

LAND AT  
CLIFTON ROAD  
DEDDINGTON

ARBORICULTURAL  
IMPACT  
ASSESSMENT

ACD

Ecology

Arboriculture

Landscape Architecture

Prepared by  
ACD  
ARBORICULTURE

for



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## 1. EXECUTIVE SUMMARY

- 1.1. The site is currently comprised of arable land located to the east of Deddington, to the south of Clifton Road. The proposed development is the building of residential housing.
- 1.2. This impact assessment is intended to evaluate the direct and indirect effects of the proposed design on the trees on site, and where necessary recommends mitigation.
- 1.3. The development proposals are in accordance with BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'.
- 1.4. Adequate protection can be provided to ensure all retained trees are protected throughout development in the form of barriers and/or ground protection.
- 1.5. All of the A and B category trees are to be retained and protected throughout the development.
- 1.6. All of the trees proposed for removal are in the lower two categories, C and U, and are not of a quality that should represent any constraint to development.
- 1.7. Where proposed new hard surfaces encroach into the RPA of trees highlighted for retention, sensitive surface construction will be required.
- 1.8. The relationship between the buildings and retained trees is sustainable and does not result in any situations which may result in unreasonable pressure to prune requests from future occupants.
- 1.9. The Arboricultural Method Statement (AMS) has been compiled in conjunction with the Tree Protection Plan (TPP) for the purpose of feasibility and planning, as per Figure 1 of BS5837:2012. These detail any mitigation which will be necessary to ensure the protection of retained trees throughout the development.

## **2. INTRODUCTION**

- 2.1. ACD Arboriculture was instructed in February 2013 to prepare the following impact assessment by Banner Homes.
- 2.2. This report is based on the recommendations given in BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'.
- 2.3. Data is extracted from, and reference should be made to, the tree survey which preceded this report. (ACD Ref: BAN18590tr)
- 2.4. This assessment is based upon the supplied layout drawing by Banner Homes drawing number PL/060114/02 revision C dated 28.02.2014.
- 2.5. Reference should be made to the Arboricultural Method Statement (BAN18590ams) and Tree Protection Plan (BAN18590-03).
- 2.6. No details have been supplied or sought of any statutory protection which may cover the subject trees.
- 2.7. The controlling authority is Cherwell District Council, who can be contacted at: Planning, Housing and Economy, Bodicote House, Bodicote, Banbury, OX15 4AA.

### 3. ARBORICULTURAL IMPACT ASSESSMENT

- 3.1. The site is currently comprised of arable land located to the east of Deddington, to the south of Clifton Road. The proposed development is the building of residential housing.
- 3.2. This impact assessment is intended to evaluate the direct and indirect impacts on the trees on the site in relation to the proposed development. Where appropriate mitigation is proposed, with details given of any issues to be addressed by the arboricultural method statement to ensure the development is acceptable in arboricultural terms.
- 3.3. Any potentially damaging activities proposed in the vicinity of retained trees are identified, such that mitigation to significantly reduce or avoid this impact can be detailed in the Arboricultural Method Statement and Tree Protection Plan as recommended in BS5837:2012 section 5.4.2.

#### 3.4. Evaluation of impact of proposed tree losses

- 3.4.1. Those trees which are to be removed are shown with a red dashed canopy outline, and a dashed emblem around the trunk on the Tree Protection Plan ACD reference BAN18590-03.
- 3.4.2. One tree from G3, T5, G6 and T22 are to be removed as a result of the development proposals. All the trees proposed for removal are in the two lower categories (C & U) and as are not of a quality that should present any constraint to development of the site.
- 3.4.3. Replacement trees will be proposed through landscape design and will more than mitigate for their removal by providing robust long term tree cover in keeping with the proposal and surrounding properties.

#### 3.5. Trees to be pruned

- 3.5.1. At this time the following tree surgery works are proposed. These works fall well within the level of good arboricultural practice:

Tree number	Species	Operation
T11	Beech	Crown lift to 2.5m above ground level over proposed driveway

- 3.5.2. At this time no further tree surgery works are anticipated (excluding tree removals). Should any become necessary it should comply with BS3998:2010 Tree Work or more recently accepted arboricultural good practice, and be approved by the LPA and project arboriculturist prior to any commencement.

### 3.6. Protection for retained trees

BS5837:2012 section 6.2.1. states: 'All trees that are being retained on site should be protected by barriers and/or ground protection (see 5.5) before any materials or machinery are brought onto the site, and before any demolition, development or stripping of soil commences. Where all activity can be excluded from the RPA, vertical barriers should be erected to create a construction exclusion zone. A specification for protective fencing is given on the Tree Protection Plan. This consists of interlocking weld-mesh panels (e.g. heras) well braced by attachment to scaffold pole uprights driven firmly into the ground. Should any alternative method of barrier construction be proposed, consultation with the project arboriculturist will be obtained to clarify the efficacy of the revised design prior to informing the local planning authority and obtaining their consent.

### 3.7. Demolition & Groundworks

To ensure damage does not occur to trees highlighted for retention, tree protection fencing must be erected prior to ANY plant machinery entering site whatsoever. This should be subject to a pre-commencement site meeting between the developer, their project arboriculturist and a representative from the Local Authority. No special demolition procedures need be observed on this site, other than respecting the tree protection fencing.

### 3.8. New Hard Surfaces within RPAs

- 3.8.1. In order to minimise impact on the trees where the proposed driveway for Plot 1 encroaches into the RPAs of trees T6 & T7, and T10 & T11 sensitive surface construction will be required in the form of a no-dig surface. It is anticipated that using no dig surface means that installation of permanent hard surface in this area is unlikely to cause significant adverse impact on the trees to be retained.
- 3.8.2. As per the recommendation of BS5837:2012 section 7.4.2.3, the new permanent hard surfacing does not exceed 20% of any existing unsurfaced ground within the RPA.
- 3.8.3. To avoid root damage, a no-dig approach must be taken, limiting the impact on the trees:
- 3.8.4. The use of a three dimensional cellular confinement system, such as 'Cellweb' is an acceptable approach, which aims to fulfil the above design criteria. This system maintains the passage of oxygen and water to root systems; avoids root loss through severance or asphyxiation and minimises the potential for soil compaction. It is achieved by laying a Geotextile membrane directly onto unchanged soil levels, with a three dimensional cellular confinement system ('Cellweb') laid on top filled with no fines granular fill, with a porous finishing surface. See specification on Tree Protection Plan (BAN18590-03).

- 3.8.5. Retained trees must first be protected during all stages of the development including demolition, by the erection of fencing as specified on the Tree Protection Plan (TPP). Installing the surface may require the re-positioning of the tree protection fencing to a secondary location in line with and associated method statement.
- 3.8.6. The area must be protected during all stages of the development including demolition, by ensuring the surface is installed, with a sacrificial tarmac surface (or trackway) if required, prior to any construction or demolition traffic entering the site.
- 3.8.7. The Arboricultural Method Statement describes installation of a typical no-dig surface. This follows the recommendations set out in Section 7.4 of British Standard 5837:2012. The author of this report is not an engineer and therefore detailed engineering design and analysis must be carried out by a suitably qualified engineer. However, any design must be approved for use by the project arboriculturist.

### 3.9. **Shade and future pressure to prune**

The site layout has been assessed in terms of shading and future pressure to prune. Given the orientation of the site, and the relationship between the proposed buildings and the retained trees, the juxtaposition is viable for long-term tree retention, and it is considered that shading by trees is unlikely to be a concern to future residents. As a result, it is considered unlikely that there would be any undue pressure to remove trees, or excessively prune from any future occupants.

### 3.10. **Services**

It is fundamental to tree protection that infrastructure design is sensitively approached, as trenching close to trees may damage roots and affect tree health and stability. Details of services have not been provided at the time of writing. The Tree Protection Plan, showing the constraints posed by retained trees will be passed to the infrastructure engineers to inform their design, ensuring that all services avoid areas of potential conflict. As per BS5837:2012 Figure 1, once further details become available as part of the detailed/technical design for the site, the TPP and AMS will be revised to incorporate these details for services for inclusion in the Tender documentation.

### 3.11. **Levels and Landscaping**

Full details of any changes in ground levels on site remain to be finalised. Any alterations to levels close to trees may damage roots and affect tree health and stability. Unless no-dig methodology is proposed for installation of surfaces within RPAs the original levels in these areas must be noted, retained, and integrated into the engineering design of the site. Landscaping operations within the RPAs of retained trees must be carried out in a sensitive manner and be subject to a detailed method statement and arboricultural supervision.

### 3.12. **Boundaries**

All plot boundaries will need to be designed, positioned and installed to avoid damage to retained trees. When within RPAs, this will include hand excavation of all post holes, and the lining of any post holes with a non porous membrane to stop leachates from the concrete damaging tree roots.



#### **4. CONCLUSIONS & RECOMMENDATIONS**

- 4.1. The development proposals are in accordance with BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'. Adequate protection can be provided to ensure all retained trees are protected throughout the development.
- 4.2. Any comments and recommendations made in section 3 should be noted and due consideration be given to the phasing and operational impact (and viability) of special construction techniques.
- 4.3. The Arboricultural Method Statement (BAN18590ams) has been compiled in conjunction with the Tree Protection Plan (BAN18590-03) for the purpose of feasibility and planning, as per Figure 1 of BS5837:2012. Once further engineering details become available as part of the detailed/technical design for the site, the TPP and AMS will be revised to incorporate these for inclusion in the Tender documentation.
- 4.4. Any fencing and other tree protection measures should be erected after tree surgery but before any demolition or construction contractor enter the site, and before any soil stripping takes place.
- 4.5. There must be no changes in levels, service routing, machine activity, storage of materials or site hut positioning within areas to be protected and the protective fencing must remain in position for the duration of the construction process.
- 4.6. Surgery may also be required in order to allow trees to be retained close to structures, to allow access for construction or future site traffic, or in the interests of the future health and safety of the trees and users of the site. Detailed recommendations for surgery should be provided prior to site commencement. All surgery should comply with BS3998:2010 or more recently accepted arboricultural good practice.

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03 March 2014

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