Northumberland TREE SURVEYS Ltd

Pre-Development: Arboricultural Impact Assessment
Harbottle

Produced for Mr G O'Kane

By Shaun Scott BSc, FdSc, MArborA

Arboricultural ASSOCIATION
Professional Member

Northumberland TREE SURVEYS Ltd

Contents

Details and Location

Location:	Harbottle, Northumberland
Client:	Mr G O'Kane, The Orchards, Harbottle, NE65 7DH
Grid ref:	NT 93918 04572 (X: 393918 Y; 604572)
Site Survey date:	22-07-20
Consultant:	Shaun Scott FdSc, BSc Arb, MArborA

Introduction

Northumberland Tree Surveys (NTS) has been instructed by the client to survey and inspect trees for a proposed building development at Harbottle, Northumberland. The purpose of the survey is to produce a report on tree status within the area of development. To present findings to the client, architect and in support of any planning application to the local authority. The survey and report have been produced in accordance with best practice and the guidelines within the British Standard 5837: (2012) Trees in relation to Construction Sites.

The client has described their intention to restore and develop a disused single storey stone building. The site has been identified by the client in person and highlighted within the attached plan (see plan no 1)

NTS has not received any formal plans or information with regards to building methods, process and specifications.

Observations have been made from ground level. Some measurements are estimated.

Overview

The site consists of a dilapidated single storey stone building and agricultural grassland. The location is surrounded by mature deciduous and coniferous trees to the North, East and West. The building is in close proximity to the South bank of the River Coquet and within the Northumberland National Park.

Eight individual trees were surveyed, small trees and shrubs do not form part of the assessment.

Tree Protection

Trees are subject to statutory law and protected in English law. Tree protection can include Tree Preservation Orders (TPO) and Conservation Areas. The felling of large volumes of trees can also require a felling licence. The trees of this site are currently not subject to a TPO and are not within a Conservation area.

Site visit

The site was inspected on Monday 22nd July 2020. The weather conditions were fine with good visibility. The survey was restricted to the area of development, surrounding grassland and river bank.

Arboricultural Impact Appraisal (pre-development)

Table 1

Impact	Reason	Important trees		Unimportant trees
		A	B	C
Trees to be removed	Building/ construction or proximity			
Retained trees which may be affected by Root Protection Area(RPA) intrusion	Surfacing, ground works, foundations, landscaping		T1,3,4,5,6,7,8	T2
Retained trees to be pruned to fit in the development proposal	Space for building and works		T1, 5	

Small trees and shrubbery of 75 mm stem diameter or less at 1.5m from ground level are not surveyed in detail and recognised as having a lower value rating.

Findings

Of the trees surveyed seven are classified having a tree quality assessment value of, B2 (T1,3,4,5,6,7,8).These trees are valued as a collective group rather than as individuals. They contribute greatly to the surrounding landscape and form an important feature of the locality.

We recommend not to remove any trees to allow this development (see table 1);

T1 has a large, exposed branch and is growing towards the North West from the lower mid crown. The branch is in close proximity to building. It would be advantageous to reduce prior to any development and limit any future risk of damage to the property, or tree.

T5 It is recommended that small dead wood is removed from the crown and a 10%-15% crown reduction is carried out. In order to reduce some overhanging branches to the the south side of the main stem and development area.

Summary

T1and T5 require a small amount of work in order to assist the development. To remove and reduce some overhanging branches, which in time may present further issues for the building. The eight trees are not within close public view and there is no requirement to remove any tree to allow the development.

The trees are within close proximity to the building and their Root Protection Area (RPA) fully covers the development site (see plan no 2 Tree Constraints). Special building techniques must be employed when works are carried out within the RPA. A “No Dig” building strategy should be implemented however, may be unachievable for some areas of the development i.e. services installation. Where ground excavation works are required, a stand and watch policy and hand excavation can be implemented.

At the time of inspection some scaffolding is positioned adjacent to the building and building material is stored in close proximity to T1.

It is advised prior to any authorised building works the burning of waste, storage of building materials, chemicals and machinery is prohibited from within the RPA area as highlighted within plan 2.

A finalTree Protection Plan and Method Statement will be produced by NTS following the receipt of plans and specifications from the client. The documents will set out works and procedures to ensure tree health during and post construction.

The trees of this sight are large and mature. It is to be expected, they will cast some shade onto the site. Seasonal leaf litter and there is a possibility of “honey dew” falling onto the building from aphids when colonising the adjacent lime trees.

Work schedule prior to development

Table 2

T1	Remove epicormic growth and suckers from buttress Removed extended branch as per Fig back to main stem	Re- inspect within 6 months
T3	Remove epicormic growth and suckers from buttress. Remove deadwood from crown and prune clear of building	Re- inspect within 6 months
T5	Remove epicormic growth and suckers from buttress. Remove deadwood and reduce crown by 10-15% to clear from building	Re- inspect within 6 months
T6	Remove epicormic growth and suckers from buttress.	Re- inspect within 6 months
T7	Prune clear of building (east branch mid crown) and crown by 10% to reduce wind loading	Monitor as per Valid tolerable risk land owners strategy

All tree works should be carried out by a qualified person and in accordance with BS 3998: 2010

Tree amenity value

The trees on this site will provide shade, cooling, wildlife habitat, colour shape and form. They are an important part of the landscape and contribute greatly to the area.

Tree planting

The client has indicated no objection to some additional tree planting within the development area.

Ground works and foundations

The client has described substantial renovation works are required, with a view to make the building water proof and suitable for habitation. To date no plans have been received and this report is a pre development arboricultural appraisal. Re-assessment of this appraisal, Method statement and Tree Protection Plan will be required and produced following the finalisation of plans.

It should be noted that when working within the Root Protection Area (RPA) of trees, special construction techniques must be employed. It is recommended a qualified contractor and suitable materials are used when developing, laying and surfacing within any RPA to ensure tree health.

Healthy trees require a permeable ground surface to allow the roots oxygen and moisture. Where required, flexible coverings should be used adjacent to tree stems in order to ensure capacity for future growth.

Permeable Asphalt, flexible and other porous coverings can be used when covering RPA of retained trees, it is recommended a “No dig” development system is implemented.

Benefits of using a permeable solution are;

- Permeability for air and water to reach tree roots
- Water run off reduction
- Reduced heat island effect
- Maintain water quality
- Reduced material quantities and cost effectiveness.

Development work adjacent to retained trees and within their RPA, require tree protective measures and appropriate construction management.

Retained trees will require areas of exclusion during construction and working techniques must adhere to minimising root disturbance. In order to eliminate risk of harm during construction operations and development.

The re-stocking of any young trees is recommended following all other construction works, and should be the final phase of landscape development.

Provided the protective measures and the appropriate construction techniques are employed during the site development, the health of the remaining trees should be maintained.

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Northumberland Tree Surveys Ltd

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Appendix:

Supporting Documents

The following documents are forwarded via email to the client in support of this document;

- Tree survey plan 1
- Tree constraints plan 2
- Tree data survey data

Tree Assessment colour coding key

Table 2

Tree category	Colour marker	Condition
U	Red	Unsuitable for retention
C	Grey	Trees of low quality or stem below 150 mm. These trees can offer some value and should not affect design.
B	Blue	Moderate quality trees making a contribution of a minimum 20 years. Where practical site design should allow retention.
A	Green	High quality and contribute greatly to the area, with a life expectancy of 40 plus years. Efforts should be made to retain where practicable.

RPA

RPA radius: The RPA radius has been calculated by multiplying the trunk diameter by 12 when measured at 1.5m above the ground level. RPA should be plotted as a circle surrounding the tree and vertical to the main stem. Where site conditions require the RPA can be interpreted as a square surrounding the trunk. Based on these recommendation the closest point to the perimeter of that square creates a minimum barrier distance. It is always recommended when possible tree protection is positioned at the full RPA extent of radius.

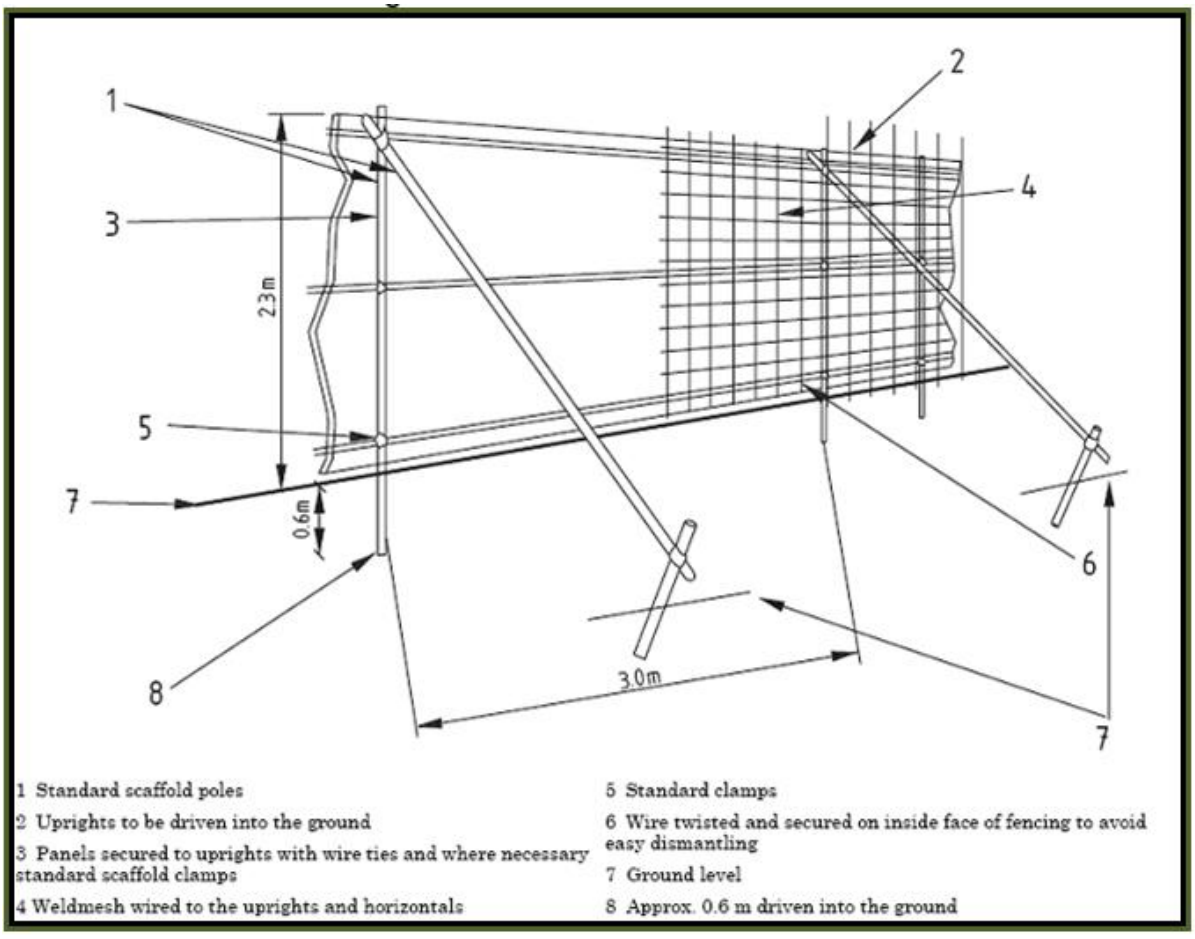
The RPA may be changed in shape, taking into account local site factors as assessed by the surveyor. The minimum barrier distance is assessed according to the recommendations set out in 4.6.2 of BS 5837.

RPA measurements table

Table 3

Tree no	DBH Diameter at Breast height mm	RPA radius (m)	RPA area (m^2)
1	1380	15	706.95
2	500	6	113.11
3	420	5.04	79.81
4	580	6.96	152.2
5	950	11.4	408.33
6	700	8.4	221.7
7	1330	15	706.95
8	708	8.5	227.01

Example of Root Protection Barrier as per BS 5837:2012



Tree data;

See attached tree data PDF

Tree images of required tree work

Figure 1 T1-8 from south aspect

Figure 2 areas of work recommendations