

## **Arboricultural Impact Assessment**

**Cala Homes (Chiltern) Ltd**

Land off Fewcott Road, Fritwell

**Ref:** 18-1515

**Version:** 1

**Date:** 31<sup>st</sup> October 2018



Arboriculture

Ecology

Forestry & Woodland Management

Landscape & Green Infrastructure

Minerals & Waste Restoration

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While all reasonable efforts have been made to identify defects in the subject trees, the statements made in this report do not take into account the effects of extreme weather events, vandalism or accidents, or changes to the site that may affect trees that have taken place since the date of the survey. Lockhart Garratt Ltd does not accept any responsibility in connection with these factors. The comments and observations made within this report will cease to be valid either within two years of the date of the survey (unless specifically stated elsewhere within the report), or when site conditions change or any works to trees take place that have not been specified within this report, whichever is the sooner.

## ACRONYMS & ABBREVIATIONS

The following acronyms and abbreviations may be used throughout this report:

### A

AC	Arboricultural Consultant
ACoW	Arboricultural Clerk of Works
AMS	Arboricultural Method Statement

### C

CEZ	Construction Exclusion Zone
CCS	Cellular Confinement System

### M

MWC	Main Works Contractor
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### R

RPA	Root Protection Area
-----	----------------------

### S

SoU	Statement of Undertaking
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### T

TPF	Tree Protective Fencing
TPO	Tree Preservation Order
TPP	Tree Protection Plan
TWC	Tree Works Contractor

## Purpose of Document

This report has been commissioned to provide an assessment of the trees at land off Fewcott Road in Fritwell in accordance with the guidelines provided by BS5837:2012 *Trees in relation to design, demolition and construction – Recommendations*.

It consists of:

- A **Tree Survey** that records all relevant information about the trees on or adjacent to the site that may be impacted by the proposals. This includes a **Tree Constraints Plan** that shows the location of the trees on the site irrespective of any development considerations.
- An **Arboricultural Impact Assessment** to consider the impact that the development proposal may have on the trees. It provides details of how any adverse impact will be mitigated (including indicative protection measures) and includes an **Arboricultural Impact Plan**. This shows the location of the trees in relation to the proposed development and the above and below ground constraints posed by the trees. It will also show an illustration of the recommended tree protection measures on a **Draft Tree Protection Plan**.

The purpose of this report is to demonstrate how the tree constraints have been considered in the design and layout of the site. It also provides the local authority (Cherwell District Council) with the necessary information to assess the tree issues associated with the planning application.

The aim is to present the information in a manner that can easily be understood by people without specific knowledge of tree related matters.

## Executive Summary

Lockhart Garratt has been commissioned to provide an assessment of the potential impact on the existing tree stock from a development proposal on land off Fewcott Road in Fritwell.

The development proposal is for 38 residential dwellings with associated access and landscaping.

A tree survey was undertaken at the site in accordance with the guidelines provided in BS5837 (2012) *Trees in relation to design, demolition and construction – Recommendations*. This survey identified a total of 33 trees, groups of trees and hedgerows. These trees have been categorised as follows:

- 10 of moderate arboricultural quality (Category B)
- 20 of low arboricultural quality (Category C)
- 3 of poor arboricultural quality (Category U)

The submitted proposal will require the loss of eight arboricultural features (G5, T6, T7, H8, T9, T10, G11 & T28). Of these, two (T7 and G11) would be recommended for removal irrespective of this design proposal due to poor physiological and structural condition. The remaining six features will require removal as a direct result of the scheme. All of these features have been categorised as being of low arboricultural quality and with the exception of one tree (T28), these trees are located internally to the site. The removal of these features will have negligible impact on the visual amenity of the site due to the presence of existing, higher quality trees on the site boundary.

A total of two groups of trees (G14 and G31) will require remedial pruning to enable sufficient space for the construction of new residential properties. The pruning will be undertaken internally to the site and will not alter the longevity or amenity value of these features.

Retained trees within the site will be protected through a combination of bespoke ground protection measures and tree protective fencing to ensure they are sustainable post construction.

The site has been specifically designed to ensure the incorporation and retention of those trees of better quality. The aim has been to utilise trees as key features of the site to create a harmonious relationship between the new built structures and existing natural infrastructure. Where retention of trees has not been possible, replacement planting has been proposed to ensure a net gain in canopy cover and biodiversity benefit. This approach is in accordance with both National and Local Planning Policy (Policies ESD10 and ESD13) in regards to tree loss, new development and landscape quality.

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**Attachments**

Description	Reference	Version
Tree Schedule	18-1513	1
Tree Constraints Plan	18-1514	1
Arboricultural Impact Plan	18-1516	1
Draft Tree Protection Plan	18-1517	1

## 1. INTRODUCTION

### Instruction

- 1.1. Written instruction was received from Cala Homes (Chiltern) Ltd on 3<sup>rd</sup> September 2018 to undertake a tree survey and to prepare an Arboricultural Impact Assessment to supplement a full planning application for a proposed residential development within the site.

### Scope

- 1.2. The survey has been carried out in accordance with the recommendations laid down by *BS5837:2012 Trees in relation to design, demolition and construction - Recommendations*.
- 1.3. The information collected during the survey has been used to assist in the preparation of a report to accompany a planning application. This report includes:
  - A schedule of the relevant trees to include basis data and condition assessment
  - An appraisal of the impact that the proposed development may have on the trees and the resulting impact this may have on the local amenity.

### Background Information

- 1.4. For reference, a previous application for 34 residential dwellings was submitted to Cherwell District Council (Ref: 16/01594/FUL) which was subsequently withdrawn by the applicant. This report provides an updated assessment to support a revised application for a residential development.

### Site Description

- 1.5. The site is located within the village of Fritwell. It is located west of Fewcott Road and consists of stables and associated paddocks (see Plate 1 below).



Plate 1 – Site location (Source: Google Maps, 2018)

- 1.6. The majority of arboricultural features are located along the boundaries of the site. These vary in species, height and composition but are generally mature in nature. These features provide a degree of vegetative screening to the site, and the Landscape and Visual Impact Assessment undertaken for this proposal notes that “it is the presence of the existing vegetation structure that lines the Site boundaries which makes a positive contribution to the scenic quality of the

area and the character of the approach to the village along Fewcott Road" (Report Ref: 18-0038).

### **Limitations**

1.7. The following limitations apply to this report:

- **Tree Safety:** Whilst every effort has been made to ensure that comments relating to the trees surveyed are accurate, it must be noted that no trees have been climbed, no internal inspections carried out and no excavation of root areas has taken place. As such this report should not be taken to mean or imply that any of the inspected trees should be considered safe. No tree can be guaranteed to be 100% safe as some defects are not detectable by visual non-climbed, non-invasive inspection. Failure of an apparently healthy tree, either in part or totally may occur as a result of physical or physiological stress.

### **Author's Qualifications**

- 1.8. I am an Arboricultural Consultant at Lockhart Garratt Ltd and have worked in Forestry and Arboricultural related industries for 5 years. I am a Chartered Arboriculturist and Professional member of the Arboricultural Association.
- 1.9. I have an MSc in Arboriculture and Urban Forestry (Myerscough College and University of Central Lancashire) and a BSc degree in Countryside Management, which was awarded by Harper Adams University College.
- 1.10. In accordance with the professional standards of both associations, I undertake regular Continuous Professional Development (CPD) in all areas of arboriculture as well as in wider business administration and other related disciplines.

## 2. PLANNING POLICY AND STATUTORY CONSIDERATIONS

### National Planning Policy Framework 2018

- 2.1. National Planning Policy is currently defined by the National Planning Policy Framework (NPPF). This provides the most current and up to date planning guidance.
- 2.2. At the heart of the NPPF is a presumption in favour of sustainable development, and specifically states that for decision making, the LPA should be approving development proposals that accord with the development plan without delay.
- 2.3. The NPPF also states that the planning system should contribute to and enhance the natural and local environment, and provides specific guidance that planning policies should:

*Para 170 (b) – “recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland”*

*Para 175 (c) - “development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons<sup>58</sup> and a suitable compensation strategy exists.”*

- 2.4. Where the LPA does not have a development plan or the development plan is out of date, the LPA should grant planning consent insofar as the development proposals do not breach the NPPF.

### Local Planning Policy

- 2.5. The site is located within the boundary of the Cherwell District Council (CDC) planning authority. The Local Planning Authority (LPA) has a statutory obligation to ensure that provision is made for the protection of trees through section 197 of the Town and Country Planning Act (1990). CDC has prepared a specific development plan which includes trees and the natural environment. This plan is Cherwell Local Plan 2011-2031 (Part 1).
- 2.6. A review of the plan has been undertaken to assist design and layout of the site. This has ensured that the existing trees on site have been considered in the context of planning policy and have influenced the design proposals submitted as part of this application.

### Cherwell Local Plan 2011-2031 (Part 1)

- 2.7. The relevant policies to this development proposal are *Policy ESD10: Protection and Enhancement of Biodiversity and the Natural Environment* and *Policy ESD13: Local Landscape Protection and Enhancement*. These policies state:

#### ***“Policy ESD10: Protection and Enhancement of Biodiversity and the Natural Environment***

*Protection and enhancement of biodiversity and the natural environment will be achieved by the following:*

- In considering proposals for development, a net gain in biodiversity will be sought by protecting, managing, enhancing and extending existing resources and by creating new resources*

- *The protection of trees will be encouraged, with an aim to increase the number of trees in the District*
- *The reuse of soils will be sought*
- *If significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or as a last resort, compensated for, then development will not be permitted.*
- *Development which would result in damage to or loss of a site of international value will be subject to the Habitats Regulations Assessment process and will not be permitted unless it can be demonstrated that there will be no likely significant effects on the international site or that effects can be mitigated*
- *Development which would result in damage to or loss of a site of biodiversity or geological value of national importance will not be permitted unless the benefits of the development clearly outweigh the harm it would cause to the site, and the loss can be mitigated to achieve a net gain in biodiversity/geodiversity*
- *Development proposals will be expected to incorporate features to encourage biodiversity, and retain and where possible enhance existing features of nature conservation value within the site. Existing ecological networks should be identified and maintained to avoid habitat fragmentation, and ecological corridors should form an essential component of green infrastructure provision in association with new development to ensure habitat connectivity*
- *Relevant habitat and species surveys and associated reports will be required to accompany planning applications which may affect a site, habitat or species of known or potential ecological value.*

***Policy ESD13: Local Landscape Protection and Enhancement***

*Opportunities will be sought to secure the enhancement of the character and appearance of the landscape, particularly in urban fringe locations, through the restoration, management or enhancement of existing landscapes, features or habitat and where appropriate the creation of new ones, including the planting of woodlands, trees and hedgerows.*

*Development will be expected to respect and enhance local landscape character, securing appropriate mitigation where damage to local landscape character cannot be avoided.*

*Proposals will not be permitted if they would:*

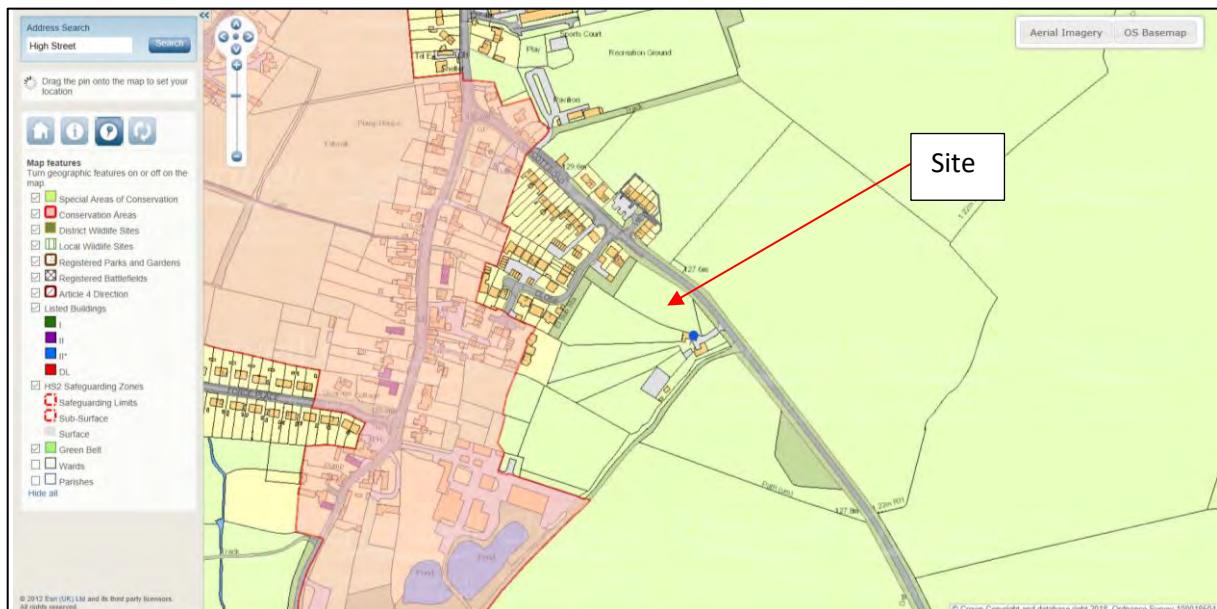
- *Cause undue visual intrusion into the open countryside*
- *Cause undue harm to important natural landscape features and topography*
- *Be inconsistent with local character*
- *Impact on areas judged to have a high level of tranquillity*
- *Harm the setting of settlements, buildings, structures or other landmark features, or*
- *Harm the historic value of the landscape*

*Development proposal should have regard to the information and advice contained in the Council's Countryside Design Summary Supplementary Planning Guidance, and the Oxfordshire Wildlife and Landscape Study (OWLS), and be accompanied by a landscape assessment where appropriate."*

- 2.8. These policies have formed the basis of this design proposal, ensuring that those trees of most significant landscape or habitat value are retained and incorporated into the scheme. Furthermore, tree removal has been minimised wherever possible and replacement planting has been proposed to mitigate the loss of low quality trees.

#### **Statutory Consideration**

- 2.9. A simple online search on Cherwell District Council's website on 12<sup>th</sup> October 2018 confirms that the site is not within a Conservation Area (see Plate 2 below).
- 2.10. The online search did not contain any information as to the presence of trees subject to a Tree Preservation Order (TPO).



**Plate 2 – Conservation Area search**

(Source:<http://your.cherwell.gov.uk/localview/Sites/Conservation/?x=452613&y=229233&sr=27700&scale=900#>)

### **3. TREE SURVEY AND CONSTRAINTS**

#### **Tree Survey**

- 3.1. An updated tree survey was undertaken on 21<sup>st</sup> September 2018 and a copy of the recorded data can be seen in the tree schedule attached to this report (Ref: 18-1513).
- 3.2. The tree survey considered all trees that have the potential to be impacted by any development proposals. This included trees that are outside the application boundary, but within influencing distance. The extent of the tree survey has been marked on the Tree Constraints Plan (TCP) attached to this report (Ref: 18-1514).
- 3.3. The purpose of the tree survey has been to provide guidance to the developer on the existing tree stock and to inform the site design and layout. The results of the survey allow the opportunity to balance the retention of significant trees against the opportunity to enhance the existing tree stock through proactive management.
- 3.4. The tree survey has been undertaken without influence of the proposed site layout and prior to any works being undertaken on the site.

#### **Tree Constraints**

- 3.5. The results of the tree survey are graphically presented on the TCP.
- 3.6. The above ground constraints posed by canopy spread are plotted as a continuous line around the tree, shown in the corresponding BS5837 retention category colour.
- 3.7. The below ground constraints posed by the Root Protection Area (RPA) have been plotted as a magenta line with the text RPA inscribed.
- 3.8. A summary of my assessment of the quality of trees, groups of trees and hedges that have been identified on the site is summarised in Table 1.

**Table 1 – An overview of tree quality in the surveyed area**

	<b>Category A</b>	<b>Category B</b>	<b>Category C</b>	<b>Category U</b>	<b>Total</b>
<b>Trees</b>	0	6	9	1	<b>16</b>
<b>Hedges</b>	0	0	5	0	<b>5</b>
<b>Groups</b>	0	4	6	2	<b>12</b>
<b>Total</b>	<b>0</b>	<b>10</b>	<b>20</b>	<b>3</b>	<b>33</b>

- 3.9. Full details of the assessment criteria for the tree survey can be found in Appendix 1.

## 4. ARBORICULTURAL IMPACT ASSESSMENT

### Design Principles

- 4.1. The development proposal submitted as part of this application has been directly and indirectly influenced by the existing tree cover on site.
- 4.2. The default position has been that no buildings will be sited within the tree canopy or root protection area of any retained tree.

### Development Proposal

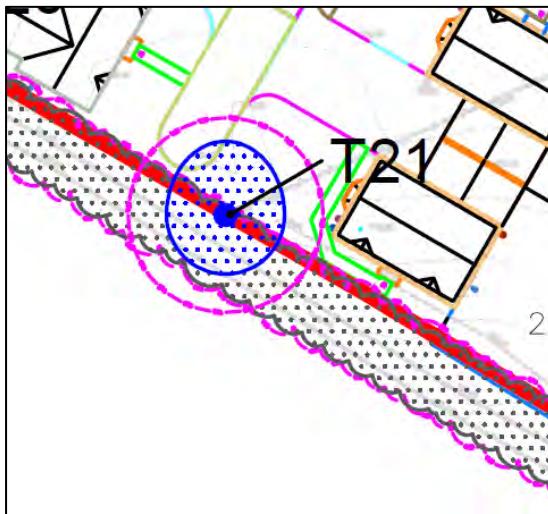
- 4.3. The development proposal is for 38 residential dwellings with associated access and landscaping.

### Impact Assessment

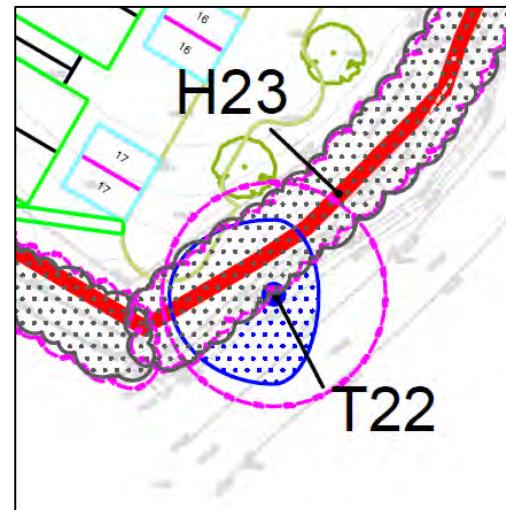
- 4.4. The impact assessment has been graphically presented by the Arboricultural Impact Plan (AIP) that is attached to this report (Ref: 18-1516).
- 4.5. The purpose of the AIP is to identify:
  - Trees that have the potential to be impacted by the design proposal;
  - Trees that are to be removed; and
  - Trees that require facilitation pruning.
- 4.6. The impacts has been considered (where possible) in terms of arboricultural impact, ecological impacts and landscape and visual impacts.

### Arboricultural Impacts

- 4.7. A total of two trees have the potential to be impacted as a direct result of this design proposal (T21 and T22). This is through encroachment into the rooting environment from new permanent hard standing to facilitate internal access drives (see Plates 3 and 4 below).



**Plate 3 – Evidence of encroachment into RPA of T21**  
(Source: AIP extract).



**Plate 4 – Evidence of encroachment into RPA of T21**  
(Source: AIP extract).

- 4.8. The encroachment into the rooting environments of these trees is minimal (<20% of the total RPA area). Both trees have sufficient space and available rooting environment elsewhere to

accommodate a minor incursion into the RPA. As such, bespoke protection measures would exceed the overall impact and therefore have not been recommended as part of this proposal.

### **Tree Removal and Pruning**

- 4.9. Tree removal and pruning has been limited to that which is necessary and unavoidable to the development of the site. Consideration has been given to species attributes and the tolerance of individual trees to disturbance. Consideration has also been given to the presence of surrounding trees and features of the site which may have an influence on retained trees.
- 4.10. Table 2 provides a detailed assessment of those trees being removed. Tree numbers in the table are colour coded in accordance with the BS5837:2012 retention category.

**Table 2 – Detailed Assessment of Tree Removals**

<b>Tree Number</b>	<b>Reason for removal</b>	<b>Evaluation of arboricultural impact</b>
G5, T6, H8, T9, T10 & T28	These features are proposed for removal to facilitate the construction of new properties and internal access roads.	All of these features are of low arboricultural quality and are located internally to the site. Their removal will have negligible impact on the overall tree stock within the site and wider community. Replacement planting will provide suitable mitigation for the loss of these trees.
T7 & G11	These trees are proposed for removal because they are in poor physiological and structural condition.	These trees would be recommended for removal irrespective of this design proposal due to poor condition and therefore are not considered further within this report.

- 4.11. Table 3 provides a detailed assessment of the requirement for facilitation pruning on retained trees:

**Table 3 – Detailed Assessment of Remedial Pruning Works**

<b>Tree Number</b>	<b>Reason for remedial works</b>	<b>Evaluation of arboricultural impact</b>
G14 (Mixed species group)	A crown reduction of approximately 2-2.5m will be required to the eastern canopy of specific trees to facilitate sufficient construction space for a new residential property.	Minor pruning to the canopies of trees that overhang the site boundary will have limited negative impact on this group of trees. The remainder of the group will remain untouched and will continue to provide a vegetative screen to neighbouring properties to the north of the site.
G31 (Ash group)	A crown reduction of 2m will be required to the southern canopy of this group of trees to facilitate sufficient construction space for a new residential property.	Minor pruning to the canopies of trees that overhang the site boundary will have limited negative impact on this group of trees. The remainder of the group will remain untouched and the pruning works will not be visible externally to the site.

- 4.12. All pruning works will be undertaken by a suitably qualified arboricultural contractor in accordance with BS3998:2010 Tree Works – Recommendations. This will ensure that the pruning cuts are carried out correctly and will not cause any structural or physiological defects in the future.

### **Ecological Impacts**

- 4.13. A detailed ecological assessment of the site has been undertaken (Lockhart Garratt Ref: 18-1615). The impact assessment considered in this report relates specifically to potential loss of habitat and biodiversity through tree removal.
- 4.14. One hedgerow (H8) that has been proposed for removal was identified as being of medium ecological value due to its composition. The removal of this hedgerow will require suitable mitigation elsewhere within the site to accommodate foraging birds and bats. The level of mitigation has been detailed in the Ecological report and therefore is not considered further in this report.

### **Landscape and Visual Impacts**

- 4.15. A detailed Landscape and Visual Impact Assessment of the site has been undertaken (Lockhart Garratt Ref: 18-0038). The impact assessment considered in this report relates specifically to visual impact that tree loss may have on the amenity of the site.
- 4.16. The removal of trees to facilitate this design proposal will not have an adverse impact on the landscape character of the site and therefore is not considered further within this report.

### **Mitigation through Landscape and Replacement Planting**

- 4.17. Indicative replacement planting has been shown on the proposed layout plan (Cala Homes Ltd Ref: SK01-RevH). It is anticipated that the replacements will be native or naturalised species that will provide additional canopy cover, biodiversity benefit and visual amenity.

### **Protection of Retained Trees**

- 4.18. The successful retention of those trees that will remain on the site will be dependent upon the quality and maintenance of any protection system that is put in place.
- 4.19. Indicative tree protection measures have been considered within this report and are graphically presented in the Draft Tree Protection Plan (TPP) (Ref: 18-1517).
- 4.20. The following principles for the protection of retained trees will be adopted by the developer during the construction of the new properties:
  - All retained trees will be protected by fencing that will form a construction exclusion zone (CEZ). The fencing has been indicated on the TPP by a dashed black line with the orange diagonal hatching showing the CEZ.
  - There will be no storage of materials, or access for construction workers or machinery within any CEZ.
  - There will be no level changes within a CEZ.
  - There will be no excavation within a CEZ. All utilities and underground services will be located outside the CEZ or tap into existing service routes.
  - Any storage or mixing station located outside of a CEZ will be located in a place that minimises the risk of contaminated runoff entering the CEZ and damaging the rooting environment. This may be achieved by using a non-permeable membrane on the ground, surrounded by sandbags to contain any spillage.
  - There will be no fires within a CEZ.
  - There will be no use of herbicides within CEZ.

4.21. The processes of construction are highly unlikely to have a detrimental effect upon the health of the retained trees assuming tree protection recommendations made in this report are adhered to at all times by the contractors.

## 5. APPENDICES

### Appendix 1: Tree Survey Criteria (BS5837:2012)

- 5.1. The assessment of the trees has been carried out in accordance with the guidance provided in Annex C of BS5837. In summary this requires that any tree on the site with a stem diameter of over 75mm at 1.5m above ground level is recorded.
- 5.2. All observations were made from ground level, without detailed investigation with regard to the general condition of the tree.
- 5.3. Trees that are located outside of the site have been considered as part of this survey, and have been annotated on the accompanying plan as such.
- 5.4. Stem diameter measurements were taken using a girth tape and in accordance with Annex D of BS5837. Where access to the base of the tree was not possible for any reason, the diameter has been estimated.
- 5.5. Height, crown spread and canopy clearance measurements are recorded in accordance with the measurement convention detailed in paragraph 4.4.2.6 of BS5837.
- 5.6. The trees are categorised in an order defined in **Table 1** of BS5837, a copy of which can be seen below in **Figure 1**, but which can be summarised as:
  - **A Category** Trees of high quality and value in such a condition as to be able to make a substantial contribution for a minimum of 40 years.
  - **B Category** Trees of moderate quality and value in such a condition as to make a significant contribution for a minimum 20 years.
  - **C Category** Trees of low quality and value currently in adequate condition able to remain until new planting can be established. These trees are expected to remain for a minimum of 10 years. It also includes young trees with a stem diameter less than 150mm measured at 1.5 metres above ground level.
  - **U Category** Trees in such a condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural or forestry management.
- 5.7. Additionally, BS5837:2012 provides subcategories 1-3 within the category system outlined above which indicate the area(s) in which a tree or group retention value lies.
  - Mainly arboricultural.
  - Mainly landscape.
  - Mainly cultural, including conservation.

**BRITISH STANDARD**
**BS 5837:2012**
**Table 1 Cascade chart for tree quality assessment**

Category and definition	Criteria (including subcategories where appropriate)	Identification on plan
<b>Trees unsuitable for retention (see Note)</b>		
<b>Category U</b> Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	<ul style="list-style-type: none"> <li>Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning)</li> <li>Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline</li> <li>Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality</li> </ul> <p><i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i></p>	See Table 2
	<b>1 Mainly arboricultural qualities</b>	<b>2 Mainly landscape qualities</b>
		<b>3 Mainly cultural values, including conservation</b>
<b>Trees to be considered for retention</b>		
<b>Category A</b> Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features  See Table 2
<b>Category B</b> Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality  See Table 2
<b>Category C</b> Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits  See Table 2

**Figure 1 – BS5837 Cascade Chart**

**Appendix 2 – Documents Supplied****Documents Supplied**

Document Reference	Date Received	Document Details	Supplied By
6983	03.09.18	Topographical Survey	Ground Surveys Ltd
SK01- REVH	31.10.18	Proposed Layout	Cala Homes Ltd

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### **AERIAL SURVEYING**

SITE SURVEYING | SITE MONITORING | 3D MODELLING | ORTHOMOSAIC | DIGITAL SURFACE MAPPING

### **ARBORICULTURE**

TREES & DEVELOPMENT | TREE RISK MANAGEMENT | TREES & THE LAW | EXPERT WITNESS

### **DIGITAL MAPPING & GRAPHIC DESIGN**

DIGITAL REPRESENTATION AND GIS ANALYSIS | GRAPHIC DESIGN

### **ECOLOGY**

HABITAT & SPECIES SURVEYS AND LICENSING | HABITAT CREATION, RESTORATION AND MANAGEMENT  
STAKEHOLDER ENGAGEMENT | ECOLOGICAL IMPACT ASSESSMENT

### **FORESTRY & WOODLAND MANAGEMENT**

FORESTRY MANAGEMENT ADVICE | OPERATIONAL MANAGEMENT | TIMBER SALES | GRANT APPLICATIONS  
NEW WOODLAND DESIGN | CARBON | WOODLAND EVALUATION

### **LANDSCAPE & GREEN INFRASTRUCTURE**

LANDSCAPE & VISUAL IMPACT ASSESSMENT | LANDSCAPE DESIGN & SPECIFICATION  
LANDSCAPE MANAGEMENT PLANS | GREEN INFRASTRUCTURE PLANNING & DESIGN | EXPERT WITNESS

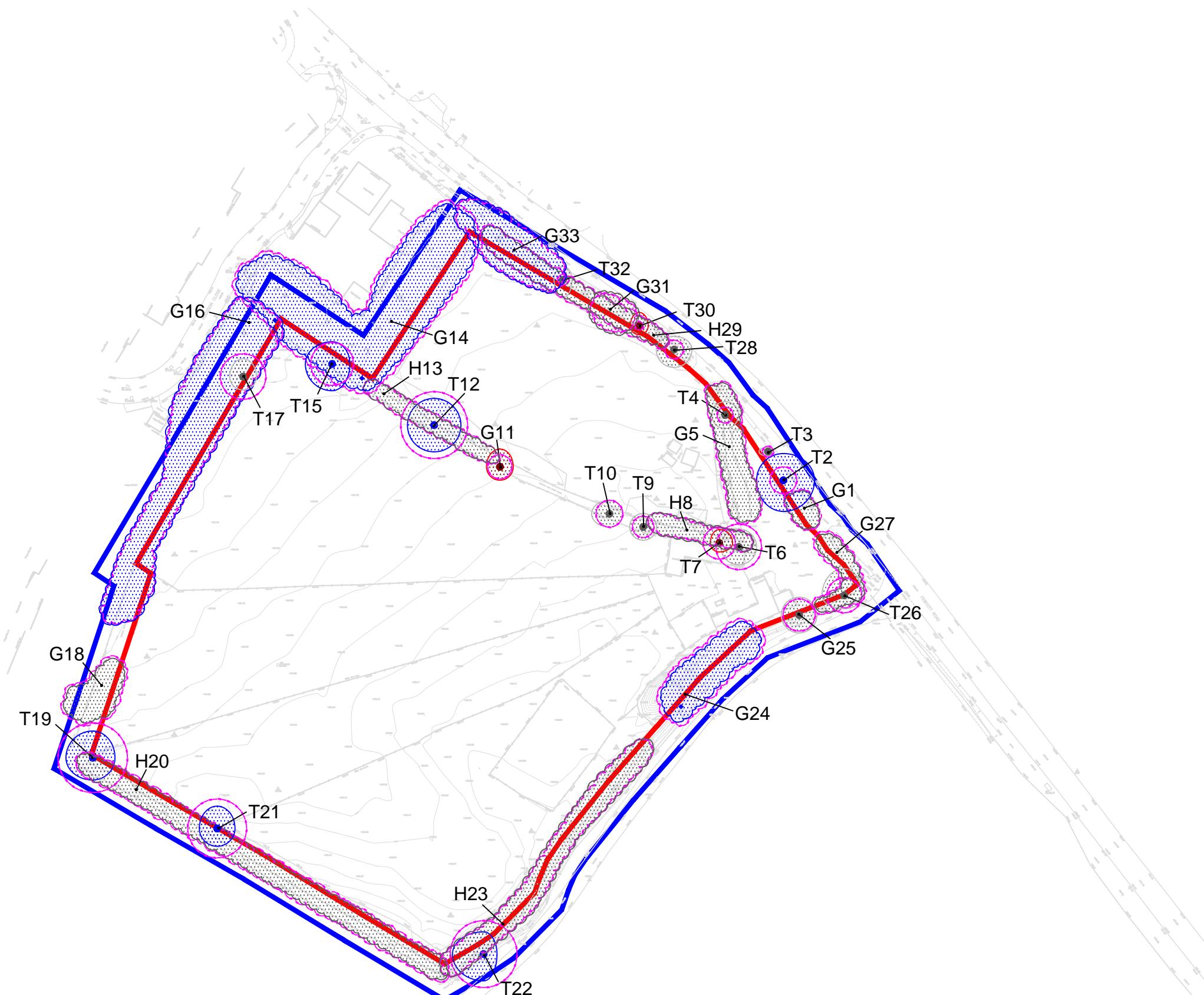
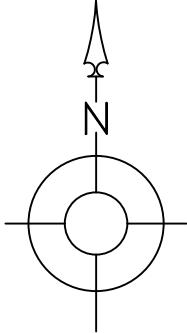
### **MINERALS & WASTE RESTORATION**

PLANNING RATIONALISATION & STAKEHOLDER LIAISON | LAND SURVEY & MANAGEMENT PLANNING  
COST ENGINEERED LANDSCAPE & HABITAT DESIGN | IMPLEMENTATION MANAGEMENT & CLERK OF WORKS  
RESTORATION & AFTERCARE MANAGEMENT PLAN (RAMP) | SOIL SURVEY & ADVICE

Client: Cala Homes (Chiltern) Ltd Site: Land off Fewcott Road, Fritwell																	Reference: 18-1513 Date of survey: 04/09/2015						
*This schedule has been updated following additional site visits on 09/06/16 and 21/09/18.																							
Key to Notations																							
Stem Dia: Stem diameter (mm) at 1.5m above ground level C.C.: Height of crown clearance above ground level L.B.: Lowest branch height in meters D.L.B.: Direction of Lowest Branch U.L.E.: Useful Life Expectancy of tree in years																							
Age Class: Y Young, EM Early Mature, M Mature, OM Over Mature, V Veteran Definition: 1st 1/3rd of life expectancy, 2nd 1/3rd of life expectancy, Final 1/3rd of life expectancy, Beyond life expectancy & in natural decline Category Grading: A High Quality & Value, B Moderate Quality & Value, C Low Quality & Value, U Dead, dying or dangerous Category: 40+ (Mainly arboricultural value), 20-40 (Mainly landscape value), 10-20 (Mainly cultural value), <10 (No remedy) Physiological condition: Good (No significant health problems), Fair (Symptoms of health that can be remediated), Poor (Significant ill health) Structural condition: Good (No significant defects), Fair (Significant defects that can be remediated), Poor (Significant defects with no remedy)																							
Tree No.	Tag No.	Species	Botanical Name	H (m)	Stem Dia.	No of Stems	Branch Spread (m)	CC (m)	LB (m)	DLB (m)	Age	PC	SC	Comments	Recommendations	ULE	Cat.	RPA (m2)	RPA Radial distance (m)				
1	G1	Hawthorn (Group)	<i>Crataegus spp.</i>	6.5	190	1	N 3	E 3	S 3	W 2	-	-	North	EM	Fair	Fair	Offsite group of x1 hawthorn, x2 elm and x1 elder - unable to take accurate measurements. All ivy clad and widely spaced and provides marginal low level screening value.	None.	10-20	C2	18	2	
2	T2	Sycamore	<i>Acer pseudoplatanus</i>	13.5	260	1	N 6	E 7	S 7	W 6	2	-	North	M	Good	Fair	Offsite tree of x14 stems from old coppice stool. Prominent boundary tree with debris and farm machinery stored at base south (within site).	Remove debris from beneath canopy and consider decompaction measures to improve rooting environment.	40+	B1	28	3	
3	T3	Elm	<i>Ulmus sp.</i>	6	90	1	N 1	E 1	S 1	W 2	2	3	East	Y	Fair	Fair	Offsite tree of little significance.	None.	10-20	C1	5	1	
4	T4	Elm	<i>Ulmus sp.</i>	5.5	158	3	N 3	E 3	S 3	W 3	3	3	1	East	EM	Fair	Fair	Unable to access - all measurements estimated. Insignificant tree with debris stored at base.	None.	10-20	C1	10	2
5	G5	Apple (Group)	<i>Malus spp.</i>	6	200	1	N 3	E 3	S 3	W 3	2	-	South	M	Fair	Poor	Linear group of x2 elder, x1 hawthorn and x3 crab apple. Majority ivy clad and leaning due west. Group forms marginal low quality screen to neighbouring site. Overall little retention value.	If retained, remove x2 dead elder at northern end.	10-20	C2	18	2	
6	T6	Sycamore	<i>Acer pseudoplatanus</i>	11.5	418	3	N 4	E 4	S 4	W 4	3	1	South	M	Good	Fair	x3 stems from base with included union. Debris stored at base and unlikely to be suitable for retention due to structural defects.	If retained remove debris from around base of tree.	10-20	C1	82	5	
7	T7	Elder	<i>Sambucus nigra</i>	3.5	292	3	N 3	E 2	S 2	W 3	2	1	North	M	Poor	Fair	Multi stemmed from base and suppressed by larger tree due east.	Remove.	>10	U	41	4	
8	H8	Elder	<i>Sambucus nigra</i>	2.5	150	1	N 2	E 2	S 2	W 2	2	-	-	South	M	Fair	Poor	Linear hedge of elder and hawthorn. Not actively managed and densely ivy clad. Generally poor and forms partial low level screen to neighbouring site.	Remove and replace.	10-20	C2	10	2
9	T9	Hawthorn (Common)	<i>Crataegus monogyna</i>	5.5	203	3	N 3	E 3	S 3	W 3	2	1	West	M	Good	Fair	Offsite tree - all measurements estimated. Multi stemmed from base.	None.	20-40	C1	18	2	
10	T10	Sycamore	<i>Acer pseudoplatanus</i>	10	247	3	N 3	E 3	S 4	W 4	2	1	East	M	Good	Fair	Offsite tree - all measurements estimated. Stem bifurcates at 1.5m with included union, retention category down graded due to structural defects but otherwise reasonable quality tree.	None.	10-20	C1	28	3	
11	G11	Elder	<i>Sambucus nigra</i>	5.5	230	1	N 4	E 3	S 3	W 3	1	2	East	M	Poor	Poor	Offsite group - all measurements estimated. Western tree has partially failed and group is overall poor.	None.	>10	U	23	3	
12	T12	Ash (Common)	<i>Fraxinus excelsior</i>	16	636	3	N 6	E 6	S 6	W 6	3	1	East	M	Good	Fair	Offsite tree - all measurements estimated. Stem trifurcates at base and is partially ivy clad. Tree is growing on old boundary wall.	None.	20-40	B1	177	8	
13	H13	Blackthorn	<i>Prunus spinosa</i>	2	0	1	N 2	E 2	S 2	W 2	-	-	South	EM	Fair	Fair	Linear hedgerow which hasn't been managed. Group provides marginal habitat value and green corridor network.	None.	20-40	C3	-	-	

Key to Notations																								
				Age Class		Definition						Category Grading												
Stem Dia:		Stem diameter (mm) at 1.5m above ground level		Y Young		1st 1/3rd of life expectancy						Category				ULE		Sub category						
C.C.		Height of crown clearance above ground level		EM Early Mature		2nd 1/3rd of life expectancy						A High Quality & Value				40+		1 Mainly arboricultural value						
L.B.		Lowest branch height in meters		M Mature		Final 1/3rd of life expectancy						B Moderate Quality & Value				20-40		2 Mainly landscape value						
D.L.B.		Direction of Lowest Branch		OM Over Mature		Beyond life expectancy & in natural decline						C Low Quality & Value				10-20		3 Mainly cultural value						
U.L.E.		Useful Life Expectancy of tree in years		V Veteran		Great age & poss. high conservation value						U Dead, dying or dangerous				<10								
Physiological condition			Good		No significant health problems						Fair				Symptoms of health that can be remediated		Poor		Significant ill health					
Structural condition			Good		No significant defects						Fair				Significant defects that can be remediated		Poor		Significant defects with no remedy					
Tree No.	Tag No.	Species	Botanical Name	H (m)	Stem Dia.	No of Stems	Branch Spread (m)				CC (m)	LB (m)	DLB (m)	Age	PC	SC	Comments		Recommendations		ULE	Cat.	RPA (m2)	RPA Radial distance (m)
14	G14	Hawthorn (Group)	<i>Crataegus spp.</i>	7	220	1	3	3	3	3	1	-	South	M	Good	Fair	Offsite group of hawthorn and elder that forms edge of small shelterbelt and habitat area. Evidence of compaction at base from horses but otherwise good quality group.		None.		20-40	B2	23	3
15	T15	Ash (Common)	<i>Fraxinus excelsior</i>	11.5	410	1	5	4	6	6	2	4	South	M	Fair	Good	Offsite tree - all measurements estimated.		None.		20-40	B1	72	5
16	G16	Hawthorn (Group)	<i>Crataegus spp.</i>	7	170	1	3	3	3	3	2	2	East	EM	Good	Good	Offsite group - all measurements estimated. Mixed species of hawthorn, elder, elm, ash, field maple, sycamore, cherry, hazel and blackthorn. Trees share mutual canopy and provides good vegetative screen to new offsite properties.		Provide minimum 3.5m buffer for future root growth.		40+	B2	14	2
17	T17	Ash (Common)	<i>Fraxinus excelsior</i>	9.5	430	1	4	3	3	3	2	4	East	M	Fair	Fair	Offsite tree - all measurements estimated. Stunted growth for species and age.		None.		10-20	C1	82	5
18	G18	Sycamore	<i>Acer pseudoplatanus</i>	7	140	1	2	2	2	2	1	1	East	EM	Good	Fair	Offsite group - all measurements estimated. Consists of sycamore, birch and hawthorn. Trees share mutual canopy and provides partial screen to new offsite properties.		Provide minimum 3.5m buffer for future root growth.		10-20	C2	10	2
19	T19	Sycamore	<i>Acer pseudoplatanus</i>	16	658	2	7	6	5	6	2	1	East	M	Good	Fair	Tree on corner of site. Good example of species but evidence of included bark at stem union. Downgraded due to structural defect.		None.		40+	B1	191	8
20	H20	Hawthorn (Group)	<i>Crataegus spp.</i>	5	130	1	2	2	2	2	-	-	North	EM	Fair	Fair	Linear hedgerow of hawthorn, blackthorn, elder, apple and sycamore. Numerous gaps and unmanaged.		Hedgerow management regime needed and supplementary planting.		10-20	C2	7	2
21	T21	Sycamore	<i>Acer pseudoplatanus</i>	14	550	1	6	5	4	4	2	2	West	M	Good	Fair	Electric fence attached to tree and open cavity at base north to 1.5m with significant reaction wood. Otherwise fairly prominent tree.		If retained reinspect for health and safety purposes.		20-40	B1	137	7
22	T22	Ash (Common)	<i>Fraxinus excelsior</i>	12	616	3	5	3	6	7	1	1	West	M	Good	Fair	Offsite tree - all measurements estimated. Tree is located east of ditch and canopy extends into site. Stem trifurcates at 1m. Evidence of x2 hanging branches at 5m west.		Remove hanging branch and provide offset to accommodate root growth.		20-40	B1	177	8
23	H23	Blackthorn	<i>Prunus spinosa</i>	5	160	1	3	3	3	3	1	-	North	M	Good	Fair	Boundary group of blackthorn and hawthorn that forms dense screen to offsite access drive. Provides dense habitat corridor.		Consider hedgerow management plan.		20-40	C2	10	2
24	G24	Sycamore	<i>Acer pseudoplatanus</i>	7	270	1	3	3	3	3	1	1	North	EM	Good	Fair	Offsite group - all measurements estimated. Consists of sycamore, ash, hawthorn, field maple, elm and blackthorn. Soil bunched at base north and shares mutual canopy. Provides vegetative screen offsite.		Remove soil bund to benefit root spread.		20-40	B2	34	3
25	G25	Sycamore	<i>Acer pseudoplatanus</i>	6	309	3	4	4	4	4	-	1	West	M	Fair	Fair	Offsite group - all measurements estimated. Historically pollarded at 1.5m (?).		None.		20-40	C2	41	4

Key to Notations																										
				Age Class		Definition						Category Grading														
Stem Dia:		Stem diameter (mm) at 1.5m above ground level		Y	Young	1st 1/3rd of life expectancy						A		High Quality & Value				ULE	Sub category							
C.C.		Height of crown clearance above ground level		EM	Early Mature	2nd 1/3rd of life expectancy						B		Moderate Quality & Value				40+	1	Mainly arboricultural value						
L.B.		Lowest branch height in meters		M	Mature	Final 1/3rd of life expectancy						C		Low Quality & Value				20-40	2	Mainly landscape value						
D.L.B.		Direction of Lowest Branch		OM	Over Mature	Beyond life expectancy & in natural decline						U		Dead, dying or dangerous				10-20	3	Mainly cultural value						
U.L.E.		Useful Life Expectancy of tree in years		V	Veteran	Great age & poss. high conservation value												<10								
Physiological condition		Good		No significant health problems						Fair		Symptoms of health that can be remediated				Poor		Significant ill health								
Structural condition		Good		No significant defects						Fair		Significant defects that can be remediated				Poor		Significant defects with no remedy								
Tree No.	Tag No.	Species	Botanical Name	H (m)	Stem Dia.	No of Stems	Branch Spread (m)				CC (m)	LB (m)	DLB (m)	Age	PC	SC	Comments		Recommendations		ULE	Cat.	RPA (m2)	RPA Radial distance (m)		
26	T26	Ash (Common)	<i>Fraxinus excelsior</i>	7.5	321	3	6	4	3	5	2	1	West	M	Fair	Fair	Offsite tree - all measurements estimated. Debris stored at base and stem trifurcates at base with an uneven canopy.		None.		10-20	C1	48	4		
27	G27	Hawthorn (Group)	<i>Crataegus spp.</i>	4	180	1	3	3	3	3	1	-	North	EM	Fair	Poor	Offsite group which is widely spaced. Consists of hawthorn, elder and elm. Debris stored at base and growing on bank of ditch. Overall little retention value.		None.		10-20	C2	14	2		
29	T28	Hazel (Common)	<i>Corylus avellana</i>	4	176	7	3	4	4	4	-	-	North	M	Fair	Fair	Multi stemmed from base and insignificant tree.		None.		10-20	C1	14	2		
30	H29	Elm (Group)	<i>Ulmus spp.</i>	3	75	1	2	2	2	2	-	-	South	M	Fair	Poor	Understorey hedgerow, dominated by elm with some elder and blackthorn. Varies in height and several gaps with little evidence of proactive management.		If retained, recommend supplementary planting to fill gaps.		10-20	C2	3	1		
31	G30	Elm (Group)	<i>Ulmus spp.</i>	5	80	1	3	2	2	2	1	-	North	OM	Poor	Poor	x1 elm and x1 elder that are dead and located within hedgerow.		Consider removal as good arboricultural practice.		>10	U	3	1		
32	G31	Ash (Group)	<i>Fraxinus spp.</i>	9	100	1	4	4	4	4	2	-	North	EM	Fair	Fair	x2 elm and x2 ash that forms more significant group within hedgerow and all multi stem from base. Measurements averaged.		None.		10-20	C2	5	1		
33	T32	Elm	<i>Ulmus sp.</i>	8	110	1	3	2	4	2	1	1	North	EM	Fair	Fair	Unable to access - all measurements estimated. Dense ivy covered stem and slightly asymmetric canopy and slightly removed from larger group due west.		None.		10-20	C1	5	1		
34	G33	Field maple	<i>Acer campestre</i>	9	200	1	5	4	4	5	1	-	North	EM	Fair	Good	Small linear group of field maple, sycamore, ash and elm. Majority multi stemmed from base - measurements averaged. Prominent trees along road edge.		Recommend retention wherever possible.		20-40	B2	18	2		



LEGEND	
	Category A trees (Stem and Canopy Spread)
	Category B trees (Stem and Canopy Spread)
	Category C trees (Stem and Canopy Spread)
	Category U trees (Stem and Canopy Spread)
	Root Protection Area
	Site Boundary
	Survey Extents

27.09.18	Changes following internal quality control procedure	SW v1
27.09.18	Original report	SW d1
Date	Details of Change	By Version

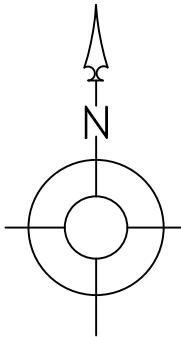


TITLE:	Tree Constraints Plan	
PROJECT/SITE:	Land off Fewcott Road, Fritwell	
CLIENT:	Cala Homes (Chiltern) Ltd	
MAP T:	18-1514	
REVISION:	1	
DATE:	27.09.18	SCALE: 1:1000@A3
APPROVED BY:	NB	PRODUCED BY: SW

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01608 648657



## LEGEND

-  Category A trees  
(Stem and Canopy Spread)
  -  Category B trees  
(Stem and Canopy Spread)
  -  Category C trees  
(Stem and Canopy Spread)
  -  Category U trees  
(Stem and Canopy Spread)
  -  Root Protection Area
  -  Trees to be Removed
  -  Site Boundary
  -  Existing Layout
  -  Proposed Layout

Date	Details of Change	Perf.	Version
31.10.18	Changes following internal quality control procedure	SW	v1
31.10.18	Original report	SW	d1

 LOCKHART  
GARRATT

Arboricultural Impact Plan

CT/SITE:  
hand off Fawcett Road, Fritwell

Cala Homes (Chiltern) Ltd

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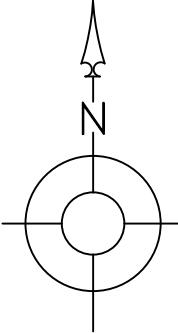
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LEGEND	
	Category A trees (Stem and Canopy Spread)
	Category B trees (Stem and Canopy Spread)
	Category C trees (Stem and Canopy Spread)
	Category U trees (Stem and Canopy Spread)
	Root Protection Area
	Trees to be Removed
	Site Boundary
	Existing Layout
	Proposed Layout
	Construction Exclusion Zone (area required to protect retained trees roots and canopy).
	Tree Protection Fencing

31.10.18	Changes following internal quality control procedure	SW v1
31.10.18	Original report	SW d1
Date	Details of Change	By Version



TITLE:	
Draft Tree Protection Plan	
PROJECT/SITE:	
Land off Fewcott Road, Fritwell	
CLIENT:	
Cala Homes (Chiltern) Ltd	
MAP T:	
18-1517	
REVISION:	
1	
DATE:	SCALE:
31.10.18	1:1000@A3
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