



**WATSON  
LINDSEY**  
ARBORICULTURE

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**Arboricultural  
Method Statement  
to BS 5837:2012**

**Site Address:**

Land at Ferry Road East,  
Barrow upon Humber

**Issue Date:**

21<sup>st</sup> June 2020

**Report No:**

200610

**Prepared For:**

Keigar Homes Ltd  
Keigar Lodge, Canberra View  
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**Prepared By:**

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# 1. Introduction

## 1.1. Purpose of the Report

- 1.1.1. This Arboricultural Method Statement has been compiled to ensure the safe and healthy retention of all retained trees on this development. Integral to achieving this goal is the implementation of the special construction details and protection methods detailed within this report.
- 1.1.2. This Method Statement must be made available to all contractors and operatives on the site during the construction process so that they fully understand the importance of the measures set out for tree protection.
- 1.1.3. The information contained within this Arboricultural Method Statement conforms to BS 5837:2012 'Trees in relation to Design, Demolition and Construction - Recommendations'.

## 1.2. Scope of the Report

- 1.2.1. I am instructed by Mark Snowdon to produce this Arboricultural Method Statement (AMS) for the proposed development consisting of nine houses with associated driveways and gardens the design of which is detailed in drawing no. FE/145/03 A.
- 1.2.2. This method statement is based on the tree survey carried out on 9<sup>th</sup> June 2020, and on the associated report ref. Arboricultural Report & Impact Assessment - 200610 FerryRoadEastBarrow.pdf
- 1.2.3. The AMS is concerned with the trees within and, where deemed necessary, those just beyond the boundary of the site, and has been compiled in order that retained trees are adequately protected throughout the course of the development. It is not intended to be used for any other purpose. The report does not take into account any other trees or vegetation, except where these are specifically referred to.
- 1.2.4. The activities to which the AMS relates are; tree removal and pruning (including root pruning) for access and clearance, tree protection measures and construction methods. Risk assessments (with relevant control measures) should be produced for each of these operations prior to commencement of work. This is the duty of the contractors engaged to undertake the work.

# 2. Timing of Operations

- 2.1. In order to ensure that disturbance to retained trees is kept to a minimum, the site operations should proceed in the following order:

### Phase 1 - Pre-development

1. Completion of the approved tree works, (Section 3)
2. Installation of tree protection measures, (Section 4 & 5)

### Phase 2 - Development

1. Adherer to site limitations resulting from tree protection measures, (Section 4 & 5)
2. At an appropriate time set-back protective fencing to allow necessary access into Construction Exclusion Zone (CEZ), (Section 6 & 9)

### Phase 3 - Post-development

1. Landscaping operations required outside CEZ
2. Removal of tree protection measures
3. Landscaping operations required within CEZ

- 2.2. Any amendments to the ordering of operations that are likely to affect retained trees must only be made with the approval of the project arboriculturist or the Local Planning Authority (LPA) Arboricultural Officer.

### **3. Tree Works**

- 3.1. Prior to any construction activity, the first operation on site will be the undertaking of the necessary arboricultural works, as described in the Survey Schedule at Appendix 1. These include:
- 3.2. The removal of T2, G1 and H2
- 3.3. The root pruning of T1 and H1
- 3.4. All work must be undertaken to BS 5837:2012 Trees in relation to design, demolition and construction - Recommendations and carried out by qualified and experienced contractors who must be adequately insured.
- 3.5. Any tree defects seen by a contractor or the client that were not apparent to the project arboriculturist must be brought to our attention immediately.
- 3.6. If during the development, additional access facilitation pruning is required advice should be sought from the project arboriculturist. Under no circumstance shall construction personnel undertake any tree pruning operations.

### **4. The Construction Exclusion Zone (CEZ)**

- 4.1. In order to adequately protect retained trees a Construction Exclusion Zone (CEZ) must be formed around their crowns and Root Protection Area (RPA). The CEZ must be formed of appropriate protective fencing and/or ground protection.
- 4.2. Within the CEZ, the following restrictions shall apply:
  - NO mechanical digging or scraping
  - NO hand digging (unless in accordance with sections, below)
  - NO storage of material or equipment
  - NO vehicular or plant access (unless in accordance with section 5, below)
  - NO fire lighting
  - NO washing down of vehicles or machinery
  - NO handling, discharging or spillage of any chemical substance including cement washings
  - NO action likely to cause localised water-logging
  - NO changing of ground levels (unless agreed by the LPA)
  - NO earthworks
- 4.3. In addition to the above, further precautions are necessary adjacent to the CEZ or adjacent to any trees on neighbouring land:
  - Materials that will contaminate the soil such as concrete mixing, diesel spillage and vehicle washings must not be discharged within 10m of a tree.
  - This must take into account the topography of the site and the slopes to avoid toxic materials running towards retained trees.
  - Fires must not be lit in a position where their flames can extend to within 5 metres of the foliage, branches or trunk. This will depend on the size of the fire and the wind direction.
  - Notice boards, telephone cables or other services (etc.) should not be attached to any part of a tree.

## **5. Tree Protection Fencing**

- 5.1. The Tree Protection Plan (TPP) at Appendix 2 shows the position of the Tree Protection Fencing. This fencing must be erected after any tree works but before any materials or machinery are brought onto site and before any demolition, development or stripping of soil commences.
- 5.2. On this site the protective fencing will be installed in accordance with the above ground stabilised protective fencing method as detailed in BS 5837: 2012. This will comprise of weld mesh panel fencing, situated in rubber or concrete feet. Panels will be joined together using a minimum of two anti-tamper couplers, positioned so that they can only be removed from inside the barrier. The fencing will be supported at each joint (where two panels meet) with a stabiliser strut, attached to the fencing at one end and a base plate/block tray at the other. All weather signage outlining the status of the CEZ should be securely fixed to the fencing. Please refer to Appendix 3 for further details of the protective fencing and signage.
- 5.3. Once erected, barriers and ground protection will be regarded as sacrosanct, and will not be removed or altered without prior agreement of an arboriculturalist and approval of the local planning authority.
- 5.4. Barriers should be fit for the purpose of excluding constructive activity, and appropriate to the degree and proximity of work taking place around the retained tree. On all sites, special attention should be paid to ensuring that barriers remain rigid and complete.

## **6. Ground Protection**

- 6.1. Ground protection is required within the CEZ around T1 and H1 to allow for development access and scaffolding to be erected around adjacent buildings. As only pedestrian traffic will be required a suspended walkway will be adequate for this purpose. This will be achieved by constructing a framework of scaffold poles attached to the main scaffolding. Scaffold boards will be placed over the framework and utilised as a walkway.
- 6.2. This ground protection will be installed immediately prior to the construction of the adjacent buildings and will involve setting back of the protective fencing to Position 1 as shown on the TPP at Appendix 2.

## **7. Temporary Buildings and Stores**

- 7.1. The location of any site office/welfare unit and temporary buildings shall be located away from the RPA of retained trees. This includes areas for mixing of chemicals including cement washings and storage of machinery as well as parking.

## **8. Installation of Services within CEZ**

- 8.1. No service installations are required within the CEZ.

## **9. New Hard Surfacing within CEZ**

- 9.1. Hard surfacing, in the form of an access driveway and car parking, is proposed within the RPA of T1. A cellular confinement system must therefore be installed using a no dig technique to prevent damage to tree roots. The location of this surfacing is highlighted on the TPP at Appendix 2.

- 9.2. The design of such a system needs to be sensitive to the requirements of tree roots, substantial enough to withstand the expected levels of traffic and practicable in terms of ease of fabrication. The final surface treatment must be porous to enable the percolation of water through the surfacing to the tree roots beneath. This method is considered to be appropriate in terms of minimising damage to retained trees. However, a structural engineer should be consulted to ensure that the mechanical needs of the chosen design are adequately met.
- 9.3. Immediately prior to the construction of this surfacing the protective fencing will be set back to Position 2 as shown on the TPP at Appendix 2. Installation of the surfacing can then commence.
- 9.4. Please see Appendix 4 for specification and installation method for this surfacing.

## **10. Demolition Works within CEZ**

- 10.1. No demolition works are required within the CEZ.

## **11. Construction of Buildings within CEZ**

- 11.1. The footprints of all buildings are located outside the CEZ, therefore no specialist foundations are required for arboricultural purposes.

## **12. Post Construction Landscaping**

- 12.1. Following completion of the main construction phase, the protective fencing can be removed, and any temporary ground protection lifted, and the landscaping phase can commence.
- 12.2. Where new fencing is located within the RPA of retained trees, post holes will be dug by hand. They may be driven in either by hand or using mechanical means. If construction plant is to be used it must work from outside of the RPA at all times. Fencing systems utilising continuous trench footings must not be used in the RPA of retained trees.
- 12.3. Landscaping works must be carried out in such a way as to avoid ground level changes or deep digging within RPAs. Tractor mounted rotovators or other mechanised cultivation methods must not be used within the RPAs of retained trees.
- 12.4. Heavy machinery is not permitted in the vicinity of retained trees, unless otherwise stated in this method statement.
- 12.5. Herbicides should be appropriate for the purpose and should not be used in such a way as to damage any retained trees or vegetation.
- 12.6. If in doubt, regarding the impact of proposed landscape operations, please contact the appointed arboriculturalist.

## Appendix 1: Survey Schedule

Tree ID	Common Name	Maturity	Height (m)	Stem Diameter (mm)		RPA Radius (m)	Crown Spread (m)				Structural Condition	Category	Life Expectancy	Physiological Condition	Comments	Recommendations
				1	2		N	E	S	W						
T1	Common Ash	Early-mature	14	660		7.9	8	7.5	7.5	7	Good	B1	>40 yrs	Good	Base and lower stem free from notable defects. Numerous recent pruning cuts on stem and primary limbs resulting in stubs. Stem and main unions ivy clad preventing detailed inspection. Crown break at 3m. Well balanced crown with minor deadwood and minor dieback. Dieback not indicative of ash die back, more likely caused by recent drought. A good specimen.	Development Recommendation: 1. Reduce crown spread of northern most third of periphery by 1m. 2. Crown lift canopy to east from 2.5m to 4m.  Current Recommendation: Prune stubs back to patent limb/stem.
T2	Sycamore	Semi-mature	12.5	190 <sup>9</sup>		6.8	6	6	6	6	Good	C1	20 to 40 yrs	Good	Previously coppiced and now multi-stemmed from ground level with numerous bark inclusions in main unions. Congested crown structure with nine stems. A healthy developing crown free from notable defects.	Development Recommendation: Remove
G1	A Group		5	100	100	1.7	2	2	2	2		C2	10 to 20 yrs		Group of young ash and elder. Location below high voltage lines limits future contribution.	Development Recommendation: Remove
H1	A Hedgerow	Mature	3.5	120		1.4	1	1	1	1		B2	>40 yrs		Previously unmanaged Hawthorne hedge. Recently topped and sided. Slightly intermittent. Provides good screening between the site and neighbouring dwellings.	Development Recommendation: 1. Reduce hedge height to 1.75m. 2. Reduce crown spread to east from 1m to 0.5m. 3.Replant gaps with British native species.
H2	A Hedgerow	Mature	2	130		1.6	1	1	1	1		B2	>40 yrs		Previously unmanaged Hawthorne hedge. Intermittent in places. Recently topped and sided.	Development Recommendation: Remove

<sup>9</sup> denotes average stem diameter and number of stems

## **Appendix 2: Tree Protection Plan**

See A1 PDF (Tree Protection Plan - 200610 FerryRoadEastBarrow.pdf) for Details

## Appendix 3: Tree Protection Fencing

Figure 1. Specification for Above Ground Stabilised Protective Fencing

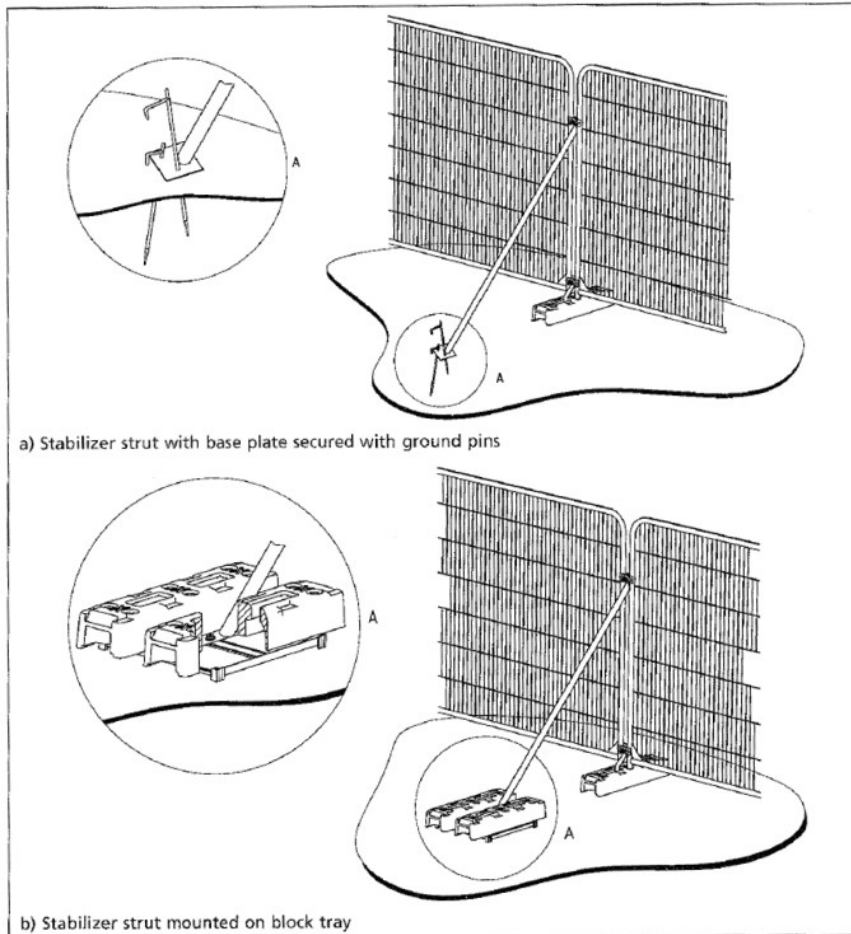


Figure 2. Example Signage for Protective Fencing

**TREE PROTECTION AREA**

TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND ARE SUBJECTS OF A TREE PRESERVATION ORDER (TOWN & COUNTRY PLANNING ACT 1990)

**CONTRAVENTION OF TREE PRESERVATION ORDERS MAY LEAD TO CRIMINAL PROSECUTION**

**THE FOLLOWING MUST BE OBSERVED BY ALL PERSONS:-**

- THE PROTECTIVE FENCING MUST NOT BE REMOVED
- NO PERSON SHALL ENTER THE PROTECTED AREA
- NO MACHINE OR PLANT SHALL ENTER THE PROTECTED AREA
- NO MATERIALS SHALL BE STORED IN THE PROTECTED AREA
- NO SPOIL SHALL BE DEPOSITED IN THE PROTECTED AREA
- NO EXCAVATION SHALL OCCUR IN THE PROTECTED AREA

**ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY**

**KEEP OUT!**

## Appendix 4: New Hard Surfacing

This Appendix outlines the options available for constructing No-Dig hard surfaces within the RPA of trees.

We are not qualified to recommend any particular construction method in terms of durability or structural integrity and any proposed construction should be approved by a qualified structural engineer prior to implementation.

However, with regards to trees, we make the following comments:

- Severance of roots and soil compaction should be avoided. However, if it is necessary to sever roots or if they are severed accidentally, we must be informed so that we are able to assess and recommend accordingly.
- Air and water must be able to diffuse into the soil beneath the engineered surface. Toxic substances which could leach into the ground must be avoided, as should substances which affect the pH value of the soil, for example limestone.

### The No-Dig Method:

This involves construction of a surface with no excavation, soil stripping or site grading (see Figure 3). All construction takes place above ground level. Preparation and installation are as follows:

1. Kill off ground vegetation using a systemic herbicide (i.e. glyphosate) applied to the foliage and remove resulting dead organic material.
2. Removed any significant protrusions and fill major hollows with sharp sand.
3. Lay a recognised geo-fabric over the area and extend to 300mm beyond boundaries whilst overlapping any joints by 300mm.
4. Install an appropriate 3D cellular confinement system.
5. Using a no dig method (i.e. gabions or pinned boards/sleepers) construct suitable edge support for the new surface.
6. Infill with a clean angular stone type 4/20 or 20/40 using a 'roll-out' technique with plant machinery operating from outside the RPA or from already infilled areas. Cells must be filled to their maximum volume and then over filled by 25mm. No additional compaction is required beyond a limited number of passes with lightweight tracked plant machinery.
7. Install layer of geo-fabric extending to 300mm beyond boundaries whilst overlapping joints by 300mm.
8. Install final porous surface as per client specification.

Figure 3. Example 'No Dig' Hard Surfacing

