John Booth Arboricultural Consultants Ltd
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Arboricultural Survey Report & Method Statement

at

Land To the Rear Of 175 Chesterfield Road
Far Laund
Belper

for and on behalf of

Lillie Building Company Ltd

29 May 2026

242 Highfields Park Drive
Broadway
Derby
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SUMMARY

This report concerns a tree located adjacent to the rear of 175 Chesterfield Road, Far Laund, Belper; it is concerned with a proposal to develop the site.

The report and accompanying tree survey schedule is produced in accordance with the guiding principles of British Standard 5837:2012 '*Trees in Relation to Design, Demolition and Construction – Recommendations'.*

The Root Protection Area (RPA) of the tree surveyed is calculated and recorded in the Tree Survey Schedule where it is expressed both in linear and square metres; it is at this distance/around this area that tree protective measures must be employed around any trees to be retained.

The findings of my survey are that to protect tree roots during all construction activity they must be protected using temporary ground protection.

It is vitally important that this report is read and understood by the project team (architects, engineers etc) and that its advice is observed where trees are proposed to be retained.

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1 INTRODUCTION

1.1 ***Author's Qualifications and Experience*****:** I am a Chartered Environmentalist, a Fellow and Registered Consultant of the Arboricultural Association; I am also a past national chairman of the Arboricultural Association. I have many years' experience of arboriculture and amenity tree management and have written papers published in respected journals such as the International Journal of Urban Forestry and was a member of drafting group responsible for the writing of the National Tree Safety Groups publication '*Common sense management of trees*'. I am trained in the use of the Quantified Tree Risk Assessment (QTRA) methodology and am a Bond Solon/Cardiff University certificated Expert Witness.

This report is based on my site observations and the information provided.

For your assurance I carry £5,000,000.00 Professional Indemnity insurance.

This report is based on my site observations and any information provided.

1.2 ***Instructions and Brief***: Lillie Building Company Ltd. (my client) sought advice regarding the condition of a tree which might be implicated in a proposal to develop a site to the rear of 175 Chesterfield Road, Far Laund, Belper (the site). Guidance was sought as to what arboricultural constraints might be associated with the proposal and how any such might be overcome/minimised. A Tree Survey Schedule compliant with the guiding principles of British Standard 5837:2012 '*Trees in Relation to Design, Demolition and Construction – Recommendations'* is contained in this report, and all survey data is recorded in this Schedule.

1.3 ***Documents & Information Provided***: A plan illustrating the proposed layout was provided; it has been annotated and supplements the accompanying Tree Survey Schedule.

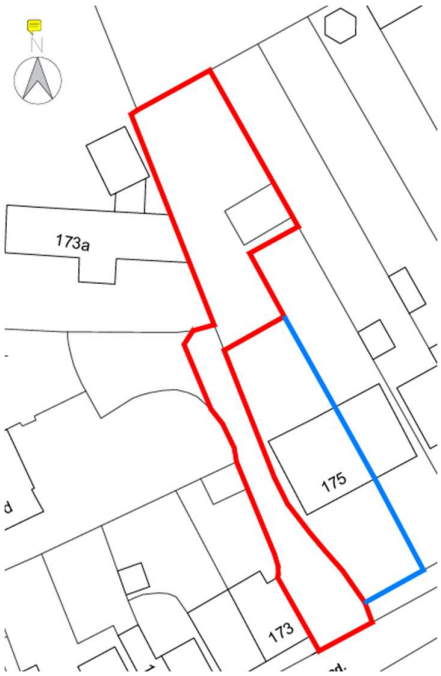

Fig 1 - Location Plan

1.4 Scope:

1.4.1 This report has been prepared for the sole use of the client. Any third party referring to this report or relying on the information contained herein does so entirely at his or her own risk.

1.4.2 Whilst every effort has been made to detect defects within the subject tree, no guarantee can be given as to the absolute safety or otherwise of any individual tree. This report represents a survey and should not be construed to be a detailed tree inspection report; trees comprising groups were assessed as such and individuals within were not subject to inspection. Any recommendations given are intended to reduce the likelihood of tree collapse and are intended to reduce the likelihood of tree collapse but absolute safety is not a realistic goal; even apparently sound trees can fail particularly during inclement weather eg Gale force winds of 8 (39 - 46 mph) may result in the shedding of small twigs and branches whereas Gale force 10 winds (55 – 63 mph) may result in trees being

uprooted. All recommendations are given in the context of the site's current usage; any change will dictate a further survey.

1.4.3 The findings and recommendations contained within this report are, assuming its recommendations are observed, valid for a period of twelve months from the date of survey. Trees are living organisms subject to change – best practice dictates they are inspected on a regular basis for reasons of safety.

1.4.4 My expertise is ARBORICULTURE, any non-arboricultural references made within this report are made as a lay person.

2 SITE VISIT AND OBSERVATIONS

2.1 ***Site Visit*****:** I undertook a site visit on 29 May 2026. The tree was surveyed visually from the ground. No drilling or excavation was carried out on this occasion. The weather at the time of the visit was dry and still, visibility was adequate for the purposes of the visit.

2.2 ***Tree Survey Methodology:*** The survey was undertaken in accordance with the guiding principles of British Standard 5837:2012 '*Trees in Relation to Design, Demolition and Construction – Recommendations'* (BS5837) and the tree was assessed objectively and without reference or influence being given to any proposed site layout. Using 'Visual Tree Assessment' (VTA) techniques the trees were surveyed from the ground. VTA is a methodology, employed by arboriculturists, to evaluate the structural integrity of a tree, relying on observation of a tree's biomechanical and physiological features; this is the method generally adopted and is appropriate in this instance.

Further explanatory details regarding the survey methodology can be found at Appendix 1.

3 TREE RETENTION – GENERAL

3.1 ***Below Ground Constraints:*** to achieve any development various construction activities are required and great care and consideration needs to be given as to how such activity can proceed whilst avoiding damage to retained trees.

3.1.2 Generally, and contrary to common belief, in the UK, the majority of a tree's roots can be found in the upper 600mm of a soil (See Figures 2 & 3). To avoid damage to these roots, trees should be protected

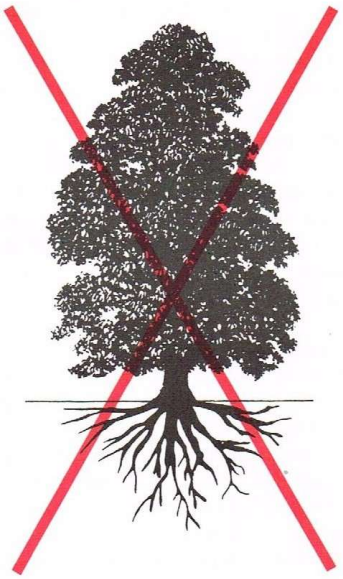

Figure 1. This is the commonly held idea of what a tree's root system is like. In fact it is quite wrong.

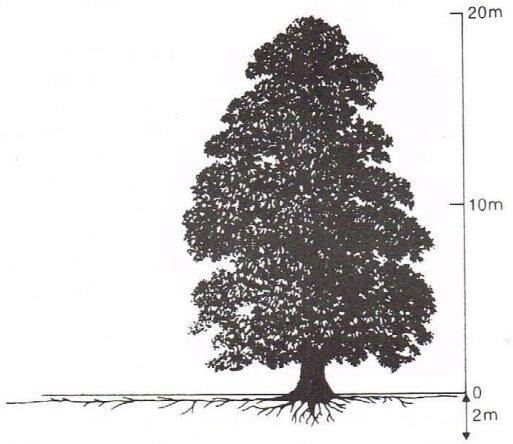

Figure 2. A tree's root system is typically fairly shallow (frequently no deeper than 2 m), but is widespreading, with the majority of roots found in the upper 60cm of soil.

Figures 2 & 3 AAIS (1995) '*Tree Root Systems*'.

4 ARBORICULTURALLY ACCEPTABLE CONSTRUCTION METHODS WITHIN RPA

4.1 ***Temporary Ground Protection*** - In some instances it may be advantageous to work within the RPA eg access a site, either for pedestrians or machinery.

BS5837 (2012) acknowledges this as a possibility and systems which dissipate any load applied, thus avoiding soil compaction and denaturing, are to be used eg see Appendix 2, also new temporary ground protection could comprise one of the following:

a) For pedestrian movements only, a single thickness of scaffold boards should be placed either on top of a driven scaffold frame, to form a suspended walkway, or on top of a compression resistant layer (e.g. 100 mm depth of woodchip), laid onto a geotextile.

b) For pedestrian operated plant up to a gross weight of 2t, proprietary, inter-linked ground protection boards could be placed on top of a compression resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile.

c) For wheeled or tracked construction traffic exceeding 2t gross weight, an alternative system (e.g. pre-cast reinforced concrete slabs) could be employed.

An engineer should be consulted regarding the design of a temporary access with the final specification being agreed with a Chartered Arboriculturist.

5 CONCLUSIONS

5.1 This report provides guidance for the design team and sets out the constraints relating to the trees on site. Tree survey and RPA detail can be found in the Tree Survey Schedule.

5.2 The findings of my survey are that to protect tree roots during all construction activity they must be protected using temporary ground protection.

6 BIBLIOGRAPHY

- Arboricultural Advisory and Information Service (1995), Research Note 130/95/ARB, '*Tree Root Systems*'.
- British Standard 5837:2012 '*Trees in Relation to Design, Demolition and Construction – Recommendations'.* BSI.
- British Standard 3998:2010 '*Recommendations for Tree Work'*. BSI.
- Mattheck, C., (2007), '*Updated Field Guide for Visual Tree Assessment'.*

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7 Tree Survey Schedule (Explanatory Notes Found at Appendix 1)

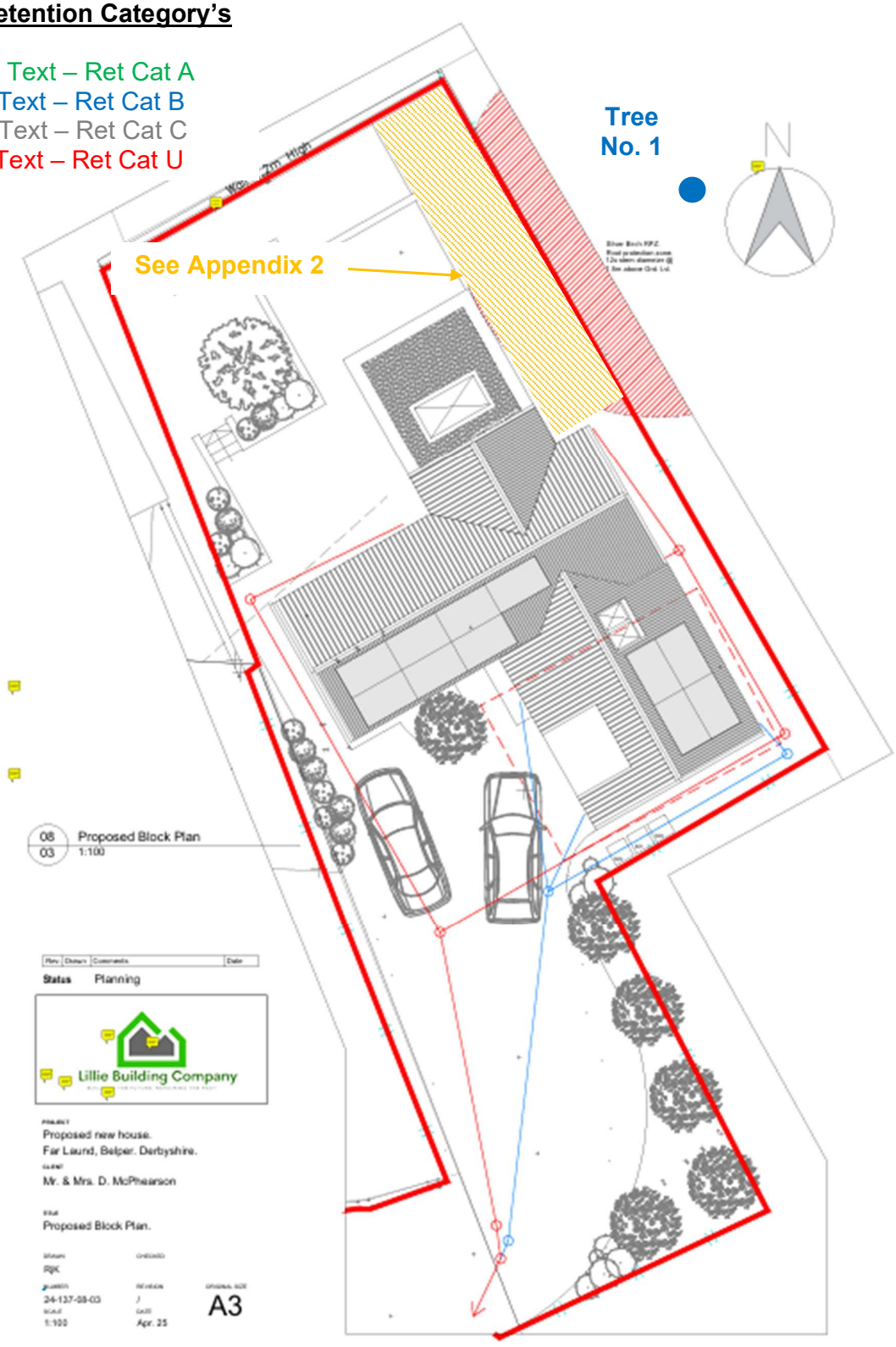
Tree No	Species	Ht (m)	Stem Dia (mm)	Branch Spread (m)				Crown Ht. (m)	Age Class	Cond	Comments/ Preliminary Recs.	Life Exp (yrs)	Ret Cat	RPA* (Lin M)	RPA** (M^2)
				N	E	S	W								
1#	Silver birch	14 (15)	500	5	5	5	5	2	Mat	A	No work required at this moment in time.	10-20	B	6.0	113

* RPA =The minimum distance, measured from the tree's trunk, at which tree protective barriers should usually be erected.
** RPA =The minimum area in M^2 around which tree protective barriers should usually be erected.
# = Access restricted, dimensions estimated.

7.1 Tree Survey Plan

Key to Retention Category's

Green Text – Ret Cat A
Blue Text – Ret Cat B
Grey Text – Ret Cat C
Red Text – Ret Cat U



8 APPENDICES

Appendix 1: Tree Survey Methodology

The survey was undertaken in accordance with the guiding principles of BS5837. Information recorded in the survey includes:

Species – the species identification is based on visual observations and the common English name of what the tree appeared to be is listed.

Tree Heights – are estimated in metres. Estimated mature heights are given in brackets.

Crown Height – the height to the lowest branch is estimated in metres.

Trunk Diameters – measured at 1.5 metres above ground and recorded in millimetres to the nearest 10mm.

Crown Radius – was recorded in metres along each of the cardinal points

Crown Height – height from ground level to lowest principal limb.

Age Class – recorded as follows:

Yng	-	Young tree; <1/3 of normal life expectancy
Mid	-	Middle aged tree; between 1/3 & 2/3 normal life expectancy
Mat	-	Mature tree; has attained optimum stature
OM	-	Over Mature tree; declining
Vet	-	Veteran tree; tree of great age which is of exceptional value culturally, in the landscape or for nature conservation.

The ***Condition*** of the trees is based upon a preliminary assessment categorised thus:

A - Good

B - Fair

C - Poor

D - Very Poor/Dead

Preliminary Recommendations – works required regardless of development proposals.

Life Expectancy – estimated; ie less than 10 years, 10-20 years, 20-40 years, more than 40 years.

A ***Retention Category*** is given as follows which corresponds with Table 1 of BS 5837' ie:

- **A** - Trees of a high quality and value, including public visual amenity value. It is usual for such trees to be retained unless the planning merits of a particular scheme or layout over-ride.

- **B** - Trees of moderate quality and value, including public visual amenity value. Such trees should be considered for retention.

- **C** - Trees with a stem diameter of less than 150mm or which are of low quality/value, including public visual amenity value and/or have and life expectancy of less than 10 years value. ***The retention of Category C trees should not be allowed to impose a constraint on development.*** Trees with a stem diameter of less than 150mm are classified as Retention Category C, they should be considered for transplanting.

- **U** - Trees in such a condition that they are unsuitable for retention. Where category U trees have identifiable conservation, heritage or landscape value, even though only for the short term (less than 10 years), they may be retained where they are (or can be) sited such that concerns over safety are at (or can be reduced to) acceptable levels.

It must be noted that Retention Categories are awarded purely on arboricultural/amenity grounds and that in some instances the planning merits of a particular scheme may well over-ride the retention of even those trees qualifying for Retention Category 'A'.

Root Protection Area (RPA) – In respect of all trees surveyed the RPA has been calculated and is given in the Tree Survey Schedule. The figures given represent both the radial distance, from the tree's trunk, at which the barriers should be erected and the entire area which should be encompassed by the barriers.

Appendix 2: Temporary Ground Protection

Ground-Guards

GreenTek

Ground protection and site access system

Ground-Guards are an "Instant Roadway" system of lightweight plastic panels, capable of taking vehicles of up to 50 tonnes weight.

Introduction The GreenTek Ground-Guards have become established as a proven alternative to the conventional method of stripping and stoning-up access roads on construction sites. By using this roadway system, ground damage and reinstatement work are minimised. This is an ideal method to use where there are tree roots under the surface as it avoids the need for excavation.

Applications The Ground-Guards site access system is designed to form temporary roads, car parks and footpaths. It is suitable for protecting grassed areas from erosion and rutting during construction projects and for the protection of tree roots where site access routes need to pass close to trees.

Green issues Ground-Guards are a very environmentally friendly product. They:

- Protect sensitive ground from erosion
- Are made from 100% recycled plastic, which is itself fully recyclable
- Provide a sustainable alternative to using up sheets of plywood for ground protection purposes

DESCRIPTION

The Ground-Guards site access system consists of virtually indestructible, lightweight plastic boards which clip together without tools to quickly form temporary roads, car parks and footpaths. They are made from 100% HDPE recycled plastic and are guaranteed unbreakable by vehicles of up to 50 tonnes.

These track mats can be easily moved around the site by just two people, without the need for a crane lorry.

Ground-Guard mats are available with a choice of different tread patterns. The "Standard" tread pattern creates a track way with a high level of traction for vehicles, whilst the "walk" pattern is designed for pedestrian walkways and event flooring.

Ground-Guards are also available with one side smooth which is ideal for trenching and utilities work as it enables the spoil to be easily backfilled into the trench afterwards.

When being used to protect tree roots, a base layer of Ground-Guard sheets should be covered by a cushioning layer of 150 mm of wood chippings. The Ground Guard trackway is then laid over the top of this in the normal way.





Dimensions Ground-Guard mats are available in sizes ranging from 1829 mm (6') x 610 mm (2') to 2438 mm (8') x 1219 mm (4'), with a choice of different tread patterns.

SUPPLY

GreenTek both supplies and hires Ground-Guards direct to construction companies nationally.

SERVICES

Ground Guards provides technical advice to specifiers and contractors. Brochures and samples are available on request.



Ground-Guard trackways may be used with a cushion of woodchips to protect tree roots



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