BS 5837:2012 Arboricultural Survey

Ollerton Depot, Newark Road, New Ollerton, NG22 9PZ

Presented to: J. Murphy & Sons Limited

Issued: December 2022

Delta-Simons Project No: 87854.545956

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Report Details

Client	J. Murphy & Sons Limited
Report Title	BS 5837:2012 Arboricultural Survey
Site Address	Ollerton Depot, Newark Road, New Ollerton, NG22 9PZ
Project No.	87854.545956
Delta-Simons Contact	Jennifer Britt [redacted]

Quality Assurance

Issue No.	Status	Issue Date	Comments	Author	Technical Review	Authorised
1	Final	316th December 2022		[redacted]		
				James Royston Arboriculturalist	Charlotte Sanderson-Lewis Associate Director	Charlotte Sanderson-Lewis Associate Director

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INOGEN ALLIANCE

Executive Summary

Purpose	Delta-Simons Environmental Consultants Ltd was instructed by J. Murphy & Sons Limited ('the Client'), to undertake a Tree Survey to BS 5837:2012 standard of an area of land at Ollerton Depot, Newark Road, New Ollerton ('the Site'). The survey was undertaken on 17th November 2022. The survey was undertaken to inform the Client on any constraints for future development.
Current Site Status	The Site is a construction and engineering company in the west, comprisin predominantly hardstanding and buildings with a large patch of both ephemerals/ perennials and scattered scrub, whilst in the centre and east is improved grassland in the northern and arable in the southern area, separated from the hardstanding by a combination of woodland and dense scrub A woodland belt runs along the southern extent of the Site with a length of hedgerow inside. A stream runs from the northern boundary in a westerly direction to the western boundary.
Proposed Development	It is understood that the proposals include extending the business into the eastern area of the Site. However, no detailed plans were available at the time of writing this report.
Results	A total of ten tree groups and one hedgerow with gaps were identified a assessed as part of the Tree Survey. The results of the desk search undertaken on http://www.newark-sherwooddc.gov.uk on 8th December 2022 indicate that no trees on-Site or immediately adjacent to the Site are covered by Tree Preservation Orders (TPOs) or are within a Conservation Area.
Recommendations	Recommendation 1 (Adequate Tree Protection) Those trees identified within the proposed development plan for retention will need to be adequately protected during any approved developmer 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 (RPAs) of individual trees to be retained should be marked out. Marking out should be completed by a competent person with arboricultural expertise. All trees retained on-Site and adjacent to the Site 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 survey.
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

Figures

Appendices

1.0 Introduction

1.1 Purpose and Scope of the Survey

Delta-Simons Environmental Consultants Ltd was instructed by J. Murphy & Sons Limited (the 'Client') to undertake an Arboricultural Survey to BS 5837:2012 standard. The survey was undertaken of land at Ollerton Depot, Newark Road, New Ollerton (hereafter referred to as 'the Site'). The survey was undertaken on 17th November 2022. The Site location and the area surveyed are shown in Figure 1. The survey was undertaken to inform client of any ecological constraints for future development.

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 SK 67090 67074 south of New Ollerton in Nottinghamshire. The Site covers an area of 24 ha and is a construction and engineering company in the west, comprising predominantly hardstanding and buildings with a large patch of both ephemerals/ perennials and scattered scrub, whilst in the centre and east is improved grassland in the northern and arable in the southern area, separated from the hardstanding by a combination of woodland and dense scrub A woodland belt runs along the southern extent of the Site with a length of hedgerow inside. A stream runs from the northern boundary in a westerly direction to the western boundary.

The Site is situated in New Ollerton and is in an area of predominantly rural area, surrounded by blocks of woodland on all aspects except the west where residential dwellings are located.

The Site layout and area surveyed is shown in Figure 2.

1.3 Proposed Development

It is understood that the Client is considering extending the business into the eastern area of the Site.

2.0 Legislation

2.1 Trees

Local Planning Authority (LPA) 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 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 to the Office of the Deputy Prime Minister for non-determination. If the LPA 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.

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 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 (Figure 2). The Root Protection Areas (RPA) of the key trees of value identified for, or recommended for retention have been marked within the Constraints Plan (Figure 3) 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.

3.4 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).

4.0 Results

4.1 Data Search

The results of the desk search undertaken on http://www.newark-sherwooddc.gov.uk on 8th December 2022 indicate that no trees on-Site or immediately adjacent to the Site are covered by Tree Preservation Orders (TPOs), or are within a Conservation Area.

4.2 Survey Details

The tree inspection took the form of a walkover inspection completed by James Royston on 17/11/22. Each individual early mature, 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 Figure 2, and within the Photograph Section of this Report (Appendix C).

4.3 Early Mature, Semi-Mature and Young Trees

A total of 10 Tree Groups (TG) have been identified and assessed as part of the tree survey. Most of the trees were located within the boundary fences of the Site apart from to the west, where there was a woodland belt beyond the boundary.

4.3.1 Species and their Arrangement in the Landscape

There is a fairly typical range of tree species on, and immediately adjacent to the Site, with birch, ash, oak, sycamore, willow and hawthorn being the main components.

Most of the trees are located in large woodland groups within the Site's boundary fences. There is also a woodland group running north to south through the middle of the Site.

4.3.2 Height and Significance in the Landscape

Most of the tree groups are made up of semi mature or early mature trees, these grow up to 16 m in height and are significant part of the local landscape.

If retained, these trees may require protection measures to ensure no impact occurs as a result of any development.

4.3.3 Age and Condition

Most of the trees present on and adjacent to the Site are early mature or semi mature. There are also areas of young trees. None of the trees show signs of past management but they do appear to be in fair condition.

4.3.4 Environmental Condition

Given the Site's apparent lack of significant change over a long period of time, it is surmised that no damage to the root system of boundary and on-Site trees has been sustained through any recent on-Site working practices.

Groundwater conditions are not assessed to be a significant factor in present or future growth or health of trees since the generally flat Site appears to be well drained, and most of the trees are located on elevated slopes with apparently good drainage.

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
TG1	Mix	Mix	Young	5	5	120	0	See plan	See plan	See plan	See plan	No major apparent defects	A group of mostly multi stem trees. No major apparent defects.	Normal amounts of deadwood throughout. No major apparent defects.	A mixed broadleaf group of mostly multi stem trees with no major apparent defects. Species include willow *Salix* spp. and hawthorn *Crataegus monogyna*.	Good	>40	C	2.8	No works at present
TG2	Mix	Mix	Semi mature	15	>50	270	2	See plan	See plan	See plan	See plan	No major apparent defects	A group of mostly single stem trees. No major apparent defects.	Normal amounts of deadwood throughout. No major apparent defects.	A mixed broadleaf group of mostly single stem trees with no major apparent defects. Species include birch *Betula* sp, sycamore *Acer pseudoplatanus*, oak *Quercus* sp., cherry *Prunus* sp. and hawthorn	Good	>40	B	3.2	No works at present
TG3	Mix	Mix	Semi mature	15	>50	310	2	See plan	See plan	See plan	See plan	No major apparent defects	A group of mostly single stem trees. No major apparent defects.	Normal amounts of deadwood throughout. No major apparent defects.	A mixed broadleaf group of mostly single stem trees with no major apparent defects. Species include birch, ash, sycamore, oak, cherry and hawthorn	Good	>40	B	3.2	No works at present
TG4	Mix	Mix	Semi mature	15	>50	340	2	See pl	See pl	See pl	See pl	No major apparent defects	A group of mostly single stem trees. No major apparent defects.	Normal amounts of deadwood throughout. No major	A mixed broadleaf group of mostly single stem trees with no major apparent defects. Species include	Good	>40	B	3.2	No works at present

							an	an	an	an			apparent defects.	ash, birch, sycamore, oak, cherry and hawthorn					
TG5	Mix	Mix	Young	3	>50	70	0	See plan	See plan	See plan	See plan	No major apparent defects	A group of mostly Multi stem trees and shrubs. No major apparent defects.	No major apparent defects.	A mixed scrubby group of multi stem trees and shrubs with no major apparent defects. Species include willow and hawthorn	Good	>40	C	3.2	No works at present
TG6	Mix	Mix	Early mature	16	>50	350	0	See plan	See plan	See plan	See plan	No major apparent defects	A group of mostly single stem trees. No major apparent defects.	No major apparent defects.	A mixed group of mostly single stem trees and with no major apparent defects. Species include hawthorn, oak, willow and cherry, but is predominantly ash.	Good	>40	B	3.2	No works at present
TG7	Mix	Mix	Semi mature	15	>50	330	0	See plan	See plan	See plan	See plan	No major apparent defects	A group of mostly Multi stem trees. No major apparent defects.	No major apparent defects.	A mixed group of single stem and multi stem trees with no major apparent defects. Species include mostly sycamore, oak and hawthorn.	Good	>40	B	3.2	No works at present
TG8	Sycamore	Acer pseudoplatanus	Semi mature	13	>20	300	0	See plan	See plan	See plan	See plan	No major apparent defects	A group of mostly single stem trees and shrubs. No major apparent defects.	No major apparent defects.	A mixed group of single stem trees with no major apparent defects. Species include sycamore and birch.	Good	>40	C	3.2	No works at present
TG9	Mix	Mix	Young	6	10	140	0	See plan	See plan	See plan	See plan	No major apparent defects	A group of mostly Multi stem trees. No major apparent defects.	No major apparent defects.	A mixed group of multi stem trees with no major apparent defects. Species include sycamore and hawthorn.	Good	>40	C	3.2	No works at present
TG10	Mix	Mix	Young	3	5	70	0	See pl	See pl	See pl	See pl	No major apparent defects	A group of mostly Multi stem trees and shrubs. No major	No major apparent defects.	A mixed group of multi stem trees and shrubs with no major apparent defects. Species	Good	>40	C	3.2	No works at present

							an	an	an	an		apparent defects.		include sycamore and birch.					
H1	Hawthorn	*Crataegus monogyna*	Semi mature	2	>50	70	0	Seeplan	Seeplan	Seeplan	Seeplan	No major apparent defects	A gappy hedge with no major apparent defects.	No major apparent defects.	A gappy hedge with no major apparent defects. Species include hawthorn.	Good	>40	C	3.2	No works at present

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).				

5.0 Tree Management

5.1 Arboricultural Assessment

No development proposals were available at the time this report was prepared and, therefore, it is not known how many tree groups can be retained and incorporated into the development plans.

It appears no management has taken place to the trees present on-Site. 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.

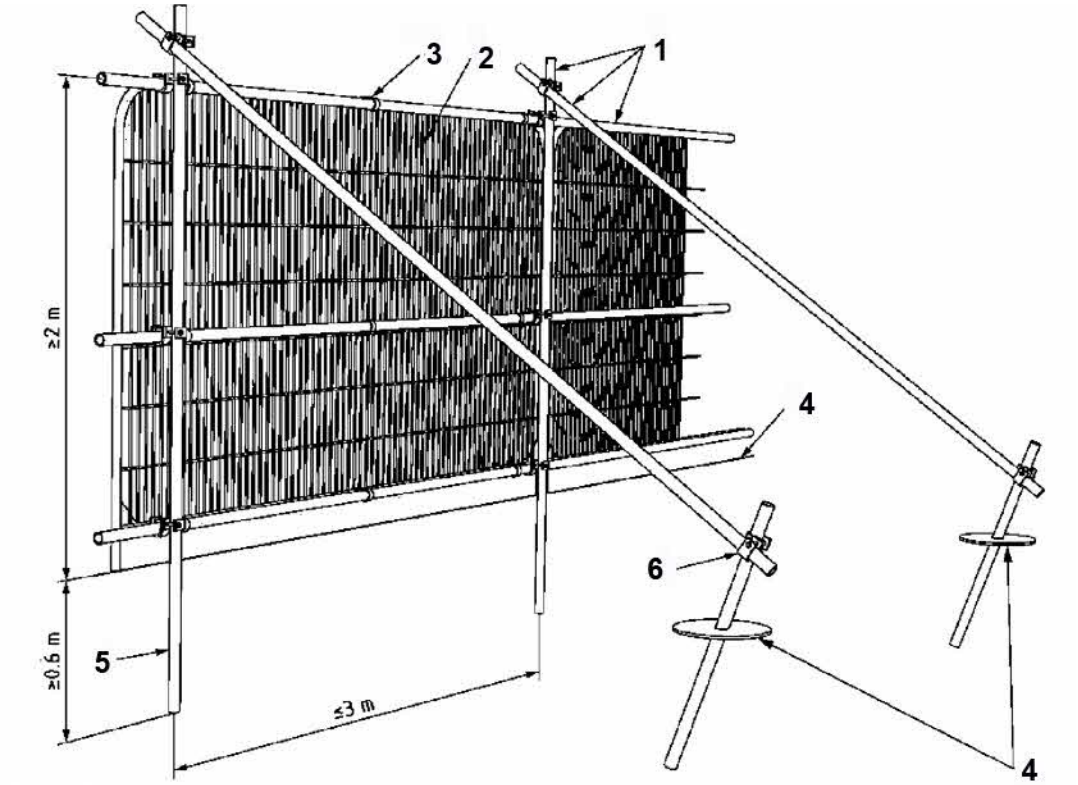
5.2 Recommendations

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

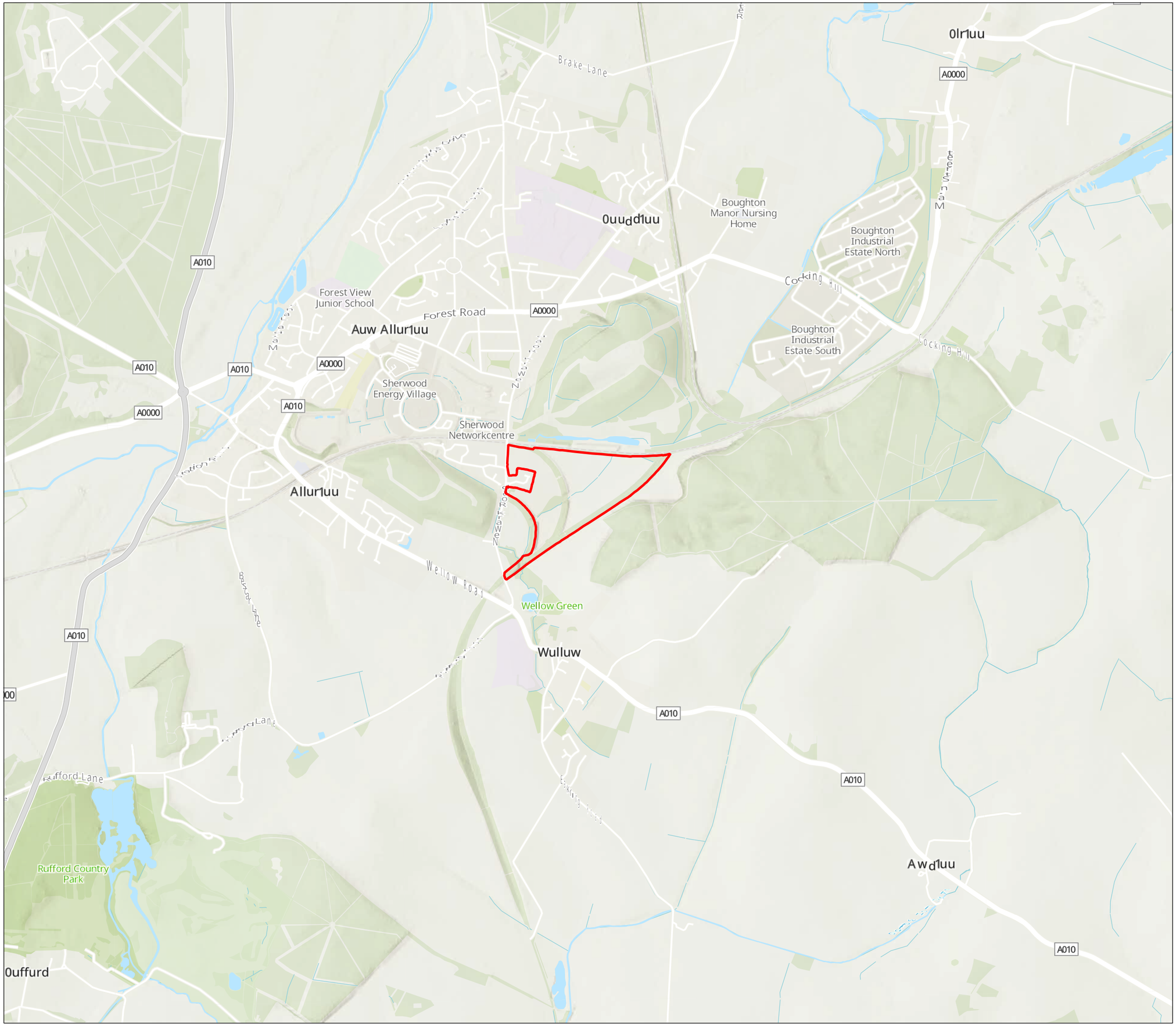
All of the above precautionary measures should be applied to minimise the effect of any damage to long-term tree health and safety.

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



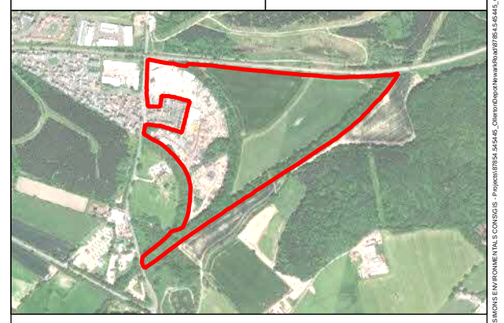
Legend

Site boundary

0 200 400 600 800 Meters

N

Figure	Site Location Plan		
Job	Ollerton Depot, Newark Road, New Ollerton		
Client	J. Murphy & Sons Limited		
Figure No. 1	Revision A	Date 13/12/2022	
Drawn KH	Checked IT	Scale 1:18,000 @ A3	
Job No. 87854.545445		Central GR 467143E 366926N	

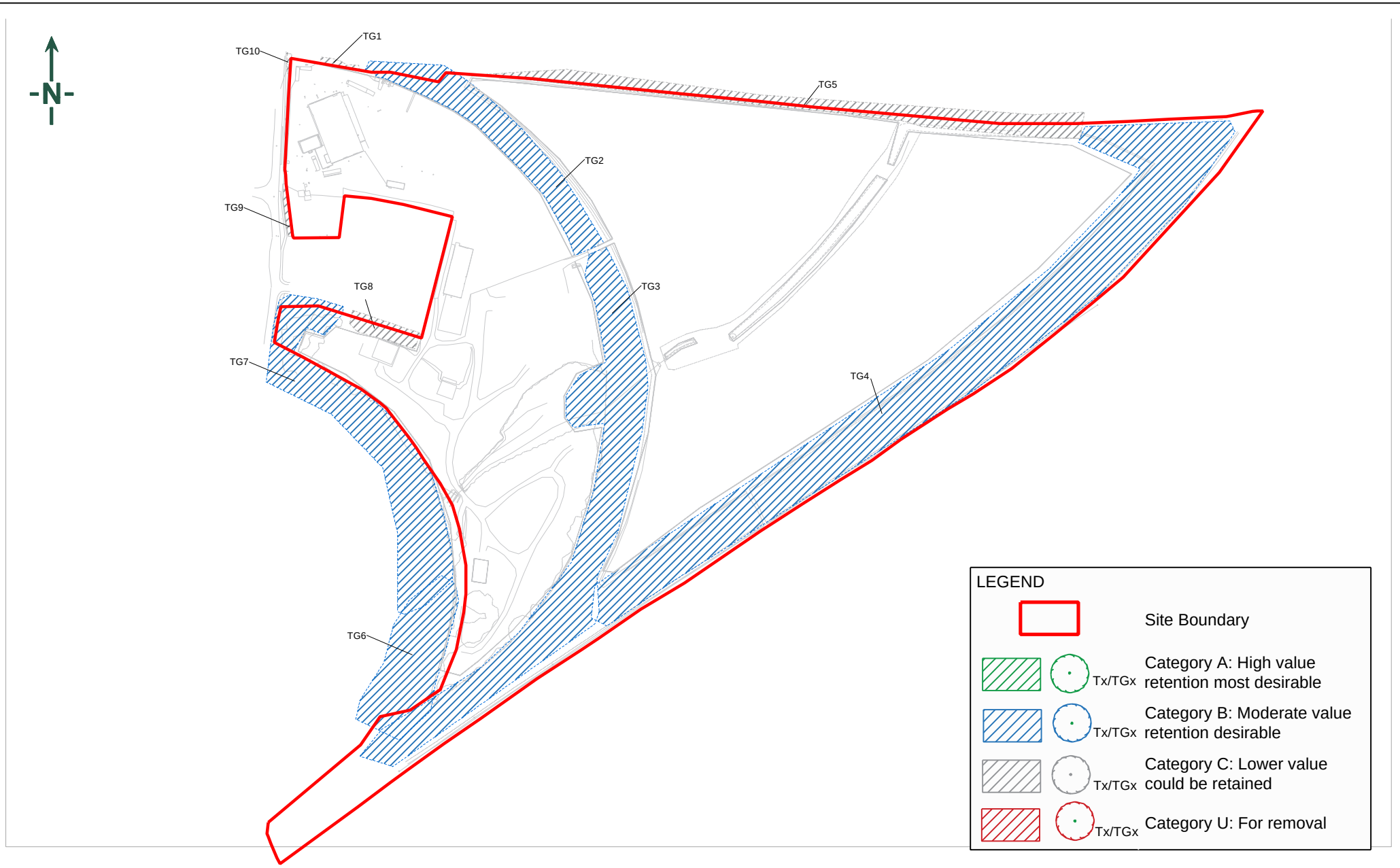


DO NOT SCALE.
NOT FOR CONSTRUCTION.

DeltaSimons

C:\Users\Kristina.Hall\AppData\Local\DELTA-SIMONS ENVIRONMENTAL\CONSULTS - Projects\87854.545445_Ollerton\Depot\Newark\Road\87854.545445_OllertonDepotNewarkRoad.aprx

Figure 2 –Tree Survey



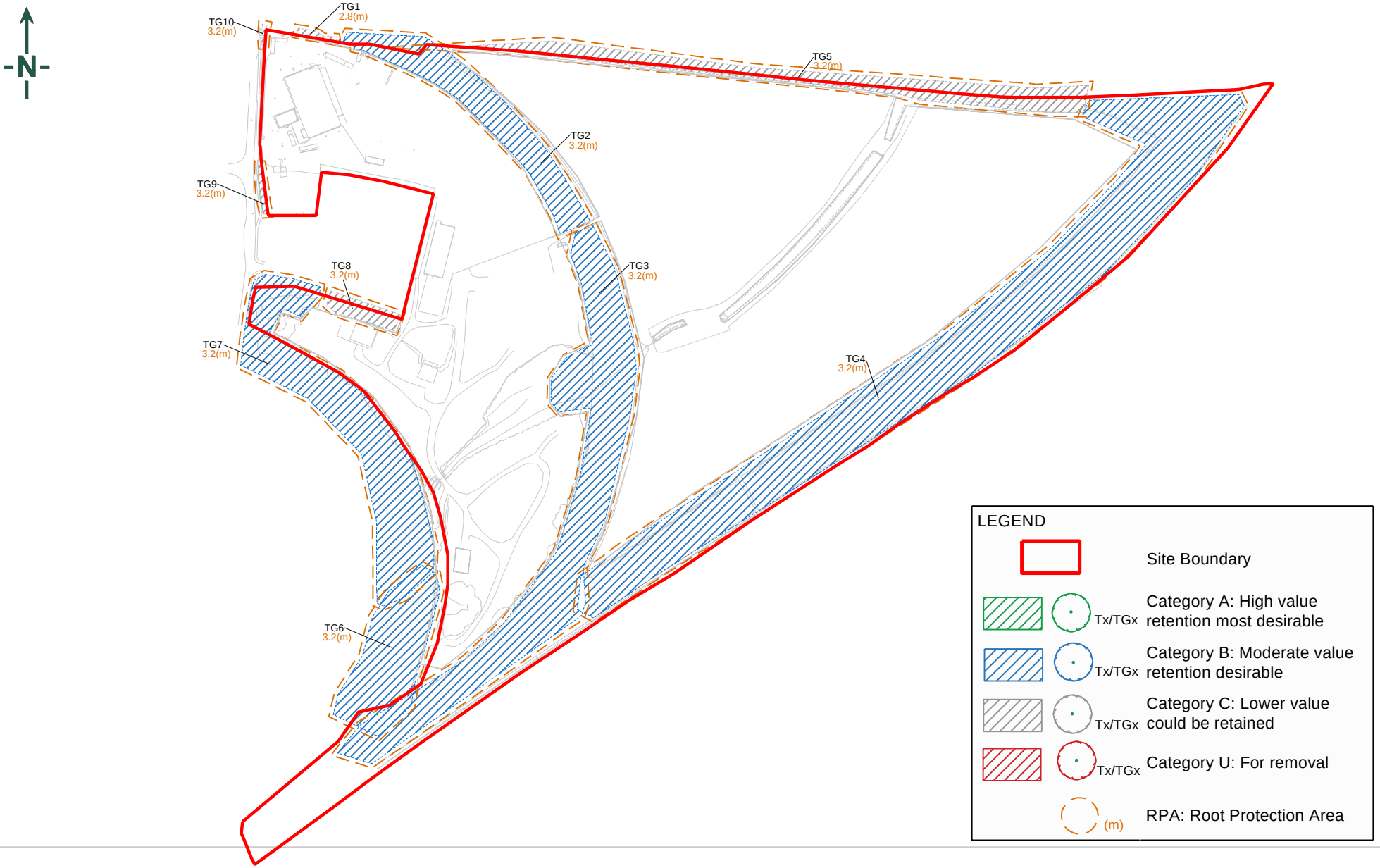
Site Plan Provided by Client

DeltaSimons
Protecting people and planet

TITLE:
Tree Survey
Ollerton

DRAWN BY: JM	SCALE: Not to Scale	PROJECT NO: 87854.545956	
CHECKED BY: CS	REVISION: 1	FIGURE NO: 2	
DATE: 13 December 2022			

Figure 3 –Tree Constraints Plan



Site Plan Provided by Client

DeltaSimons
Protecting people and planet

TITLE:
Tree Constraints Plan
Ollerton

DRAWN BY: JM	SCALE: Not to Scale	PROJECT NO: 87854.545956	
CHECKED BY: CS	REVISION: 1	FIGURE NO: 3	
DATE: 13 December 2022			

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.

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