Arboricultural Method Statement And Tree Protection Plan for: The Cedars, Helhoughton

Survey scope :	'Trees in relation to demolition, design and construction – Recommendations'
Prepared on behalf of :	Neil Langley NKF Planning Consultancy King's Lynn
Report reference :	2019.010_AMS_ plot 1
Date of report :	08.05.19 Updated 08.10.2020 (JA)

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Table of contents

1. Introduction

1.1. This Arboricultural Method Statement (AMS) includes a Draft Tree Protection Plan (TPP), Appendix 1, for The Cedars, Helhoughton - plot 1. The aim of this document is to identify:

- Protective fence positions therefore, the Construction Exclusion Zones (CEZ)
- Site construction entrance
- Storage and mixing area / contractors parking
- Works to / removal of trees
- Cellular confinement no-dig systems

1.2. This AMS includes the draft layout. Further information on working methods and materials used in construction is yet to be finalised. The designated areas for contractor parking and material storage displayed in the TPP are subject to change as the construction phase continues.

1.3. Tree numbers in this document follow the numbering system laid out in the Arboricultural Impact Assessment produced by Norfolk Wildlife Services reference 2019.010_AIA plot 1.

1.4. This report provides supplementary information to be read in conjunction with the Tree survey, Arboricultural Impact Assessment and Tree Constraints Plan. A list of contact details is laid out below: -

Table 1: Table of contacts

Role	Name	Contact details
Client NKF Planning Consultancy	Mr. Neil Langley	07982 653 378 nkfplanningconsultancy@outlook.com
Landscape Officer North Norfolk	Simon Case	01263 516142 Simon.Case@north-norfolk.gov.uk
Arboricultural Consultant - NWS	James Allitt	01603625540 jamesa@norfolkwildlifeservices.co.uk

2. Overview of events and key actions

Table 2: Overview of events

Event	Key Actions
Before demolition and construction work starts (including bringing of plant and materials on site):	Tree works to be completed: See works to trees. Prior to work commencing on site and before the tree protection is installed, it will be necessary to complete the tree works. All tree work must comply with British Standard 3998: 2010 'Recommendations for tree work' or other appropriate current industry standard(s).
After tree works but before construction work starts (including bringing of plant and materials onto site):	Tree protection fencing will be erected in the positions as indicated on the Tree Protection Plan before any construction has commenced. It will be installed along the edges of the Root Protection Areas (RPA), except where temporary construction access is justified within the RPA (see

Event	Key Actions
	paragraph below). The fencing will be in accordance with the recommendations of BS5837:2012.
Site visit by consulting arborist to check protective fencing:	Where trees are subject to protection from appropriate fencing there shall be an auditable system of arboricultural site monitoring. This shall extend to supervision by the appointed arboricultural consultant whenever construction and development is within or adjacent to any RPA.
During construction:	Tree protection fencing or temporary ground protection will not be moved or altered without written consent from the Local Planning Authority's tree officer and the area within the Construction Exclusion Zone will be considered sacrosanct. Construction operations must comply and follow the sequence set out within the Construction Method Statement (see below).
Post-construction works and following removal of all plant and materials from site:	Remove tree protection.

2.1. Communication

2.1.1. A copy of this method statement will be provided to all relevant parties.

2.1.2. Dimensions and positions of the approved fencing will be drawn onto all plans used by site operatives.

2.1.3. Laminated protective fence signage should be erected on all protective fencing at 1.5m from ground level and every 3m along the fence.

2.2. Site monitoring and supervision

2.2.1. In accordance with section 6.3 of BS5837: 2012, the site will be monitored to ensure the arboricultural parts of the planning permission are implemented and maintained throughout the development e.g. the installation of protective fencing and temporary ground protection, specialist construction techniques in close proximity of trees.

2.2.2. The monitoring and supervision will be auditable. Results will be recorded and available for the Local Planning Authority and client.

2.2.3. The Arboricultural consultant will inspect the tree protection at pre-determined and agreed time intervals, including:

- After the protective fencing has been installed, but before development commences.
- At least once during development.
- Once all development work is completed and all construction traffic is off site and the tree protection fence has been removed.

2.2.4. Any defects requiring remediation or rectification will be notified to the site foreman/manager and the client. Should protective fencing become damaged so as to impair its function as a protective barrier, all works will cease in the vicinity of the damage until the fence has been repaired.

3. Works to trees and protection measures

Table 3: Summary of tree works

Impact on trees	Reason	Cat A	Cat B	Cat C	Cat U
Remove, development	To facilitate building proposal	0	1 tbc	1	0
Remove, arboricultural management	To improve the amenity of the site Poor health / structure / Ground protection	0	0	0	0

3.1. Tree works

3.1.1. The removal of Tree T25 to allow the construction of the new access. (To be confirmed).

3.1.2. The removal of T26 to allow the construction of the new driveway.

3.1.3. Crown reduction to the eastern canopy of G6 to allow safe demolition of the existing farm building.

3.1.4. Crown reduction by 2m to the northern canopy of the eastern most tree within G9 to allow vehicles access to the site and avoid damage to tree.

3.2. Protective measures

3.2.1. Temporary ground protection (www.Groundtrax.com) will be laid at the south east corner to allow access for vehicles to manage the land. It will measure 4.8m in width and fit between the stems of trees T24 and T25. Once construction and permanent access has been agreed a no-dig access road will be installed.

3.2.2. The no-dig access road at the south east corner will be installed prior to any construction of the plot commences. This will ensure that compaction and rutting of the existing surface and subsequent irreparable damage will be avoided to tree roots.

3.2.3. The no-dig access road at the north will be installed prior to any construction of the plot commences to avoid damage to the roots of trees T17, T18 and tree group G4.

3.2.4. All vegetation and top soil within the RPA of retained trees T17, T18, G4, G9 and T27 will be removed by hand.

3.2.5. Protective fencing that complies with recommendations made in section 6 of the BS5837:2012 (Appendix 3 & 4 of this document) and according to the TPP should be placed around trees in the following areas: -

1. At the northern boundary of the plot to protect the RPA of trees G3, G4, T18 and G5.
2. Along the southern boundary around the RPA of the retained trees G6, T22, T23 and G9.
3. Along the eastern boundary around the RPA of trees G10, T27 and T28.
4. Around the western boundary around the RPA of trees T21 and G6.

3.2.6. Where construction of the access drive enters into the RPA of G9 a ‘no dig’ cellular support system will be used and the protective fence will be set back to allow installation. The surface of the access drive will be permeable.

3.2.7. New permanent hard surfacing on top of the ‘no dig’ construction will not exceed 20% of any existing unsurfaced ground within the RPA. It will consist of:

- A geotextile membrane to stop the transfer of pollutants to the roots and soil.
- A suitable depth 3D cellular confinement system filled with 4/20mm clean angular

stone. The depth of which will be confirmed by a structural engineer according to road usage and final surface.

- 50mm clean angular stone 4/20 type used for overfill.

3.2.8. An example of cellular confinement system is attached as an Appendix 2.

4. General Guidance

The following general precautions must be taken during the construction phase:

- All contractors parking shall be outside the RPA of retained trees and in designated areas.
- Mechanical equipment must not be refuelled within the RPA's of retained trees or areas where new trees are to be established.
- No bonfires shall be permitted within 10m of the outer edge of the crown of retained trees.
- Cement shall not be mixed or stored within the trees RPA. Cement mixers must not be washed out uphill of the RPA of retained trees.
- The soil level within the RPA of retained trees must not be raised or lowered without the agreement of the local tree officer.
- No materials shall be stored within the RPA of retained trees.
- No vehicles shall be parked or operate within the RPA of retained trees

5. Construction Method Statement

Sequence order	Construction action	Methods	Potential effects on trees	Protection measures necessary
1	Crown lift trees T24 & T25 to 5m to allow temporary access. Remove tree T25 (to be confirmed). Crown reduction by 2m on northern canopy of G9. Remove tree T26. Crown reduction by 1m to G6 eastern canopy.	Appropriate felling techniques. Pruning cuts to appropriate growth points.	Poor arboricultural management resulting in damage to tree health.	Follow guidance to BS3998:2010 Tree Works - Recommendations
2	Install temporary ground protection to reinstate access to allow land management.	Temporary ground protection to extend within the RPA of tree T24, T25 and part of G9 as indicated on AMS.	Without temporary ground protection there will be compaction of soil from vehicles causing irreparable damage to roots. This will ultimately shorten the life of the trees.	Installation of temporary ground protection to be within the stems of T24 and T25 and extending to the RPA of both trees and G9. Groundtrax® or similar will be installed specified to the type of vehicle use.
3	Installing tree protection and Construction Exclusion Zones.	Barriers as shown on Tree Protection Plan Appendix 1 and 3.	Without tree protection tree strike from plant machinery or delivery vehicles may cause damage to trunk and branches. Compaction of soil will inhibit the uptake of water and nutrients to sustain a healthy tree.	Installation of vertical barrier will be approved by the project Arboriculturist. Barriers will be installed prior to any materials or machinery being brought onto site. Vertical barriers (Appendix 3) will follow guidelines set out in BS5837:2012 and extend to the RPA of all retained trees with the exception of trees where it is deemed appropriate to enter into the RPA. Where this is agreed the barriers will be set back and no-dig cellular support system will be adopted. Once installed, barriers should not be removed or altered without prior consent from the Arboricultural Consultant or approval from the Local Planning Authority.
4	Construction of the new access drives.	No-dig cellular support system within RPA of trees within T17, T18, G4, G9 and T27.	Compaction of soil from plant machinery. Damage to roots from trenching and tracking.	Installation of access driveway prior to any other construction work will be carried out to avoid compaction and subsequent irreparable damage to roots and soil structure. All vegetation within the RPA of G9 and T27 will be removed by hand.
5	Installing areas for contractors parking and material storage. Visit by Arboricultural consultant to check fencing.	Barriers / ground protection shown on Tree Protection Plan.	Compaction from vehicles. Run off from materials that pollute the soil.	Contractors parking areas are to be sited away from retained trees. Mixing areas or material storage will be in such a place where no run off from toxic materials will inhibit the root functions of retained trees.
6	Demolition of the existing farm buildings.	Demolition to be undertaken inwards within the footprint of the existing building	Compaction of soil from vehicles.	‘Top down, pull back’ method of demolition within the existing footprint. Protective barrier installed to the edge of the structure prior to any demolition taking place.
7	Construction of the new dwelling.	Traditional building techniques.	Compaction of soil from plant machinery. Damage to roots from trenching and tracking.	The protective barrier will remain in place throughout the construction phase. No plant machinery will enter into the CEZ.

8	Final visit of Arboricultural consultant to sign off tree protection measures	Provide auditable results to LPA.	N/A	The Arboricultural consultant will inspect retained trees to ensure no damage has occurred during the construction phase.

Appendix 1: Tree Protection Plan

TREE PROTECTION PLAN

SITE:
The Cedars, Helhoughton

CLIENT:
NKF Planning Consultancy

N

LEGEND

- RPA A
- RPA B
- RPA C
- RPA U
- CROWN SPREAD
- CONSTRUCTION EXCLUSION ZONE
- PROTECTIVE BARRIER
- CELLULAR SUFFPORT SURFACE
- CONTRACTORS PARKING
- MATERIALS STORAGE

DRAWING REF:
2019.010_TPP_plot 1

DRAWN BY: JA | 08.10.2020

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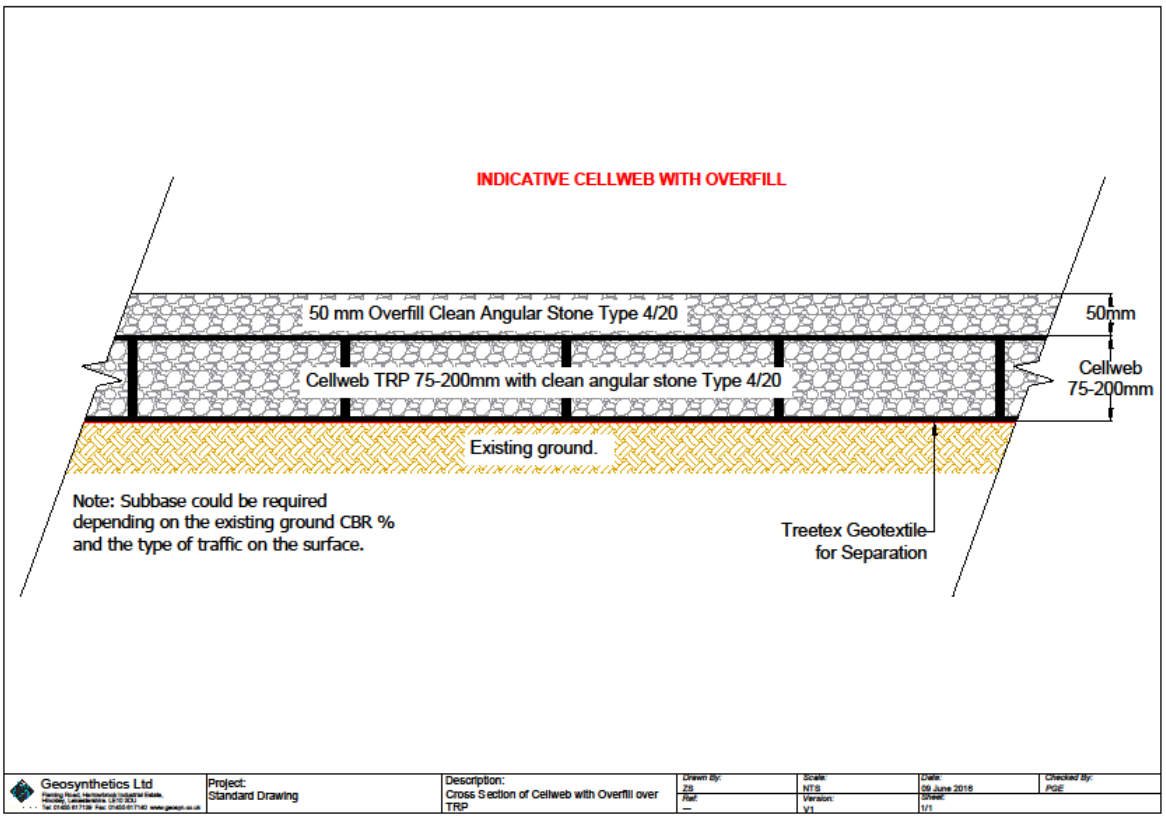
Appendix 2: Cellular confinement ‘no dig’ system

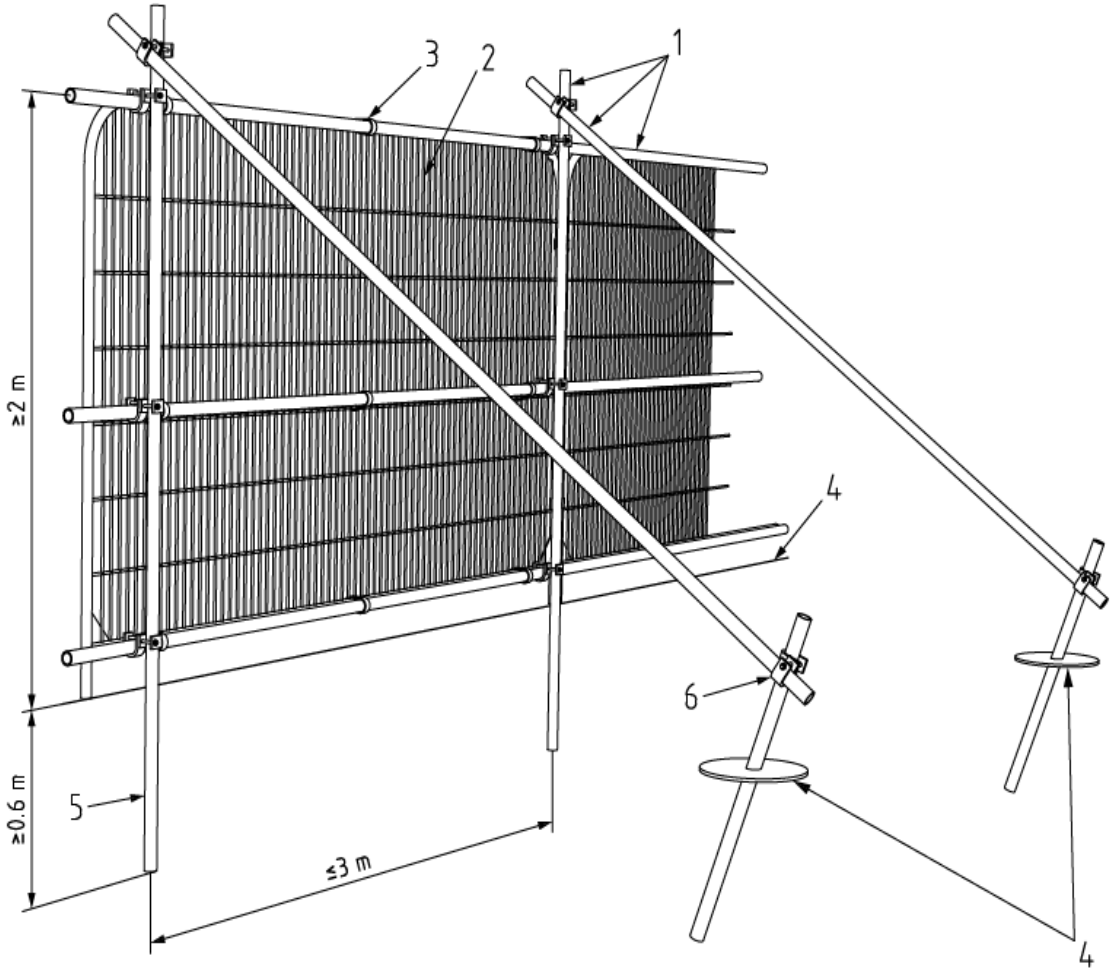


Source: Geosynthetics Ltd

Appendix 3: Protective Fencing

Default specification for protective barrier. All-weather notices should be attached to the barrier with words such as:

“CONSTRUCTION EXCLUSION ZONE – NO ACCESS”.



Key

1 Standard scaffold poles

2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels

3 Panels secured to uprights and cross-members with wire ties

4 Ground level

5 Uprights driven into the ground until secure (minimum depth 0.6 m)

6 Standard scaffold clamps

Appendix 4: Protective fencing sign