From: Neil Duffield
Sent: 05 September 2019 08:36
To: Hilary Saunders
Subject: NYM/2019/0497/FL Rose Engineering E11938- nymnp tree survey 05-09-19

Morning Hilary,
Please see attached the Tree Survey/Report as required for this application.

I trust this is as required but if you have any queries please let me know.

Kind regards
Neil

elliottconsultancyltd.
arboricultural consultants

NYMNPA

05/09/2019

Location:
Rose Engineering
Land off Fairfield Way
Whitby

Report Type:
Arboricultural Survey
Arboricultural Impact Assessment
Arboricultural Method Statement

Ref:
ARB/AE/2246

Date:
September 2019

Contents

Appendices

1 Introduction

1.1 This report has been prepared by Andrew Elliott of Elliott Consultancy Ltd on behalf of the applicant.

1.2 Elliott Consultancy Ltd was commissioned to visit the site to inspect the trees and to produce an arboricultural report in accordance with British Standard 5837:2012 '*Trees in Relation to Design, Demolition & Construction*'. An initial inspection of the trees was undertaken on the 20th August 2019.

1.3 **Scope of the report:**

- This report provides arboricultural information and advice in relation to the proposed re-development of the site – as shown within Appendix 5.
- It should be used to guide the construction process in order to minimise potential damage to retained trees.
- Section 4 provides a summary of the design proposals and their impact on the current tree population.
- Sections 5 & 6 provide a method statement that details all measures recommended for adequate tree protection including any special construction measures to be utilised.
- Within the Arboricultural Tasks Sequence Table (Appendix 2), is a timescale for implementation of these tree works and protective measures in reference to the development period.

1.4 **Prior to site works commencing, the Arboricultural Method Statement needs to be passed to the site manager or contractor and used as reference during the development period, with particular attention paid to Sections 5-6, and Appendices 3-6.**

2 Site Information

2.1 The site is situated on land off Fairfield Way Industrial Estate, from which access is taken, and is currently an area of disused ground to the rear of other industrial units. Figure 1 shows the extent of the site:

Figure 1: Survey extent highlighted (this may exceed the red-line of the proposals)

2.2 Tree cover within the site is negligible with the only tree cover being within the plantation group to the south (Group 1) and in the adjacent outgrown boundary hedge (Group 2) to the east.

2.3 Any visibility constraints encountered are noted within the survey data (Appendix 1).

3 Tree Quality Assessment

3.1 BS5837:2012 notes that all trees apart from those with stem diameters <150mm or classified as Category U should be viewed as a site constraint. When inspected, each tree and or group feature is assigned one of four categories that signify how suitable that tree/group would be for retention within any development proposals, and therefore the degree to which it should constrain the site. The four categories are as follows:

3.2.1 **Category A** trees are those of high quality and value, and of a condition whereby they could make a substantial contribution to the site. Such trees should be retained and offered adequate consideration during the design phase and physical protection during the construction phase in accordance with BS 5837:2012. This means keeping proposed features and alterations to ground levels outside of root protection areas and crown spreads to ensure that trees remain in adequate condition post-development.

3.2.2 **Category B** trees are those of moderate quality and value, and of a condition that still make a substantial contribution to the site. Category B trees should be retained wherever possible and offered adequate consideration during the design phase and physical protection during the construction phase in accordance with BS 5837:2012.

3.2.3 **Category C** trees are considered to be of low quality and value, or lacking stature, but of an adequate condition to remain in the short-term. These trees can also be retained if required but where they form a significant constraint to development their removal should be considered. Where they are to be retained they should be afforded adequate consideration during the design phase and physical protection during the construction phase in accordance with BS 5837:2012.

3.2.4 **Category U** trees are of such a condition that any existing value would be lost within 10 years. As a result it is recommended that Category U trees are not considered a constraint for development and are removed prior to construction commencing.

3.3 In addition to the four main categories explained above, each tree/group is assigned a sub-category which signifies its overriding value as determined by the surveyor, which is noted by adding a suffix of 1, 2 or 3 alongside the category letter. 1 signifies that the trees/groups main value is arboricultural e.g. it may be a particularly good example or may be rare. A 2 signifies that the overriding factor was due to the landscape value that the tree/group provides e.g. it may be part of a group feature such as a screen. A 3 indicates that a cultural factor was the overriding value e.g. it may have historical or commemorative importance.

3.4 All trees inspected adjacent to this site were classified as Category B2 trees as individually they generally have little merit, whereas they do provide some screening value when viewed from off-site due to their collective value.

4 Design Proposals and Arboricultural Impact

4.1 This section concentrates on the proposals and how they relate to the trees on the site. The proposals include the construction of a new industrial unit and access road (proposals are shown within Appendix 5).

4.2 **Potential Conflict 1: Loss of trees to allow design.**

No trees are to be removed for the construction of the new unit. Group 2 requires removal to allow for the construction of a new 2m high security fence.

Figure 2: Design & tree locations

Mitigation / Countermeasure: No countermeasures or mitigation are required as no trees will be removed to allow construction of the unit.

4.3 **Potential Conflict 2: Damage to retained trees during construction.**

During any construction process retained trees in Group 1 could be damaged due a variety of reasons and construction pressures.

Mitigation / Countermeasure: All retained trees in group 1 can be fenced off prior to any works being undertaken on site. Although it is proposed that a 2m high security fence is to be installed, the root protection areas extend further than the new fence-line and therefore it will be necessary to install a secondary temporary fence-line in the locations shown at Appendix 6 to ensure no damage is caused to underlying roots. The fencing can be in accordance with **BS5837:2012** '*Trees in relation to design, demolition and construction – Recommendations*', but it would be expected that given the proposals and the tree cover locations that a lesser Heras type fencing would be more appropriate (see Appendix 3)

5 Pre-Development and Site Preparation Works

5.1 Refer to Appendix 2 for stage specific tasks.

5.2 Prior to any site works the tree work will be undertaken – see Appendix 2. This work must be undertaken by a suitably experienced Arborist and be in accordance with BS3998 'Tree works – Recommendations' 2010.

5.3 Once the aforementioned tasks have been completed and prior to any site work the tree protection barrier need to be erected as per the Tree Protection Plan (Appendix 6). The barrier must encompass the root protection areas and crown extents of the retained trees to ensure that these areas remain free from disturbance.

3.3.1 The barriers needs to be installed according to the locations found on the Tree Protection Plan, Appendix 6 and conform to the specification within Appendix 3. All weather notices should be attached to the fencing marked with the following: '*Construction Exclusion Zone - Keep Out'* (a notice is provided within Appendix 3b).

6 Tree protection measures during access construction

6.1 Refer to Appendix 3 for stage specific tasks.

6.2 All ground levels where trees are located should be maintained. Changes to soil levels adjacent to trees can severely affect the trees structural integrity and its ability to gain moisture and nutrients from the surrounding soil. Unavoidable level changes that may affect retained trees, and not already accounted for within this method statement, should be assessed by a qualified arboriculturalist so that any mitigation or special construction techniques can be considered.

6.3 Building material storage and operations that can contaminate soil, such as cement mixing, must be confined to areas outside the construction exclusion zone.

6.4 Fires should not be lit within 5m of the foliage or drip line of the tree. Care should be taken and the fire should not be allowed to become large, and the wind direction noted.

6.5 The trees should not be used to attach notices, cables or other services.

6.6 The installation of any underground services near or adjacent to trees on the site shall conform to the requirements of National Joint Utilities Group publication Volume 4 (November 2007). Preliminary engineering drawings show utilities connections are to be made outside of retained tree RPA's only.

Appendix 1: Tree Data

Key to tree survey headings:

- **Species –** Common name of each tree
- **DBH –** Average 'Diameter at breast height' in mm taken on stem at 1.5m.
- **Hgt –** Average Height in metres of each tree
- **Average spread:** Crown spread in metres to from centre of stem
- **CH –** Crown clearance from ground to lowest branches
- **Age –** Age-class of tree: Y = Young, SM = Semi-mature, M = Mature, OM = Over-mature.
- **General observations –** details both Physiological and structural Condition
- **Est Con –** Estimated life expectancy / contribution to the landscape (in years): 0-10, 10-20, 20-40, 40+
- **Recommendations –** Any recommendations that, regardless of land use, require attention.
- **BS. Cat –** Retention category. **A**, **B**, **C**, or **U**. For retained trees **A** being of the highest quality, **C** being the lowest. Category **U** trees for removal regardless of design. Category A, B, & C are given sub-catagories1, 2, & 3 – details of which are shown in appendices.

Group Data

Group Number	Dominant Species	Lesser Species	DBH	Average Height	Age	Average Spread	Condition/Comments	Recommendations	EstCont	BS Cat
1	Hybrid Black Poplar	Willow spp Hawthorn Hazel Wild Cherry	25	12	SM	2	Plantation dominated by tall narrow Poplars on frontage of group. Planted at 3-4m spaces. X3 trees nearest are all Poplars 25cm. Group value rather than individual.	No work required	20+	B2
2	Hawthorn Field Maple Blackthorn		30	4	M	2	Short section of remnant outgrown hedgerow. Broken connectivity.	No work required	20+	B2

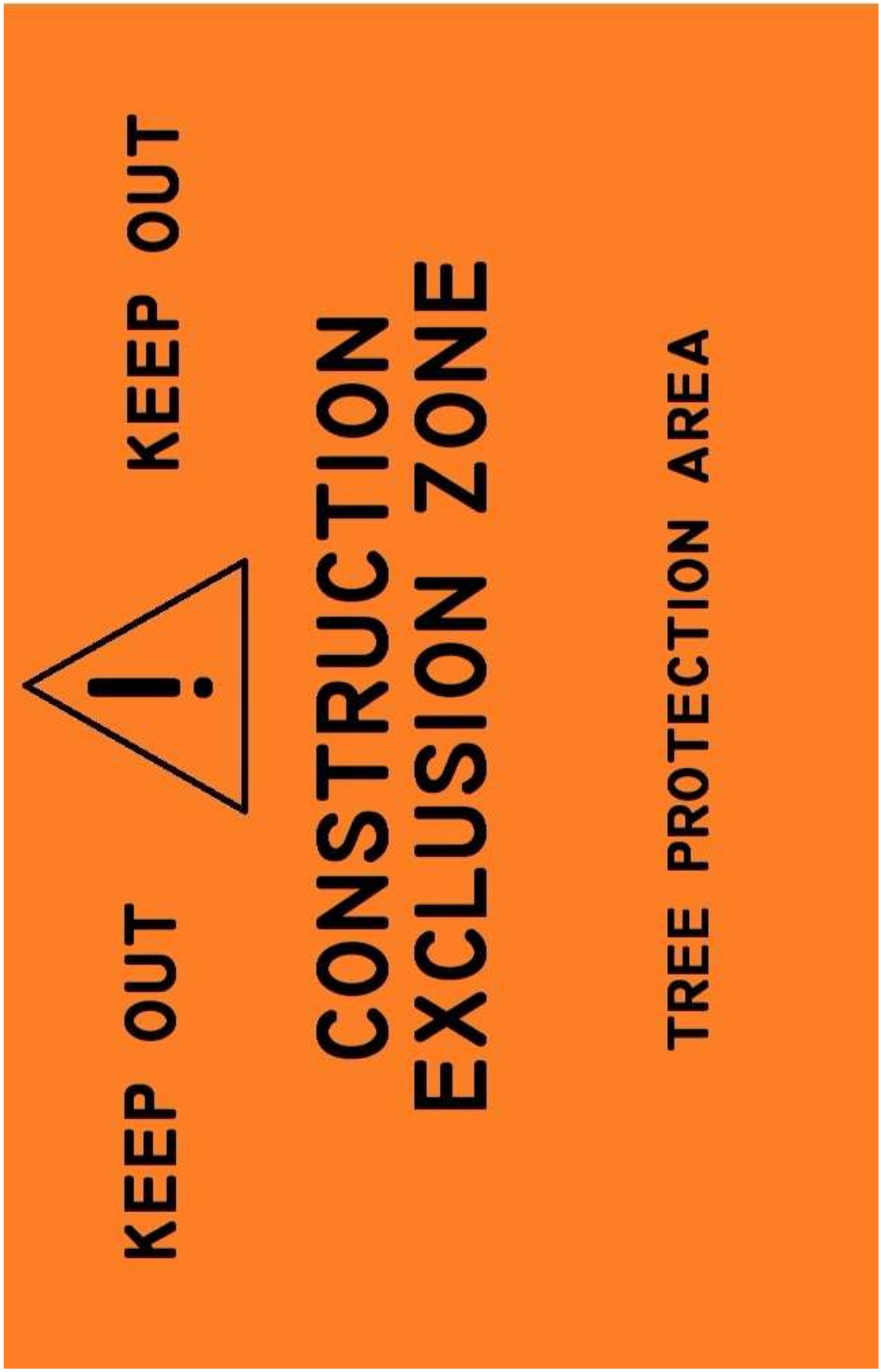
Note: Recommendations are arboriculturally based and do not relate to any development proposals at this stage. Such information would be detailed within an Arboricultural Method Statement

Appendix 2: Arboricultural Tasks Sequence Tables

Tree or Group Number	Pre-Construction Stage	Construction Stage	Post Construction Stage
Group 2	Fell.		
All trees.	Adhere to Section 5. Erect Protection Fenceline. Attach notice in Appendix 3b.	Adhere to specification within Section 6. Monitor integrity of fencing and tree protection area.	

Appendix 3: Tree Protection Fence

Appendix 3b: Construction Exclusion Zone Notice



Conveyor

4

1

3

2

Tree Group 2
B2

Tree Group 1
B2

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arboricultural consultants

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North Yorkshire YO21 2PF

Root Protection Area - to remain free from disturbance

Group of Trees

Photo Number, Position and Aspect

1/G1 Tree/Group

A1/B1/
C1/U BS5837 Retention Category

APPENDIX 4

Drawing Title: Tree Constraints Plan

Project: Rose Engineering

Drawing Number: ARB/AE/2246/TCP

Date: September 2019

Scale: 1:500 @ A3

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North Yorkshire YO21 2PF

Root Protection Area - to remain free from disturbance

Group of Trees

1/G1 Tree/Group

A1/B1/ C1/U BS5837 Retention Category

Group of Trees Removed for Construction

APPENDIX 5

Drawing Title: Tree Impact Plan

Project: Rose Engineering

Drawing Number: ARB/AE/2246/TIP

Date: September 2019

Scale: 1:500 @ A3

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Root Protection Area - to remain free from disturbance

Group of Trees

1/G1 Tree/Group

A1/B1/ C1/U BS5837 Retention Category

Tree Protection Fenceline

APPENDIX 6

Drawing Title: Tree Protection Plan

Project: Rose Engineering

Drawing Number: ARB/AE/2246/TpP

Date: September 2019

Scale: 1:250 @ A3