	Phototropic growth towards centre of group. Ash displaying ash dieback	F / P	20 - 40	B 2	1.8	Consider selective thinning.
TG5	Field maple Grey poplar Ash Sycamore	*Acer campestre* *Populus × canescens* *Fraxinus excelsior* *Acer pseudoplatanus*	Y	Av 12	1	Av 200	3	4	4	4	4	No visual defects	Single and multiple stems from base. Vertical	Dense rounded canopies that read as one.	Phototropic growth towards centre of group. Ash displaying ash dieback	F / P	20 - 40	B 2	2.4	
T6	Ash	*Fraxinus excelsior*	S M	17	1	800	4	7	7	9	7	No visual defects	Single stem. Vertical	Rounded canopy. Historic lifting to 4 m. Scattered deadwood.	Rot holes and splits. Low BRP	F	>40	B 2	9.6	
SG1	Blackthorn Dogwood Osier	*Prunus spinosa* *Salix viminalis*	Y	Av 5	M S	Av 3 x 100	0	2	2	2	2	No visual defects	Single and multiple stems, Vertical	Rounded canopies that read as one.	Spreading scrub group	F	>20 - 40	C 2	2.1	

Table 2 – Key to Tree Schedule

Measurements	Age – Class	Overall Condition	BS 5837 2005 : Cascade Chart for Quality Assessment/Retention Category	Symbols:
MS – Multi-stemmed	Y - Young	G – Good	A – High	**<** = less than
Ht - Height in metres	SM – Semi-Mature	F – Fair	B – Moderate	**~** = approximately
Stem – Stem Diameter at 1.5m in mm	EM – Early-mature	P – Poor	C – Low	**>** = greater than
Crown – Crown spread in metres	M – Mature	D – Dead	R – Trees for Removal	
TD - Trunk division (height in metres)	V - Veteran **Est Yrs –** estimate of years remaining (>40 years; 20 –40 years; <20 years)		**Sub-categories:** **1** = mainly arboricultural values **2** = mainly landscape values **3** = mainly cultural values.	
RPA = Root Protection Area (equivalent to a circle with a radius 12 x the stem diameter for single stem trees and 10 x the basal diameter for trees with more than one stem arising below 1.5m above ground level).				

4.5 Hedgerows

A total of six hedgerows have been identified and assessed as part of the hedgerow survey. They were all assessed against the Hedgerow Regulations (1997), and none were found to support an adequate number of woody species along a 30 m length or to be of an adequate age to be considered an 'Important Hedgerow'.

4.5.1 Hedgerow H1

Hedgerow H1 (Photograph 8), was a short section of intact species-poor hedgerow towards the eastern extent of the southern boundary of the Site, which runs for approximately 47 m. The hedgerow is bounded by Wood Walk to the south, and historical mapping suggests the hedgerow dates back to 1855. Tree 2 is located within the hedgerow, and it was dominated by blackthorn *Prunus spinosa* and hawthorn, osier and with occasion elder *Sambucus nigra*. The hedgerow did not have an associated drain or ditch and was not connected to any other hedgerows, though it has been historically. The hedgerow was not assessed to be an important hedgerow ecologically. The height of the hedgerow was 3 m with a maximum width of 3 m. The hedge was young and unmanaged.

4.5.2 Hedgerow H2

Hedgerow H2 (Photograph 9), was an intact-species poor hedgerow that defined the northern boundary of the Site and was contiguous with a post and rail fence, which runs for 250 m across the northern boundary of the Site. The hedgerow was bounded by dense scrub and a roadside embankment for Dearne Valley Parkway to the north. The hedgerow was assessed as being species-poor, lacking woody species, it was dominated by hawthorn with occasional blackthorn and rarely occurring field maple and hazel, such that there were no more than four woody species along any 30 m length. The hedgerow does not appear on any historic maps before 1998 following the construction of the Dearne Valley Parkway, where it is assumed it was planted on the top of the embankment. The hedgerow did not have an associated drain or ditch and was not connected to any other hedgerows. The hedgerow was not assessed to be an important hedgerow ecologically. The height of the hedgerow was 4 m with a maximum width of 3 m. The hedge was young and unmanaged.

4.5.3 Hedgerow H3

Hedgerow H3 (Photograph 10) defined the western boundary of the Site. It comprised an intact species-poor hedgerow, unmanaged to 3 m high and 3 m wide, comprising hawthorn, field maple and Prunus sp.. Adjacent trees within TG5 over-hung the hedgerow.

4.5.4 Hedgerow H4

Hedgerow H4 (Photograph 11), defined a section of the south-western boundary. It comprised a defunct species-poor hedgerow located on the south-western boundary of the Site, which ran for approximately 64 m. The hedgerow was dominated by hawthorn, ash and elder. The hedgerow appears as a field boundary on maps dating back to 1855. The hedgerow did not have an associated drain or ditch and was not connected to any other hedgerows, though may have historically connected to Hedgerow 4. The hedgerow was not assessed to be an important hedgerow ecologically, stood 7 m high and 4 m wide and was unmanaged.

4.5.5 Hedgerow H5

Hedgerow H5 (Photograph 12), was a short section of defunct species-poor hedgerow in the western extent of the southern boundary of the Site, which runs for approximately 116 m, and includes a 15 m gap which provides access to the Site (Photograph 11). The hedgerow is bounded by Wood Walk to the south, and historical mapping suggests the hedgerow dates back to 1855. The hedgerow appeared unmanaged and was dominated by blackthorn, with frequent bramble and occasional hawthorn and elder. The hedgerow did not have an associated drain or ditch but was attached to Hedgerow 5 and was historically attached to Hedgerow 1. The hedgerow was not assessed to be an important hedgerow ecologically. The hedgerow had a height of 3 m with a maximum width of 3 m.

4.5.6 Hedgerow H6

Hedgerow H6 (Photograph 13), was a short section of intact species-poor hedgerow which protruded into the Site from the southern boundary and was approximately 33 m in length. Historical mapping suggests the hedgerow dates back to at least 1855. Tree 1, a mature ash tree, is located at the northern tip of the hedgerow, which was dominated by hawthorn, with occasional bramble and elder. The hedgerow did not have an

associated drain or ditch but was attached to Hedgerow 4 and was historically attached to Hedgerow 1. The hedgerow was not assessed to be an important hedgerow ecologically. The hedgerow had a height of 1 m and maximum width of 1.5 m. The hedgerow was unmanaged.

5.0 Tree Management

5.1 Arboricultural Assessment

Around the eastern and southern boundaries of the Site are a number of on-Site tree groups and individual trees, together with off-Site tree groups located adjacent to the eastern, western and northern boundaries that could be adversely impacted upon by any proposed development. It should be possible to retain and incorporate the majority of boundary trees and tree groups into the landscaping scheme of the proposals.

Limited previous management has been undertaken to on-Site trees, with the two semi-mature trees present on-Site with historic evidence of crown lifting and reduction. The ash trees present within two tree groups appear to be failing, with several dead and displaying evidence of ash dieback. Trees towards the centre of the groups adjacent to the northern boundary and eastern extent of the Site display phototropic growth. Selective thinning of the on-Site group would improve tree heath and extend its lifespan.

A single tree (T6) was assessed as offering Low BRP. The tree appeared to be in generally in good condition; however, broken limbs and rot holes were noted on the southern aspect of the main trunk.

All trees and tree groups are to be retained in line with Barnsley Metropolitan Council's Local Plan (Site HS69 Land north of Wood Walk, Hoyland Indicative number of dwellings 112**)** which states;

The development will be expected to:

- *Retain the broadleaf plantation in the east of the site and the strip of dense scrub with scattered trees towards the west of the site;*
- *Retain and maintain the large ash tree near the centre of the site; and*
- *Fully evaluate any hedgerows which are proposed for removal against all criteria of the Hedgerows Regulations 1997*

However, thinning of the broadleaf plantation (TG4) should be undertaken extend the useful life expectancy of the group and its general health, while works on the scrub group (SG1) should be undertaken to prevent blackthorn spreading and maintain the groups open appearance.

To ensure that the root areas and canopy extremities of the individual trees and the tree groups that may be retained are not damaged, a Constraints Plan has been prepared to show the locations where protective fencing should be erected for any trees selected for retention (see Figures 3a-b). Any tree surgery required is best carried out towards the conclusion of the development so that, if necessary, any known root damage can be corrected by the appropriate crown thinning to restore root/shoot balance.

Six hedgerows were recorded on-Site. Four were found to be species-poor and intact, and the other two were recorded to be species-poor and defunct, and none were assessed to be 'Important' under the Hedgerow Regulations (1997) criteria.

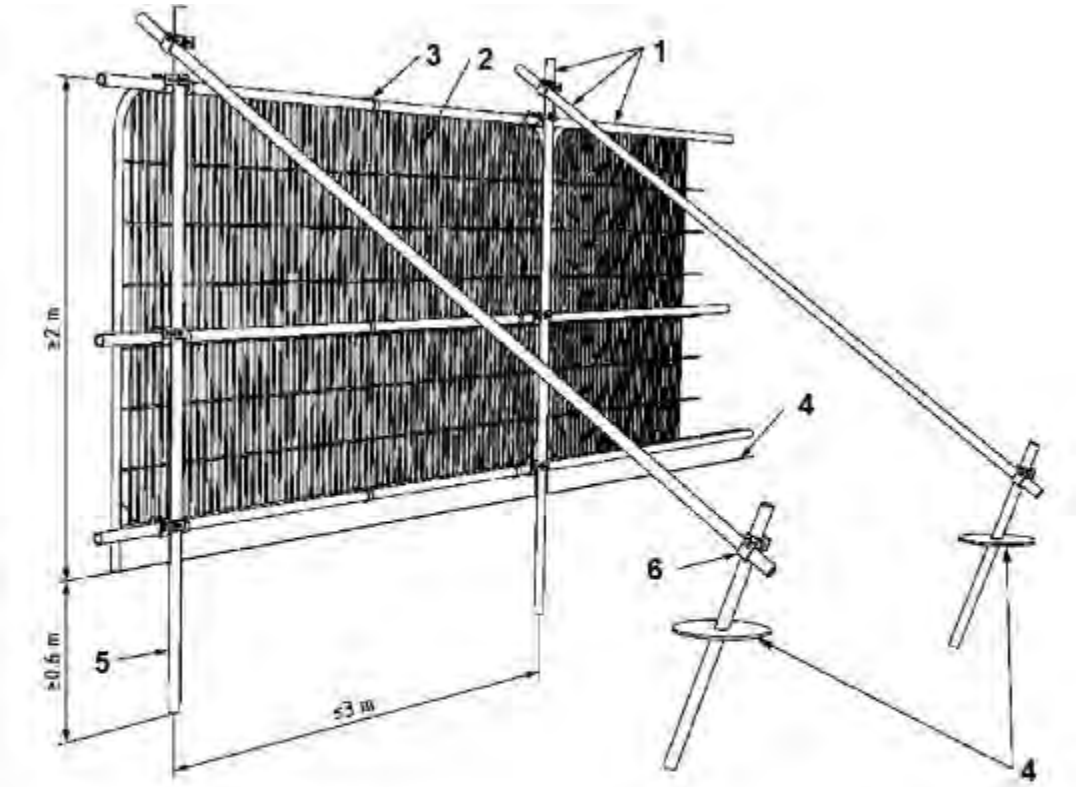
5.2 Recommendations

Recommendation 1 (Adequate Tree Protection)

Those trees identified within any development plan for retention will need to be adequately protected during any approved development works. As a general rule at this Site, measures to protect trees should follow the best practice principles set out in BS5837: Trees in Relation to Design, Development and Construction (2012). Prior to any construction or development work proceeding, the RPAs of individual trees to be retained should be marked out using the distances provided in the Table 1. Marking out should be completed by a person with arboricultural or horticultural expertise as individual trees will have root zones that may be affected by local conditions and allowances would need to be made to accommodate this.

The best practice principles have been broadly summarised below:

- All trees retained adjacent to the Site should be protected by barriers or ground protection around the calculated RPA and as indicated on any Tree Constraints Plan (TCP) that may be produced in association with the assessment;
- Any fencing required should be erected prior to commencement of construction and before demolition including erection of any temporary structures. Once set up fences should not be removed or altered without prior consultation with the arboricultural advisor;
- Arrangements should be made for an arboriculturist to supervise works and tree protection where trees are particularly vulnerable or sited close to access points;
- Pre-development works may be undertaken prior to the installation of fencing with the agreement of the local planning authority;



1. Standard scaffold poles
2. Heavy Guage 2m tall galvanised tube and weld mesh infill panels
3. Panels secured to uprights and cross members with wire ties
4. Ground Level
5. Uprights driven into ground until secure (up to 0.6m)
6. Standard scaffold clamps

- All tree works should follow best practice procedures as set out in BS 3998 (2010). All trees should be maintained in good condition on-Site and be inspected annually (where overall condition requires) or every two years and after any major storm events, with safety a priority;
- Fencing should be clearly visible and suitable for the location, type and proximity of construction activity;
- It may be appropriate on some sites to use temporary site offices as components of the protection barriers;
- Where it has been agreed and shown on a Tree Protection Plan, construction access may take place within the RPA if suitable ground protection measures are in place (e.g. existing surfaced car park areas). In other areas this may comprise single scaffold boards over a compressible layer laid onto geo-textile materials for

pedestrian movements. Vehicular movements over the RPA will require the calculation of expected loading and may require the use of proprietary protection systems;

- Once areas around trees have been protected by fencing, any works on the remaining Site area may be commenced providing activities do not impinge on protected areas. Notices should be placed on fencing to indicate that operations are not permitted within the fenced area;
- Wide or tall loads etc should not come into contact with retained trees. Banksman should supervise transit of vehicles, jibs, booms etc where this is in close proximity to retained trees;
- Oil, bitumen, cement or other material that is potentially injurious to trees should not be stacked or discharged within 10 m of a tree bole. No concrete mixing should be done within 10 m of a tree. Allowance should be made for the slope of ground to prevent materials running towards the tree;
- No fires should be lit where flames are anticipated to extend to within 5 m of tree foliage, branches or trunk, taking into consideration wind direction and size of fire;
- Notice boards, telephone cables or other services should not be attached to any part of a retained tree;
- Where it is deemed necessary to operate a wide or tall load, plant bearing booms, jibs and counterweights or other such equipment, as part of construction works, and such equipment would have potential to cause injurious contact with crown material i.e. low branches and limbs, of retained trees within the RPA fencing, it is best advised that appropriate, but limited, tree surgery be carried out beforehand to remove any obvious problem branches. This is classed as 'Facilitation Pruning' within BS 5837 (2012). Any such pruning should be undertaken in accordance with a specification prepared by an arboriculturist;
- It is advised that a Pre-Commencement Site Meeting is held with contractors who are responsible for operating machinery, as described above, to firstly highlight the potential for damage occurring to tree crowns and to ensure that extra care is applied when manoeuvring machinery during such operations within close proximity to retained trees to avoid any contact;
- In the event of having caused any such branch or limb damage to retained trees it is strongly recommended that suitable tree surgery be carried out, in accordance with BS 3998 (2010) Recommendations for Tree Work, to correct the damage, upon completion of development; and
- All of the above precautionary measures should be applied to minimise the effect of any damage to long-term tree health and safety.

<u>Recommendation 2 – BRP Tree</u>

<u>Low BRP Tree</u>

- Any proposed felling or management works to tree T6, assessed as having low BRP should be completed under a method statement which could include a single dawn survey completed during the active bat season (April-October, inclusive) on the morning prior to the works being undertaken; or
- Alternatively, a licenced bat ecologist trained to use specialist tree climbing equipment could undertake a thorough inspection of the potential roost features immediately prior to works commencing.

6.0 Limitations of the Tree Survey

The recommendations contained in this Report represent Delta-Simons' professional opinions, based upon the information referred to in Section 1.0 of this Report, exercising the duty of care required of an experienced Environmental Consultant.

This Report was prepared by Delta-Simons for the sole and exclusive use of the Client and for the specific purpose for which Delta-Simons was instructed as defined in Section 1.1 of this Report. Nothing contained in this Report shall be construed to give any rights or benefits to anyone other than the Client and Delta-Simons, and all duties and responsibilities undertaken are for the sole and exclusive benefit of the Client and not for the benefit of any other party. In particular, Delta-Simons does not intend, without its written consent, for this Report to be disseminated to anyone other than the Client or to be used or relied upon by anyone other than the Client. Use of the Report by any other person is unauthorised and such use is at the sole risk of the user. Anyone using or relying upon this Report, other than the Client, agrees by virtue of its use to indemnify and hold harmless Delta-Simons from and against all claims, losses and damages (of whatsoever nature and howsoever or whensoever arising), arising out of or resulting from the performance of the work by the Consultant.

Figure 1 – Site Location Map

Scale: 1 / 500,000 @ A4

LEGEND

Site Boundary

Scale: 1 / 10,000 @ A4

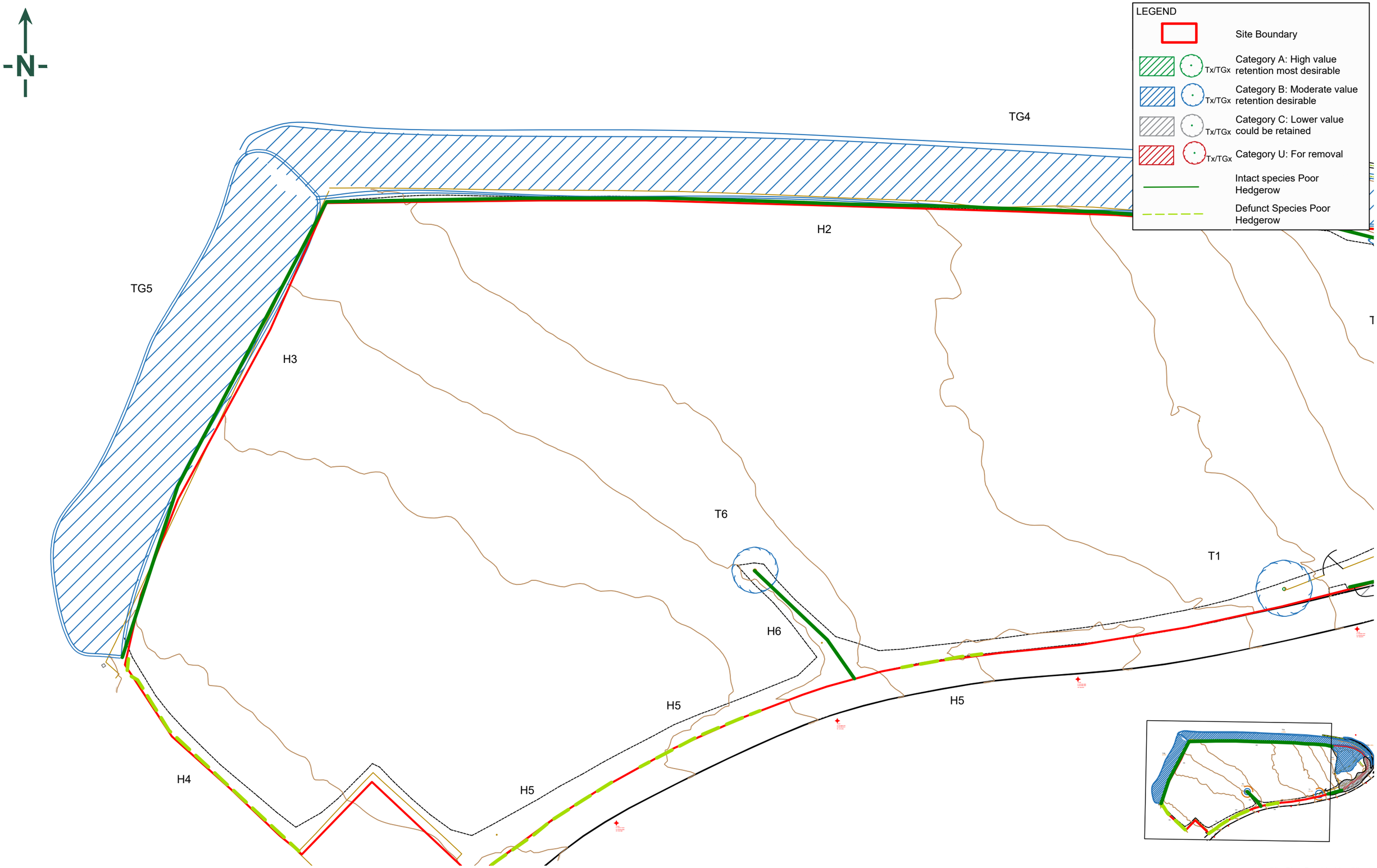
Contains OS data © , Crown Copyright and Database Right (2020)

deltasimons
Environment - Health & Safety - Sustainability

TITLE:
Site Location Map
Land off Wood Walk
Hoyland, Barnsley

DRAWN BY: YA	SCALE: To Scale@A4	PROJECT NO: 16-0406.06
CHECKED BY: PM	REVISION: 1	FIGURE NO: 1
DATE: 30 June 2021		

Figures 2a-b – Tree Survey



Site Plan Provided by Client

deltasimons
Environment - Health & Safety - Sustainability

TITLE:
Tree Survey
Land off Wood Walk
Hoyland, Barnsley

DRAWN BY: YA	SCALE: Not to Scale	PROJECT NO: 16-0406.06
CHECKED BY: PM	REVISION: 1	FIGURE NO: 2a
DATE: 08 July 2021		

N

TG4

TG3

TG2

SG1

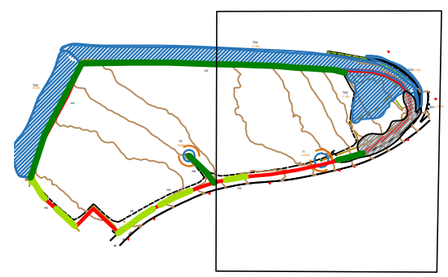
T1

H1

H5

LEGEND

- Site Boundary
- Tx/TGx — Category A: High value retention most desirable
- Tx/TGx — Category B: Moderate value retention desirable
- Tx/TGx — Category C: Lower value could be retained
- Tx/TGx — Category U: For removal
- Intact species Poor Hedgerow
- Defunct Species Poor Hedgerow



Site Plan Provided by Client

deltasimons
Environment - Health & Safety - Sustainability

TITLE:
Tree Survey
Land off Wood Walk
Hoyland, Barnsley

DRAWN BY: YA	SCALE: Not to Scale	PROJECT NO: 16-0406.06
CHECKED BY: PM	REVISION: 1	FIGURE NO: 2b
DATE: 08 July 2021		

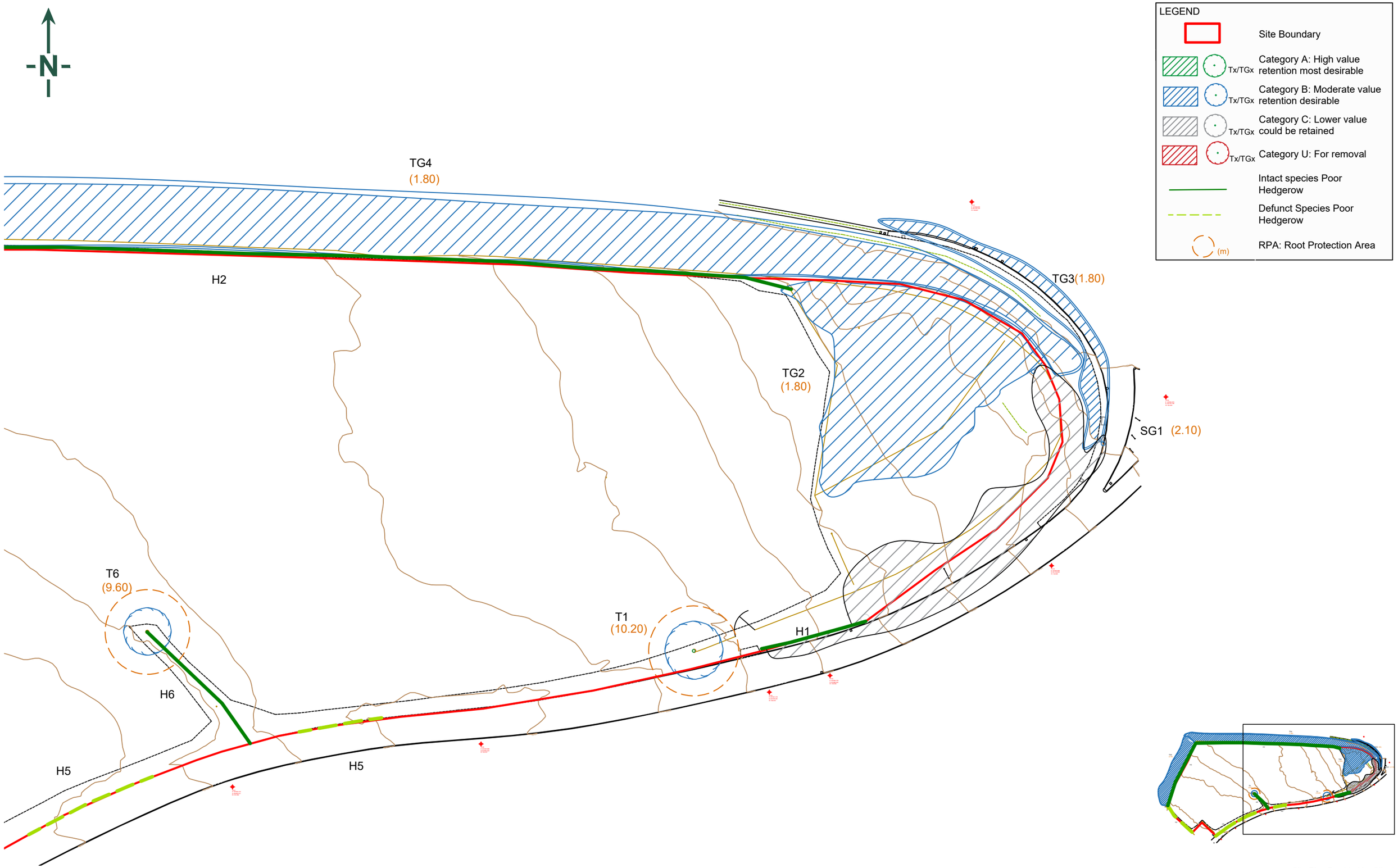
Figures 3a-b – Tree Constraints Plan

Site Plan Provided by Client

deltasimons
Environment - Health & Safety - Sustainability

TITLE:
Tree Constraint Plan
Land Off Wood Walk
Hoyland, Barnsley

DRAWN BY: YA	SCALE: Not to Scale	PROJECT NO: 16-0406.06
CHECKED BY: PM	REVISION: 1	FIGURE NO: 3a
DATE: 08 July 2021		



Site Plan Provided by Client

deltasimons
Environment - Health & Safety - Sustainability

TITLE:
Tree Constraint Plan
Land Off Wood Walk
Hoyland, Barnsley

DRAWN BY:	SCALE:	PROJECT NO:
YA	Not to Scale	16-0406.06
CHECKED BY:	REVISION:	FIGURE NO:
PM	1	3b
DATE:		
08 July 2021		

Drawing 1-00-001-Site Plan_rev P4

Gross Site Area

Name	Area m²	Area ft²	Area Ac.	Area ha.	Percentage
Overall Site Plan	36057 m²	388116 ft²	8.9 acres	3.6 hectare	100%

Site Constraints/Considerations

Name	Area m²	Area ft²	Area Ac.	Area ha.	Percentage
High Wall	8245 m²	88743 ft²	2.0 acres	0.8 hectare	83%
Existing Woodland	1664 m²	17907 ft²	0.4 acres	0.2 hectare	17%
Grand total	9908 m²	106651 ft²	2.4 acres	1 hectare	100%

Developable/P.O.S Area

Name	Area m²	Area ft²	Area Ac.	Area ha.	Percentage
Public Open Space	4213 m²	45351 ft²	1.0 acres	0.4 hectare	16%
Developable Area	22487 m²	242053 ft²	5.6 acres	2.2 hectare	84%
Grand total	26701 m²	287404 ft²	6.6 acres	2.7 hectare	100%

Accommodation Schedule

House Type	Quantity	Bedrooms	Area m²	Area ft²
TypeH (3Nr.)_TheBeamsley	12	2	850.4 m²	9154 ft²
TypeH (4Nr.)_TheBeamsley	4	2	284.5 m²	3062 ft²
TypeJ&K_Eastern_Kelham	18	2	1187.5 m²	12782 ft²
	34 (40.5%)		2322.3 m²	24998 ft²
TypeA(Detached)_Ingleborough	1	3	87.5 m²	942 ft²
TypeA_Ingleborough	8	3	689.0 m²	7417 ft²
TypeB_Lilac	4	3	363.0 m²	3907 ft²
TypeG_Whernside	7	3	656.9 m²	7071 ft²
	20 (23.8%)		1796.4 m²	19337 ft²
TypeC_Laurel	9	4	1049.4 m²	11296 ft²
TypeD_Sandringham	6	4	752.4 m²	8099 ft²
TypeE_Harewood	3	4	371.1 m²	3994 ft²
TypeF_Winterley	2	4	262.2 m²	2822 ft²
TypeL_Buckden	10	4	1305.8 m²	14056 ft²
	30 (35.7%)		3741.0 m²	40268 ft²
Grand total	84 Units		7859.8 m²	84602 ft²

00 Series General Arrangement Notes

1. Any areas indicated on the plans are approximate. They relate to the likely areas of the building at the current state of the design and are calculated using the stated eg(NIA) method from the Code of MEasuring Practice 5th Edition RICS/ISVA. Any decision to be made on the basis of these predictions, whether as to project viability, pre-letting, lease agreements or the like, should include due allowance for design development and building tolerances. Floor areas are subject to Planning, Building Control and other statutory approvals.

2. Any structural, services or fit out detail shown is for coordination only, refer to relevant Consultants/Clients information for details.

3. Refer to Enjoy NBS for full outline performance specification of Architectural Elements.

4. THE CONTENT OF THIS DRAWING IS FOR DESIGN INTENT AND REQUIRES FURTHER DESIGN DEVELOPMENT AND COORDINATION WITH ALL RELEVANT CONSULTANTS, SUB-CONTRACTORS, SPECIALIST DESIGNERS AND STATUTORY AUTHORITIES.

- Attenuation Area_ **1,424m²**
- Broadleaf Plantation Area_**1,277m²**
- Existing Hedgerow removed_ **0 linear m**
- Proposed Hedgerow added / relocated_ **36 linear m**

Key

- Vegetation - Existing
- New Hedgerow
- Vegetation - Removed
- Public Open Space
- Attenuation

Affordable houses *

Dearne Valley Parkway

Plot 01 Plot 02 Plot 03 Plot 04 Plot 05 Plot 06 Plot 07-08 Plot 09-10 Plot 11-12 Plot 13 Plot 14 Plot 15 Plot 16 Plot 17-18 Plot 19-20 Plot 21-22 Plot 23 Plot 24 Plot 25 Plot 26 Plot 27 Plot 28 Plot 29 Plot 30 Plot 31 Plot 32 Plot 33 Plot 34 Plot 35 Plot 36 Plot 37 Plot 38 Plot 39 Plot 40 Plot 41 Plot 42 Plot 43 Plot 44 Plot 45 Plot 46 Plot 47 Plot 48 Plot 49 Plot 50 Plot 51 Plot 52 Plot 53 Plot 54 Plot 55 Plot 56 Plot 57 Plot 58 Plot 59 Plot 60 Plot 61 Plot 62 Plot 63 Plot 64-65 Plot 66-67 Plot 68-69 Plot 70 Plot 71 Plot 72 Plot 73 Plot 74 Plot 75 Plot 76 Plot 77 Plot 78 Plot 79 Plot 80 Plot 81 Plot 82 Plot 83 Plot 84

PRIVATE DRIVE

SHARED SURFACE

P.O.S

Existing woodland area

Bin collection point

New access to and from the site

Highwall - No-Build Zone

Highwall - No-Build Zone

Ash Tree Retained

Existing Tree Retained

New Hedgerow added

Over head power lines to be re-routed (below ground) as indicated

Overhead power line post to be removed and power lines to be sunk below ground

Vegetation cut back

Visibility Splay 90532

Visibility Splay 97540

<SEWER ZONE>

Wood Walk

Wood Walk

Single Garage	Double Garage	Type A	Type B	Type C	Type D	Type E	Type F	Type G	Type H (Typcial)	Type J/K	Type L
		The Ingleborough 3Bed 927ft² x 2 Semi Detached No Garage	The Lilac 3Bed 977ft² Detached Ext. Garage	The Laurel 4Bed 1255ft² Detached Ext. Garage	The Sandringham 4Bed 1350ft² Detached Ext. Garage	The Harewood 4 Bed 1331ft² Detached Ext. Garage	The Winterley 4Bed 1372ft² Detached Ext. Garage	The Whernside 3Bed 1010ft² Detached Ext. Garage	The Beamsley 2Bed 763ft² x 3 Terrace	The Easton/The Kelham 2Bed 685ft²/734ft² x 3 Apartments	The Buckden 4Bed 1406ft² Detached Int. Garage

Typical Elevation · Typical Section · Example Image

Typical Plan · Indicated on plan -

Knee Rail

Typical Elevation · Typical Section · Example Image

Typical Plan · Indicated on plan -

Perimeter and Separating wall with infill fence panel

Typical Elevation · Typical Section · Example Image

Typical Plan · Indicated on plan -

Perimeter and Separating 1.8m fence

Proposed Site Plan

1 : 500

1 : 200
0 2 4 6 8 10m

1 : 500
0 10 20 30m

N

Contractor must verify all dimensions on site before commencing any work or shop drawings. If this drawing exceeds the quantities taken in any way the Architects are to be informed before the work is initiated. Only figured dimensions to be taken from this drawing. Do not scale off this drawing. Drawings based on Ordnance Survey and / or existing record drawings - design and drawing content subject to Site Survey, Structural Survey, Site Investigations, Planning and Statutory Requirements and Approvals. Authorised reproduction from Ordnance Survey Map with permission of the Controller of Her Majesty's Stationery Office. Crown Copyright reserved. Enjoy Design Ltd.

Notes.

Rev.	Des.	By	Date	Ch.
P4	2 spaces shwon on Plots 28, 38, 39, 76, 77. Road aligned to tracking at Plot 2 bend.	WD	08.07.2021	WD
P3	Boundary treatments added, minor adjustments made to housing areas to now comply with the Nationally Described Housing Standards/South Yorkshire Design Guide & GIA areas added.	WD	24.06.2021	MH
P2	Plot 27 revised to Type C. Garage added	WD	10.06.2021	
P1	Draft Planning	WD	Date 1	

Status: Planning

The Old Brewery
High Court
Leeds
LS2 7ES
Tel: 0113 242 3622
www.enjoy-design.co.uk

Client:	Job No:
Yelcon Ltd	18.030
Project:	
Wood Walk, Hoyland, Barnsley	
Title:	
Proposed - Site Plan	
Date: 05/07/21	Scale: As indicated@A1
Drawing No: 00-001	Drawn By: MH
Checked by: WD	Revision: P4

ENJOY DESIGN

Appendix A – References

References

BSI Publication BS 5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations.

BSI Publication BS 5837:2005 Trees in Relation to Construction - Recommendations.

Collins, J. (ed.) (2016) Bat surveys for Professional Ecologists: Good practice guidelines (3rd edition). The Bat Conservation Trust, London.

Stace, C. (2010). *New Flora of the British Isles 3rd edition*. University Press, Cambridge.

Appendix B – Guidance on Assessing the Potential Suitability of Development Sites to Support Bats

Guidance on Assessing the Potential Suitability of Development Sites to Support Bats

(adapted from Collins, J. (ed)).

Suitability	Description	
	Roosting	**Commuting and Foraging**
Negligible	An inspected structure or tree which is considered to have no features of importance for roosting bats. No further constraints apply to the method or timing of proposed works.	Negligible habitat features on-Site to support commuting or foraging bats
Low	A structure with at least one or more features suitable to support opportunistic individual bats. However, inadequate space, shelter, protection and conditions, and the low suitability of surrounding habitats means that it is unlikely to be used as a maternity or hibernation roost site. A tree of adequate age and stature to support potential roosting features, however, either no features, or only features of limited potential recorded from the ground.	Habitat with potential to support low numbers of commuting bats due to its quality and connectivity. For example, a gappy hedgerow or unvegetated stream that is isolated from the surrounding landscape. Alternatively, suitable but isolated habitats suitable to support low numbers of foraging bats such as a lone tree or a patch of scrub.
Moderate	A structure or tree with one or more potential roost sites that are of adequate size, shelter and protection, with suitable conditions and surrounding habitat to support a bat roost not of high conservation status (with respect to roost type not individual species conservation status).	Linear habitat continuity connecting to the wider landscape offering potential to support commuting bats, such as rows of trees and scrub or linked back gardens. Habitat such as trees, scrub, grassland or a waterbody with connectivity to the wider landscape offering foraging opportunities for bats.
High	A structure or tree with one or more potential roost sites that are suitable for use by large numbers of bats on a regular basis and for long periods of time due to their size, shelter, protection, conditions and the surrounding habitat.	Continuous high-quality habitat with strong connectivity to the wider landscape that is likely to be used by commuting bats on a regular basis, such as flowing waterbodies, hedgerows, rows of trees and woodland edges. High quality habitat with strong connectivity to the wider landscape that is likely to be regularly used by foraging bats, such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to, and connected to, known roost sites

Appendix C – Site Photographs

Site Photographs

Photograph 1 – Tree (T)1 [January 2021]

Photograph 2 – Tree Group (TG)2

Photograph 3 – TG3

Photograph 4 – TG4

Photograph 5 – TG5

Photograph 6 – T6

Photograph 7 – Scrub Group 1

Photograph 8 – Hedgerow (H)1

Photograph 9 – H2

Photograph 10 – H3

Photograph 11 – H4

Photograph 12 – H5

Photograph 13 – H6