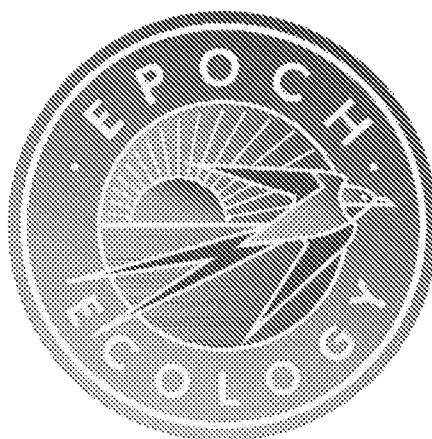




Mitigation Excellence

Crete Nursery, Dappers Lane, Angmering, West Sussex

Arboricultural Method Statement ADDENDUM

Produced on behalf of Countyoak Homes Ltd on
13/11/2019

Site Reference: EE-19-10250-01

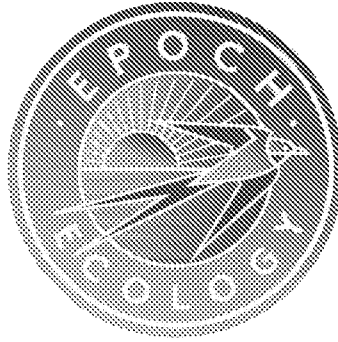
Site Address: Crete Nursery, Dappers Lane, Angmering, BN16 4EN

Report Prepared By: Mark Vivian BSc MSc MCIEEM

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SUMMARY

Countyoak Homes Ltd commissioned Mark Vivian BSc MSc MCIEEM to assist in the *'approval of reserved matters'*, relating to arboriculture which were raised at the outline planning stage, at Crete Nursery, Dappers Lane, Angmering, BN16 4EN (Grid Reference: TQ 07299 04976; hereafter referred to as the 'site').

This report has been compiled to assist in the *'approval of reserved matters following A/178/17/OUT for the demolition of existing outbuildings with retention of existing dwelling & erection of 6no. dwellings.'* For information, the current Planning Application Reference is A/104/19/RES.

The report presented here provides details of the proposed fencing for the boundary and gardens within the RPA of the hornbeams to the north of the site and provides a methodology for mitigation. In addition, the details for resurfacing the access road within the confines of the RPA of the dominant Category A oak (T07) have been provided including methodology for removing the existing track, protection during the interim, and details for installing the new road.

1.0 INTRODUCTION

- 1.1 Countyoak Homes Ltd commissioned Mark Vivian BSc MSc MCIEEM to assist in the *'approval of reserved matters'*, relating to arboriculture which were raised at the outline planning stage, at Crete Nursery, Dappers Lane, Angmering, BN16 4EN (Grid Reference: TQ 07299 04976; hereafter referred to as the 'site').
- 1.2 This report has been compiled to assist in the *'approval of reserved matters following A/178/17/OUT for the demolition of existing outbuildings with retention of existing dwelling & erection of 6no. dwellings.'* For information, the current Planning Application Reference is A/104/19/RES.
- 1.3 Comments and recommendations were raised at the outline application stage, in November 2017, by Arun District Council's appointed arboricultural consultant. These were endorsed by Mr Mark Warwick on 21st October 2019 and an objection has been registered to the advancement of the proposals. The outstanding issues, which must be addressed to the satisfaction of Arun District Council, relate to Paragraph 3 and 4 from the initial response (2nd November 2017).
- 1.4 Paragraph 3 states *'The AMS does not cover in enough detail what is happening with the boundary fencing and garden division fencing within the RPA of the hornbeam trees to the north and off-site – mitigation measures and methodology required here.'*
- 1.5 Paragraph 4 states that *'The AMS does not detail exactly what is happening and the mitigation measures and methodology required here for any revisions to the access drive (widening or resurfacing) that appear to be taking place.'*
- 1.6 The report presented here provides details of the proposed fencing for the boundary and gardens within the RPA of the hornbeams to the north of the site and provides a methodology for mitigation. In addition, the details for resurfacing the access road within the confines of the RPA of the dominant Category A oak (T07) have been provided including methodology for removing the existing track, protection during the interim, and details for installing the new road.

2.0 BOUNDARY & GARDEN FENCING WITHIN RPA OF HORNBEAMS TO NORTH OF SITE

- 2.1 There is a line of hornbeam located offsite to the north of the site on third party land (see Plate 2). The RPAs for this group have been amalgamated to reflect the largest RPA of the group, this has been calculated to be 7.50 metres which extends on to the development site.

Plate 1: Line of Hornbeam to the North of Site (Off Site)

Western Section – Photo taken on 29th October 2019

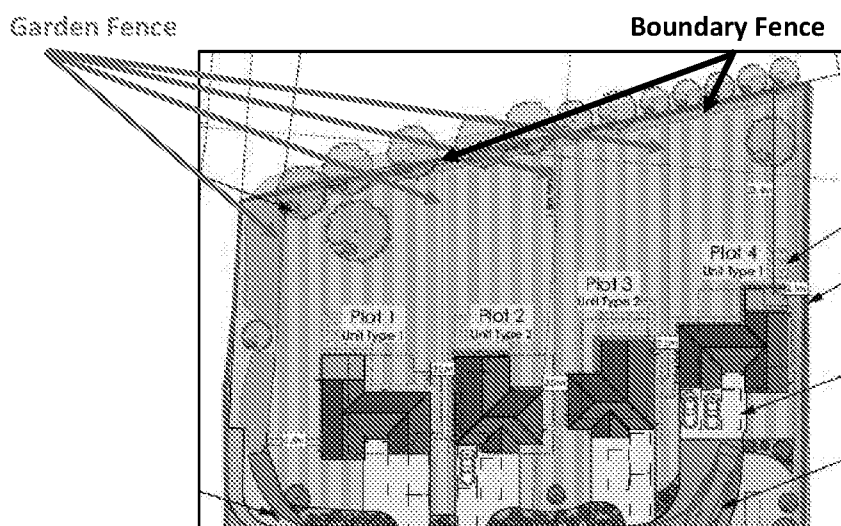


Eastern Section – Photo taken on 29th October 2019



- 2.2 The development proposals require the construction of small fences (1.8m high) to delineate the gardens of each plot and the northern boundary of the site (see Plate 2). The boundary and garden fence will be comprised of closeboard panels and posts, the posts will require digging within the RPA of the hornbeams.

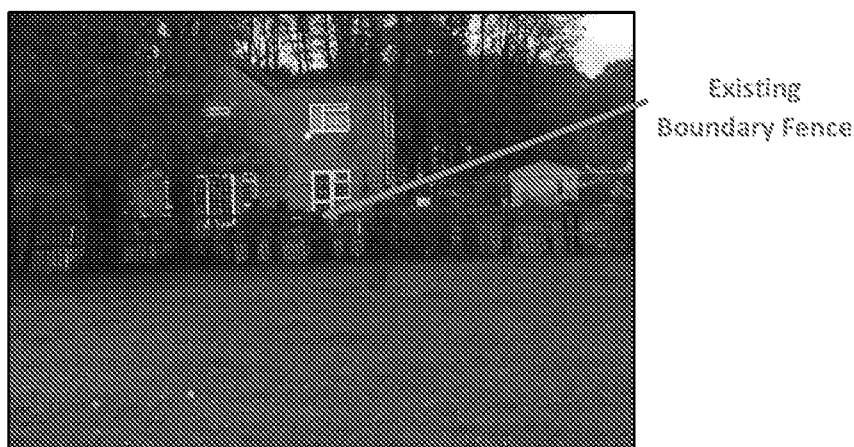
Plate 2: Garden & Boundary Fences



Mitigation

- 2.3 There is an existing wooden fence that demarcates the northern boundary of the site (refer to Plate 2 & Plate 3). The holes left by the removal of the existing fence posts will be used to erect the new fence posts. It is not known how deep these currently go however it likely that they will have been sunk to a depth of 0.30m or more. The height of the new fence will be 1.8m and the fence posts will be sunk to a depth of 0.5m, requiring extra digging of c. 0.2m.

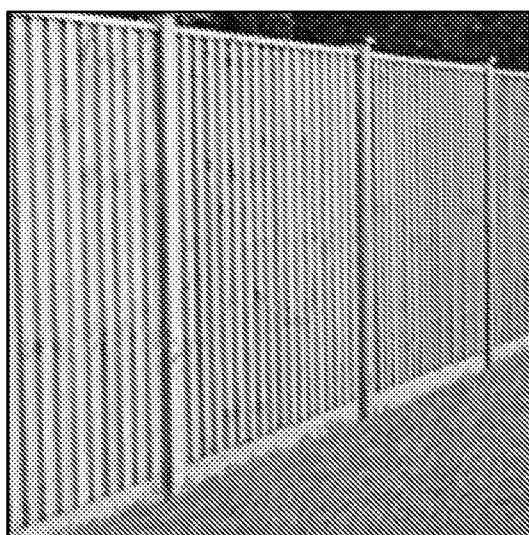
Plate 3: Existing Wooden Fence Along the Northern Site Boundary



- 2.4 The garden fence (see Plate 2) will be constructed using 1.8-metre-wide panels with supporting fence posts. This will require digging a maximum of three fence posts per fence line to be dug within the RPA of the line of hornbeam to the north of the site. The holes for the fence posts will measure L: 0.2m x W: 0.2m x D: 0.5m – the holes will be lined with a series of plastic sheets to ensure damaging leachate from the concrete block base does not enter the RPA of the hornbeams.

Plate 3: Fence Panels

Example of 1.8m wide panel



- 2.5 It is stated within Matheny and Clark 1998 (*Trees & Development – A Technical Guide to Preservation of Trees During Land Development*) that *Carpinus caroliniana* has a moderate relative tolerance to development impacts, however, that it is also stated that they are intolerant of root loss. It is acknowledged that the trees of concern here are *C. betulus*, however, it is stated within Johnson and More 2004 (*Collins Tree Guide: The Most Complete Guide to the Trees of Britain and Europe*) that *C. betulus* and *C. caroliniana* have comparable phenological manifestations. On this basis it is suggest that it is a suitable proxy for assessment. Even though root loss is an issue for this species, it is considered that digging for the fence posts will impart a ‘negligible’ impact because of the very small-scale root loss that will occur from excavating the holes for the gate posts.

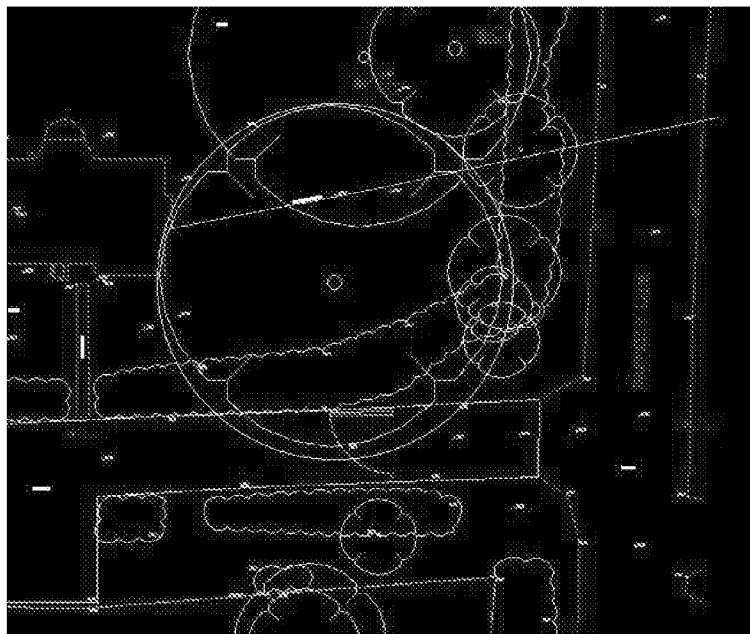
Methodology

- 2.6 Within the RPA, the holes for fence posts will be dug using hand tools only; specific fence digging equipment is appropriate.
- 2.7 The depth of the holes for the fence posts will measure 0.5m deep and 0.2m x 0.2m wide. The fence post will be held in place using either post mix or ballast and cement.
- 2.8 The erection of each post, from digging the hole to setting the post, will be completed in one go to avoid having roots exposed overnight.
- 2.9 The boundary fence will be placed over the existing wooden fence that marks the northern boundary of the site using the location of existing posts as the support network for the new fence.
- 2.10 The holes for the fence posts will be lined with a series of plastic sheets to ensure damaging leachate from the concrete block base does not enter the RPA of the hornbeams. The series of plastic sheets will be comprised of an initial layer of thin sticky plastic, akin to carpet protector, that will be rolled around the outside of the hole to create an impermeable layer. Two narrow sheets of thicker polythene sheeting will then be laid in a crisscross fashion over the bottom of the fence post as it is inserted into the hole to create extra protection from leachate and to ensure the thinner outer layer is not perforated in the act of inserting the fence post.

3.0 RESURFACING OF THE ACCESS ROAD WITHIN THE RPA OF T07

- 3.1 The existing access road will be resurfaced and replaced with a permeable hardstanding access track. The RPA of T07 extends beneath the existing hardstanding track therefore its removal will need to be undertaken under an Arboricultural Method Statement and Arboricultural Watching Brief.

Plate 4: RPA of T07 in Relation to the Existing Hardstanding Access Track
Dominant Category A Oak Tree (T07) With 9.15m RPA Superimposed



Approximate Location of RPA Underneath Existing Hardstanding Access



Mitigation

- 3.2 The removal of the existing hardstanding track will be undertaken using the '*break up, pull back*' principle. The pieces of concrete will be taken out by hand and placed outside of the area of concern. The subbase will be taken out using a mini digger stationed on the remaining hardstanding to ensure roots do not become compacted.
- 3.3 The area exposed will be protected and cordoned off, using tree protective fencing (*if necessary*), between the time that the existing hardstanding is removed and the replacement permeable hardstanding is implemented.
- 3.4 A subbase of appropriate depth and durability will be laid underneath the replacement permeable paving to ensure that roots do not become compacted and water can percolate to the roots over the long term.
- 3.5 The southern extent of the replacement road will follow the line of the existing track and will not extend further toward the dominant Category A oak (T07).

Methodology

- 3.6 The RPA of T07 (9.14m) will be measured and marked-out using fluorescent spray paint, where it extends underneath the existing hardstanding access track, to identify the area of concern to all site users. This will be undertaken at the earliest possible convenience following full planning permission being granted. The marked-out area will conform broadly to that highlighted in the bottom picture of Plate 4. The line will be suitably annotated to clearly signify what it is marking out, the hardstanding outside of this line can be removed without the supervision of an arboricultural watching brief.

Arboricultural Watching Brief

- 3.7 The existing hardstanding access track will be removed by breaking apart the concrete using hand tools, such as a pneumatic drill (jackhammer), under the supervision of an arboricultural watching brief. The concrete will be retrieved by hand from the existing hardstanding, where possible, and from scaffold boards laid out to protect roots, where not possible. The pieces of concrete will be placed within the site outside of the contentious areas, the subbase will be removed with a mini digger, from the remaining hardstanding, using the '*pull back*' technique and under supervision of the arboricultural watching brief.
- 3.8 The soil exposed from underneath the removed hardstanding will be covered, using a tarpaulin and weighed down / buffered from weather using sharp sand or another inert granular fill (not builder's sand because of its high salt content) to protect the roots from desiccation and rapid temperature changes. The area will be also be cordoned off using tree protection fence, if necessary, and all site access will be excluded from the area until the construction of the replacement permeable hardstanding access track is started.
- 3.9 The depth of the existing hardstanding track is not currently known, however, due to its robust appearance it is currently believed that it is relatively deep. The depth cannot, however, be confidently asserted until the removal process is underway. This adds an element of uncertainty to the methodology, at this time, because the eventual depth of the soil will affect the levels of the replacement permeable access track.
- 3.10 What can be stated with confidence is that the levels beneath the subbase of the existing track will not be taken down more than 200mm beneath the existing base of the subbase of the existing access track. Less than 10% of the RPA of T07 extends beneath the existing access track and more than 90% of a tree's roots will be in the top 1.0 metre of soil. If it was necessary to take the soil down to the maximum depth of 200mm, this would constitute a loss of less than 2% of the RPA of T07. Add to this the fact that the replacement access track will be permeable, thereby improving the quality of the soil and the utility of the roots to the tree, the impact of excavating 200mm of soil will be negligible over the short term and neutral over the long term to the amenity of T07.

- 3.11 It is stated within Matheny and Clark 1998 (*Trees & Development – A Technical Guide to Preservation of Trees During Land Development*) that *Quercus* sp. have a moderate relative tolerance to development impacts (Page 175). The development impact as described is suggested to impart a relatively low impact which would add credence to the previous assertion.
- 3.12 The subbase of the replacement permeable hardstanding access will be installed in line with the engineer's recommendations and under arboricultural watching brief. Due care and attention will be paid at all times during its construction to avoid the compaction of the roots during this process.
- 3.13 Acceptable proposals, subject to a schedule of auditable supervision by the project arboriculturist, to be agreed with the LPA at a pre-commencement site meeting.