AMENDED

Arboricultural Consultancy

New Oxford House, George Street, Grimsby, North East Lincolnshire DN31 1HB

T | 01472 324271 or 01472 323280

M | 07919 304536 or 07971 804783

Arboricultural Method Statement

Arboricultural Method Statement and Tree Protection Plan
(in accordance with BS 5837:2012 Trees in Relation to Design, Demolition and Construction)

For:

Client: Mr. Ben Pepperell

Location: Land at Bonby House, Carr Lane, Bonby, nr. Brigg, Lincolnshire, DN20 0PX

Date: 13th January 2021

(Note: this report should be read in conjunction with the attached plans)

AMS Author: Dina J. Mysko FdSc Arb / TechArborA
Arboricultural Consultant

Checked & Approved By: Andrew Hudson ND Btec Forestry/Arb / TechArborA
On: 18/06/2021 *Senior Arboricultural Consultant*

Arboricultural Consultancy

Client Details: Mr. Ben Pepperell
Bonby House
Carr Lane
Bonby
Nr. Brigg
Lincolnshire
DN20 0PX

Agent Details: Blue Forest
The Studio
Bensfield Farm
Beech Hill
Wadhurst
East Sussex
TN5 6JR
W: www.blueforest.com

Contact: Sophie Nightingale
Structural Engineer / Designer
E: [redacted]
M: [redacted]
T: [redacted]

Arboricultural Consultancy

Contents

Note: This AMS should be read in conjunction with the 'Ground Screw Post Anchor Construction Method Statement' – Blue Forest (UK) Ltd.

Arboricultural Consultancy

1.0 Introduction

The purpose of this method statement is to evaluate the direct and indirect effects of the design/layout and to ensure good practise in the protection of trees during the construction of this development.

1.1 ENGIE Arboricultural Services have been instructed to prepare this Arboricultural Method Statement and Tree Protection Plan for this development, based on the recommendations and guidance outlined within the BS 5837:2012 'Trees in relation to design, demolition and construction – Recommendations'.

1.2 This method statement should be included as part of the specification and schedule of works and issued to all relevant parties including the building contractor and sub-contractors.

1.3 Scope of Recommendations and Techniques

This method statement outlines methods and techniques for preserving the requirements trees need in order to survive. The soil environment for retained trees can be protected throughout the course of development activities.

1.4 Site Supervision

An arboricultural consultant should be appointed by the developer for advice on the tree management for the site and to attend meetings, as set out within this method statement.

1.5 Description of Development

It is proposed to construct a family treehouse around existing trees on land associated with Bonby House. The proposed treehouse will include an entrance deck connected to the main treehouse space with a separate dining deck accessible via an external deck and rope bridge. The treehouse is to be supported on posts from the ground and built around the existing trees.

1.6 Site Description

The site is situated on land associated with residential property Bonby House in the village of Bonby. The proposed site is located in the central and eastern area of a large amenity garden associated with the property, and comprises of a number of mature trees, smaller trees, shrubs and other vegetation. Access to the site is via a formal stone driveway off Carr Lane. The south-western area of the proposed site extends into a grassed area enclosed by a 2m high post and wire fence containing a dog kennel and mature tree. A small watercourse runs through the proposed site from west to east. The land levels are relatively level in the southern part of the site with the levels gradually ascending northwards, beyond the watercourse. The proposed site boundaries open into the rest of the amenity garden space, apart from a small section of boundary fencing separating the site from neighbouring land to the east. A number of boundary treatments enclose the existing property and amenity garden itself. 2m high close board fencing defines the boundary with neighbouring property to the east and west. Hedgerow defines the southern boundary with Carr Lane with small sections of brick wall at the access point towards the western end of the boundary. Further north, south and west of the site the land use is predominantly agricultural farmland with a few detached residential dwellings. The land further east and south east is mostly residential and the heart of the village on Bonby itself is situated approx. 0.3 miles to the south-east. The main arterial road, the A15, is located approx. 2miles east of the site providing connections between the Humber Bridge and Humber Estuary to the north and the M180 motorway to the south. The town of Barton-upon-Humber is located approx. 4 miles north east of the site.

Arboricultural Consultancy

2.0 Status of the Site

The Local Planning Authority (LPA) is North Lincolnshire Council. In accordance with the LPA's online mapping service, accessed on 24th November 2020, it was confirmed that the site and land adjacent to the site is not within a conservation area, however, it was confirmed that there are trees within the site and on land adjacent afforded protection by virtue of a Tree Preservation Order (TPO).

TPO Title: *County of Lincoln, Parts of Lindsey Tree Preservation (Bonby) Order, 1960*

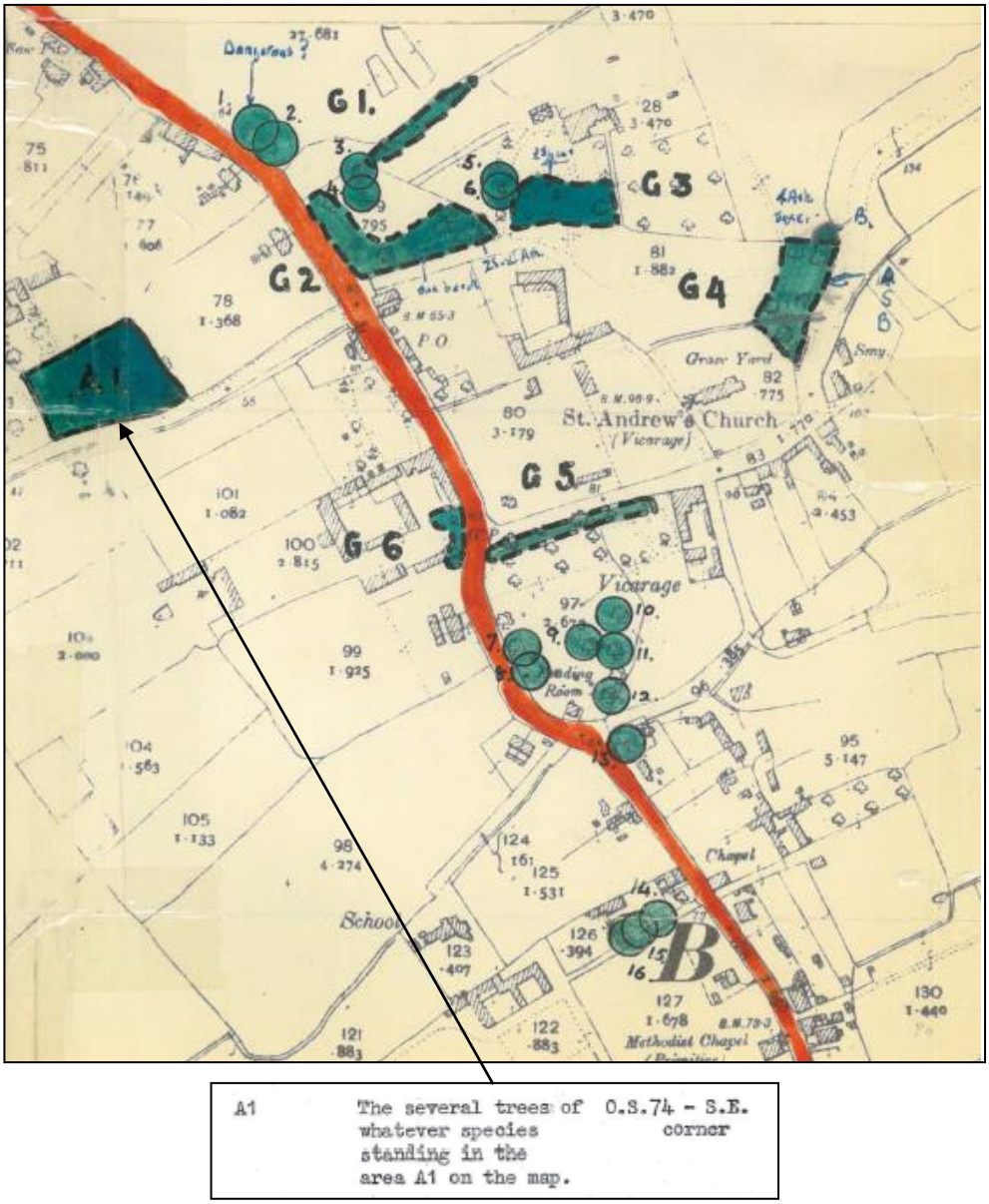


Image source: North Lincolnshire Council - *County of Lincoln, Parts of Lindsey Tree Preservation (Bonby) Order, 1960*

Note: Any works to protected trees outside of a planning permission will need permission from the LPA

Arboricultural Consultancy

3.0 Arboricultural Method Statement (AMS)

3.1 Pre-Development Tree Work

Prior to any construction activity taking place the recommended tree works should be completed.

3.2 Specification of Tree Works:

In accordance with the design/layout tree works are required and specified to facilitate the successful development of the site (see '3.3 Schedule of Tree Works' below and Appendix "A" – 'Tree Retention and Removal Plan' of the AIA). Reference should also be made to Appendix "A" – 'Tree Protection Plan' at the end of this method statement.

3.3 Schedule of Tree Works:

Trees to be removed

Trees identified for remedial works

Individual Trees

- T1 – Remove lowest branch north-west at 3m. Lift secondary and tertiary branches only, up to approx. 7m from north-west side of canopy. Clean out to remove any dead, diseased, crossing, duplicating branches.
- T2 – Fell
- T3 – Fell
- T4 – Clean stem to remove 7 x lowest branches from south-east, south and south-west sides, up to approx. 5m. Lift secondary and tertiary branches only, up to approx. 8m from south-east, south and south-west sides of canopy. Clean out to remove any dead, diseased, crossing, duplicating branches.
- T5 – Clean stem to remove 2 x lowest branches south-east and 4 x lowest branches north-west, overhanging stream, up to approx. 4m. Lift secondary and tertiary branches only, up to approx. 6m from north-west side of canopy. Clean out to remove any dead, diseased, crossing, duplicating branches.
- T6 – Sever ivy at base and remove first 6m. Clean stem to remove basal and epicormic suckered growth up to approx. 7m. Clean out to remove any dead, diseased, crossing, duplicating branches.
- T7 – No works recommended
- T8 – Remove lowest branch extending north-east and lift canopy to cut back only secondary branches up to approx. 3m north-east and east over access/driveway.
- T9 – No works recommended
- T10 - No works recommended

Groups of Trees

- G1 - No works recommended

Note: *Competent contractors must be appointed. All works should be carried out in accordance with the British Standard BS 3998:2010 Tree Work: Recommendations or any subsequent updates*

Note: *All tree works must be completed to the satisfaction of the Local Authority Tree Officer before any other works begin*

Arboricultural Consultancy

3.4 Arboricultural Supervision (Pre-Commencement of Development)

A pre-commencement meeting should be held on site before any site clearance, ground works and construction work begins. This would normally be attended by the site manager, the arboricultural consultant and a local planning authority ("LPA") representative, preferably the Local Authority Tree Officer. In the event that an LPA representative declines to be present, the arboricultural consultant should inform the LPA in writing of the details of the meeting. This meeting should include the following:

- Inspection of pre-development tree works to ensure works have been carried out in accordance with the approved specification of works and has been carried out to the correct standards.
- Any additional tree works expected, outside of the approved specification of works will be agreed and recorded.
- All tree protection measures detailed in this method statement should be fully discussed so that all aspects of implementation and sequencing are understood by all the parties.
- Any specialist engineered methods should be fully discussed so that all aspects of implementation and sequencing are understood by all the parties.
- The details of the programme of tree protection, no-dig solution and foundation design, if required, should be agreed and finalised.
- Any site supervision arrangements between the arboricultural consultant and developer should be agreed and finalised. Including any site visits deemed necessary, by a local planning authority ("LPA") representative.

Arboricultural Consultancy

3.5 Installation of Tree Protection Measures

Trees will be protected by barriers and as described in Appendix "A". The positioning of the barriers is also shown in Appendix "A". The barriers will form an exclusion zone that will be regarded as sacrosanct. Vertical barriers will be installed as soon as the pre-development tree work is complete. Once erected the barriers should be regarded as sacrosanct and should not be removed or altered without approval from the LPA.

3.6 The barriers should be fit for the purpose of excluding all construction activity. For this site the barrier should consist of 2m tall, welded mesh panels on rubber or concrete feet joined together using a minimum of two anti-tamper couplers, installed so they can only be removed from inside the fence. The panels should be supported on the inner side by stabiliser struts, which would normally be attached to a base plate secured with ground pins (see Appendix "A"). All weather notices should be securely attached to the barrier with words such as "*Construction Exclusion Zone – KEEP OUT! Removing of moving these barriers may result in a breach of planning conditions*".

3.7 The ground protection should be fit for the purpose of pedestrian-operated plant movements up to a gross weight of 2 tonnes. For this site the ground protection should consist of proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150mm depth of woodchip), laid onto a geotextile membrane.

3.8 The primary concern for the protection of trees on this site is to protect, improve and maintain the tree's micro-environment/root system.

3.9 Tree stem protection from potential impact should be installed to trees T4 and T5, if practicable. This should consist of 3 to 4 layers of hessian sacking wrapped around the tree stem to a height of approx. 2m, secured in place by twine or wire. Onto this add two layers of chestnut paling, wrapped to an approx. height of 2m and secured in place with wire, as described and illustrated in Appendix "A".

3.10 Arboricultural Inspection (Tree Protection Measures)

Once protective barriers, ground protection and tree stem protection have been installed, prior to any other works taking place on site, all tree protective measures will be checked and approved in writing by the appointed arboricultural consultant and/or the Local Authority Tree Officer. Arrangements will be made at a convenient time for the arboricultural consultant and/or Local Authority Tree Officer to carry out an inspection of the site.

Arboricultural Consultancy

3.11 Detail for Specification for Protective Barrier

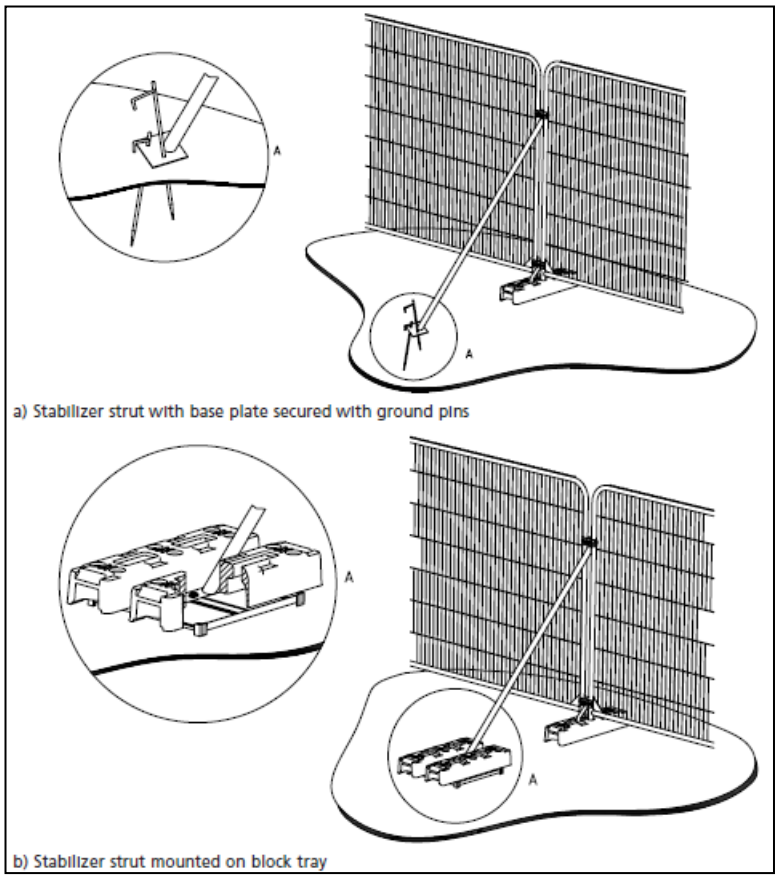


Image source: © The British Standards Institution - *BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations* – Above-ground stabilising system

Arboricultural Consultancy

3.12 Construction Phase

Prior to works starting all site personnel including sub-contractors should be inducted in the requirements expected in order to ensure the future health of trees. Begin main site works.

3.13 Installation of Foundations

In accordance with the design/layout the treehouse is expected to be constructed within the RPA of retained trees. However, it is proposed to build the treehouse around the existing trees, which will in turn be supported by a number of posts extending from screw piles inserted into the ground. It is considered that this method of construction will have minimal impact of the trees and their rooting environment (see 'Ground Screw Post Anchor Construction Method Statement' – Blue Forest (UK) Ltd). On this basis, there are no special requirements for foundation design, however, it should be taken into consideration that there are solutions for inserting structures close to trees should matters change.

3.14 Installation of Services

When considering development for this site the installation of services must be kept as far as practically possible from the root protection area (RPA) of any retained trees.

3.15 Trenching near trees by conventional means, using a mechanical excavator, inevitably causes root loss, as the bucket easily rips through roots. For services such as foul, surface, electric, gas, BT etc., the most practical solution would be to run all services through one trench. Where encroachment into the RPA cannot be avoided trench-less techniques should be adopted. An alternative would be to hand dig a trench minimising the cutting of roots. Pipes and ducted cables can then be thread through enabling installation with very little damage, provided that the borehole is small and deeper than the main lateral roots.

3.16 In the UK, the usual guidelines for trenching by utility companies are provided by NJUG Volume 4 (previously NJUG 10), which is available to download at http://www.njug.org.uk/publications/. By agreeing to the guidelines to be followed during trenching, all parties are assured that problems can be solved using a common set of criteria. Supervisors from the appointed contractor should direct operatives to follow the agreed practices and it is quite likely that the Local Authority Tree Officer will monitor for compliance.

3.17 Main Site Construction Works

Begin the main site works for the construction of the treehouse and associated infrastructure. The protective fencing will seal off the exclusion zones and temporary ground protection will preserve existing ground conditions, as detailed in the Tree Protection Plan (see Appendix "A"). The protective fencing, ground protection and tree stem protection should only be removed once all the construction works are complete.

3.18 Construction Phase Complete

Once all construction activity has finished on site the protective fencing, ground protection and tree stem protection can be removed. Any post development landscape finishes should take into account existing trees and any deep cultivation within the RPA of the trees should be avoided.

Arboricultural Consultancy

3.19 Snagging

During construction/development activities, should there be a need for any variations to the scheme of tree protection and/or methods and techniques, whether planned or reactive, these variations shall be agreed in writing by the Local Authority Tree Officer.

3.20 During construction/development activities, in the event of incidents likely to result in the loss of trees that are to be retained then the site manager or Arboricultural Consultant shall notify the LPA Tree Officer of the incident within 48 hours.

3.21 The tree protective measures will seal off the exclusion zone and preserve the existing ground conditions, as detailed in the Tree Protection Plan (Appendix “A”). The tree protection measures should only be removed once all construction activities are complete.

Arboricultural Consultancy

4.0 Key Personnel

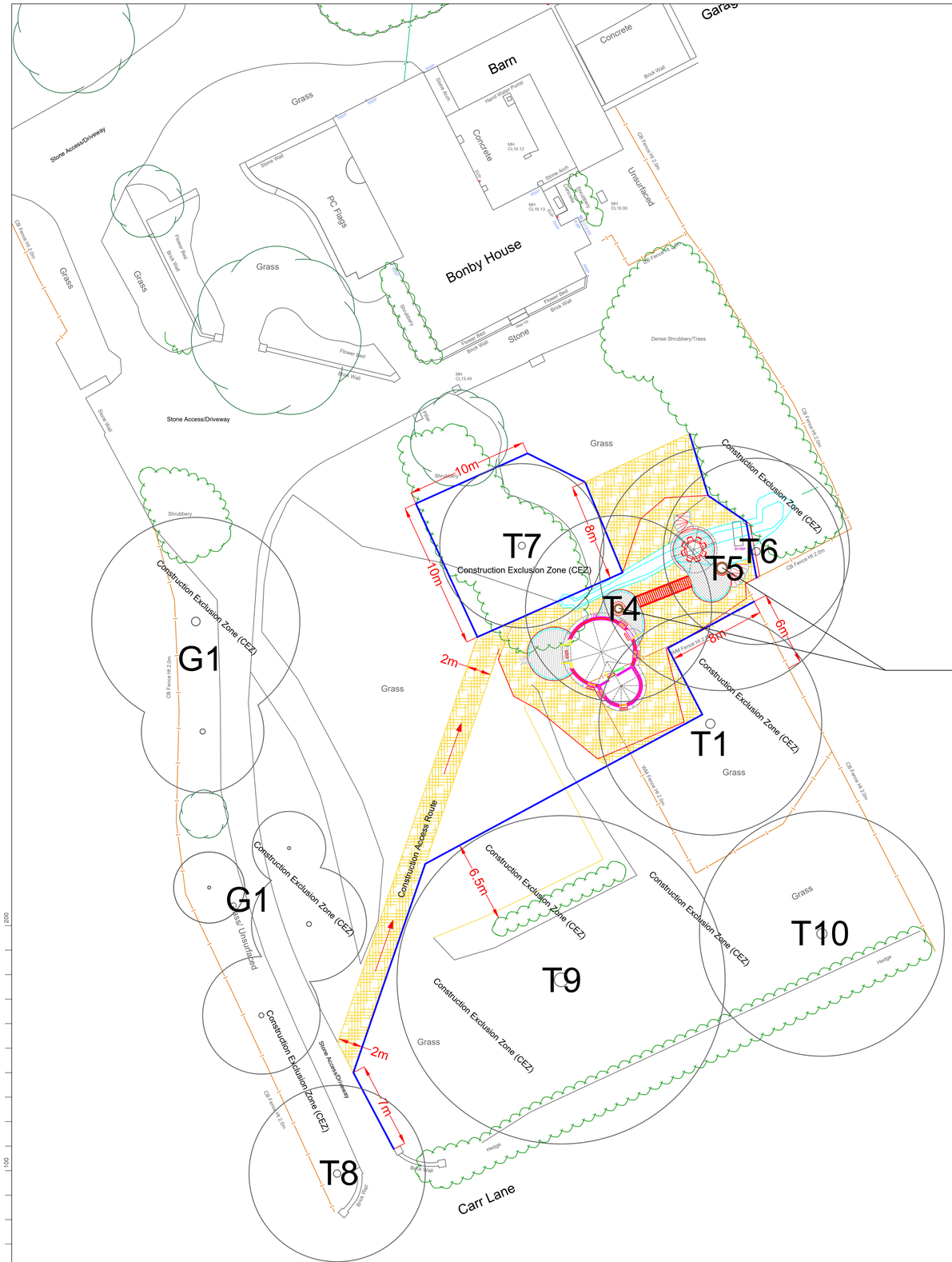
A list of the known contact details of the relevant parties is as follows:

Role	Name	Company
Arboricultural Consultant -	Dina Mysko	Engie Arboricultural Services New Oxford House George Street Grimsby North East Lincolnshire DN31 1HB M: 07971 804783 E: dina.mysko@engie.com
Agent -	Sophie Nightingale (Structural Engineer / Designer)	Blue Forest (UK) Limited The Studio Bensfield Farm Beech Hill Wadhurst East Sussex TN5 6JR E: sophie@blueforest.com M: 07811 450 470 T: 01892 750 090
Environment Officer (Trees and Landscape) – Local Planning Authority	Andrea Brocklebank	North Lincolnshire Council Transport, Highways and Environment Directorate of Operations North Lincolnshire Council Tel: 01724 297000 E. Andrea.Brocklebank@northlincs.gov.uk

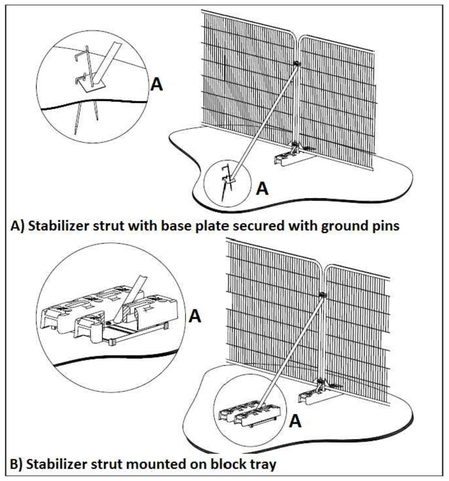
Arboricultural Consultancy

5.0 Summary and Phasing of Works

Phased Project Management of Tree Issues Throughout Development	
Action	**Summary of Detail**
Pre-Development Tree Work - Prior to any construction activity taking place the recommended tree works should take place.	As specified within this Arboricultural Method Statement: Schedule of Tree Works Page 6 (3.3) - Works to trees: T1, T2, T3, T4, T5, T6 and T8
Arboricultural Supervision - A pre-commencement meeting should be held on site before any of the site clearance, ground works and construction work begins	• Inspection of pre-development tree works to ensure works have been carried out in accordance with the approved specification of works and has been carried out to the correct standards. • Any additional tree works expected, outside of the approved specification of works will be agreed and recorded. • All tree protection measures detailed in this method statement should be fully discussed so that all aspects of implementation and sequencing are understood by all the parties. • The details of the programme of tree protection should be agreed and finalised. • All details, methodologies and techniques for the construction of foundations, if required, shall be fully discussed. Any site supervision arrangements between the arboricultural consultant and developer should be agreed and finalised. Including any site visits deemed necessary, by a local planning authority ("LPA") representative.
Installation of Tree Protection Measures - Trees will be protected by barriers/ground protection/tree stem protection as described in Appendix "A". The positioning of the barriers/ground protection is also shown in Appendix "A".	The barriers should be fit for the purpose of excluding all construction activity. Vertical barriers will be installed as soon as the pre-development tree work is complete. The ground protection should be fit for the purpose of pedestrian-operated plant (up to gross weight 2t) and installed as soon as the pre-development tree work is complete. The tree stem protection should be fit for purpose and installed prior to any construction activity. Once protection measures are installed, they should be regarded as sacrosanct and should not be removed or altered without approval from the LPA.
Arboricultural Inspection – (Tree Protection Measures)	All tree protective measures will be checked and approved in writing by the appointed arboricultural consultant and/or the Local Authority Area Development Officer
Construction Phase – once tree protective measures have been formally approved main site construction may begin	• Any variation to tree protective measures needs to be formally agreed • Any variation to methods/techniques, design/construction needs to be formally agreed • Any incidents of tree loss during development needs to be reported within 48hrs • Tree protective measures should be regarded as sacrosanct and should not be removed or altered without approval from the LPA.
Construction Phase Complete	The tree protective measures can be removed. Post development landscape finishes should still consider the trees below ground constraints



Barrier Specification



Tree Stem Protection (trees T4 & T5)

Tree Stem Protection:

Where it is practical to install standard protection measures, due to proximity, the stems of trees should be protected from potential impact. This should consist of 3 to 4 layers of hessian sacking wrapped around the stem to a height of approximately 2m, secured in place by twine or wire. Onto this should be two layers of chestnut paling, wrapped to a height of approx. 2m and secured in place with wire (see example above).

Barrier Position

T1

Root Protection Area

Ground Protection

2m Chestnut Paling Fencing

Appendix "A"

Tree Protection Plan

Tree Barriers:

Barriers should be fit for the purpose of excluding construction activity from the root protection (RPA) area of retained trees. The barriers should remain rigid and complete throughout the demolition/construction phase.

BS 5837: 2012 - Trees in Relation to Design, Demolition and Construction recommends the barrier type specification is commensurate to site circumstances and associated risk of damage within the RPA of retained trees.

Pre-development site inspection should be carried out by an arboriculturalist or Local Authority Tree Officer to ensure protective measures are to the correct specification and fit for purpose. The Local Planning Authority should be made aware of any amendments.

Tree protective barriers protect the RPA of retained trees. Any contamination into these areas such as chemical, petrol, diesel and oil spillage should be avoided. The mixing of cement and use of toxic materials should have a designated area well away from tree barriers

Temporary Ground Protection:

Ground protective measures should be capable of supporting any traffic/pedestrian entering or using the site without being distorted or causing compaction to the underlying soil. The objective should be to avoid compaction of the soil so that tree root functions remain unimpaired.

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

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

Tree protective measures should be erected before any materials or machinery is brought onto site and before any demolition, development or stripping of soil commences. Once erected, protection measures should be regarded as sacrosanct and should not be removed or altered without approval from the Local Planning Authority and recommendation of an arboriculturalist

ARBORICULTURAL CONSULTANCY

ENGIE

New Oxford House
George Street
Grimsby
North East Lincolnshire
DN31 1HB
Tel: 01472 324271

CLIENT	Mr. Ben Pepperell		
PROJECT	Bonby House, Carr Lane, Bonby, Brigg, Lincolnshire		
TITLE	Tree Protection Plan		
DRAWN	DJM	CHECKED	AH
APPROVED	AH		
DATE	7th January 2021	ORIGINAL SIZE	A1 (594 x 841)
SCALE	1:200		
FILE REF	AH-ENGIE	DRAWING No.	TPP-070121-03
REVISION NO	C		

Scale Check (Millimetres), Do Not Scale from this drawing. OS Licence Number OS 100020759.

v2.0