

# Arboricultural Report

Tree Survey,  
Arboricultural Impact Assessment &  
Arboricultural Method Statement

In relation to the development proposal at:

**Newcastle South**

**Newcastle**

**Co. Dublin**

On behalf of:

**Cairn Homes Properties Ltd.**

**June 2022**

**220301-PD-11-A**

**CHARLES MCCORKELL**  
ARBORICULTURAL CONSULTANCY

# Contents

<b>Section 1: Arboricultural Impact Assessment</b>	<b>3</b>
1 Summary	3
2 Introduction	4
3 Observations & Context	7
4 Local Planning Policy	12
5 Technical Information	14
6 Analysis of the Proposal in Respect of Trees	15
7 Discussion & Conclusion	18
8 Recommendations	20
<b>Section 2: Arboricultural Method Statement</b>	<b>21</b>
<b>Appendices</b>	<b>26</b>
Appendix A – Schedules	26
Appendix B – Plans	27
Appendix C – Cellular Confinement System	28
Appendix D – Ground Protection	29

# Section 1: Arboricultural Impact Assessment

## 1 Summary

- 1.1 This arboricultural report has been instructed by Cairn Homes Properties Ltd. (the 'Applicant').
- 1.2 The proposal is for the construction of a strategic housing development at Newcastle South, Newcastle, Co. Dublin (the 'Application Site').
- 1.3 This report includes:
- an assessment of the trees, their quality and value in accordance with BS 5837:2012 - Trees in relation to design, demolition and construction;
  - the site context and observations on the trees;
  - local planning policies relevant to the consideration of trees on the site;
  - the impact of the proposed development upon the tree population in and around the site;
  - methods of reducing impacts on trees; and
  - measures to be taken to protect trees during the proposed works.
- 1.4 The proposed development will require the removal of eight low quality trees (C Category); three poor quality trees (U Category); and the partial removal of one moderate quality hedgerow (B Category) and one low quality hedgerow (C Category).
- 1.5 The proposed removals have been assessed and their loss will not have a significant impact on the landscape character of the local surrounding area.
- 1.6 The proposal includes substantial new high-quality tree and hedgerow planting that will mitigate the proposed removals and have a positive impact on the amenities and visual appearance of the development and local surrounding landscape in the future.
- 1.7 In conclusion, the proposed development is achievable in both arboricultural terms and in relation to local planning policy as it relates to trees. Tree impacts have been assessed and tree protection measures have been specified in accordance with best practice and are sufficient to safeguard retained trees during the proposed works.

## 2 Introduction

### Instructions

- 2.1 This arboricultural report has been instructed by Cairn Homes Properties Ltd. to provide information to assist all parties involved in the planning process to make balanced judgements with regard to arboricultural features in relation to the proposed strategic housing development at Newcastle South, Newcastle, Co. Dublin.

### Development proposal

- 2.2 The development will consist of the construction of 280 no. dwellings, a creche, and open space at this site within the townland of Newcastle South, Newcastle, Co. Dublin, on lands of c. 8.47 hectares (2 no. sites comprising main development site (8.4 ha.) and site relating to creche c. 0.07 ha. in 'Graydon' as follows:
- A) 128 no. 2 storey houses (8 no. 2 bedroom houses, 94 no. 3 bedroom houses, 25 no. 4 bedroom houses and 1 no. 5 bedroom house;
  - B) 116 no. apartments in 2 no. 5 storey buildings comprising (54 no. 1 bedroom apartments & 62 no. 2 bedroom apartments, all with terrace or balcony along with solar panels and green roofs at roof level as well as telecommunications infrastructure comprising 9 no. support poles on ballast mounts (to accommodate 1No. 2m 2G/3G/4G antenna & 1No. 5G antenna each) & 3 no. poles on lift overrun (to accommodate 2No. Ø0.3m Microwave links each at roof level of Apartment building B, together with associated equipment and cabinets/shrouds);
  - C) 36 no. apartments/duplex apartments in 3 no. 3 storey buildings – (18 no. 2 bedroom apartments and 18 no. 3 bedroom duplex apartments) all with terrace;
  - D) Amendment to permitted Creche (c. 518sqm) in 'Graydon' (ABP References: TA06S.305343 & ABP-305343-19) to now provide a Creche of c. 778 sq. m of 2 no. storeys;
  - E) Open space, hard and soft landscaping (including public lighting & boundary treatment), communal open space for duplex apartments and apartments; along with single storey bicycle/bin stores and ESB substations;
  - F) Vehicular access from the Athgoe Road from a new signalised junction along with upgrades to footpath and pedestrian crossing as well as provision of vehicular/pedestrian/cycle link to permitted 'Graydon' (TA06S.305343) 'Newcastle Boulevard' to the east, as well as 423 no. car parking spaces and 370 no. bicycle spaces and all internal roads, cycleways, green routes and paths;

- G) Provision of Surface water attenuation measures and underground attenuation systems, connection to water supply, and provision of foul drainage infrastructure as well as underground local pumping station to Irish Water specifications and all ancillary site development/construction/landscaping works.

## **Qualification and experience**

- 2.3 This report has been prepared by Charles McCorkell. Charles is a Chartered Arboricultural Consultant dealing with trees in relation to all forms of human activity, including the built environment. He is a Professional Member of the Institute of Chartered Foresters, a Professional Member of the Arboricultural Association, a qualified professional tree inspector (LANTRA), and has a BSc Honours Degree in Arboriculture from the University of Central Lancashire.

## **Scope and limitations**

- 2.4 The survey undertaken is not a health and safety assessment of trees; however, trees identified as imminently dangerous will have been highlighted and recommendations made, where appropriate.
- 2.5 The contents of this report are the copyright of Charles McCorkell Arboricultural Consultancy and may not be distributed or copied without the author's permission.

## **Methodology and guidance**

- 2.6 The author of this report has referred to *British Standard 5837: Trees in relation to design, demolition and construction (2012)* which provides a methodology for the assessment of trees and other significant vegetation on development sites.
- 2.7 BS 5837 (2012) is intended to assist decision making with regard to existing and proposed trees and sets out the principles and procedures to be applied to achieve a harmonious relationship between existing and new trees and structures that can be sustained for the long term.
- 2.8 The BS 5837 (2012) recommends the National Joint Utilities Group (NJUG) document *Guidelines for the planning, installation and maintenance of utility apparatus in the proximity to trees*. Volume 4, issue 2. London: NJUG, 2007, as a normative reference for guidance on the installation of utilities within proximity to trees.

## **Definitions**

- 2.9 **Root Protection Area (RPA)** – a layout design tool indicating the area surrounding a tree that contains sufficient rooting volume to ensure the survival of the tree.

- 2.10 **Tree Protection Zone (TPZ)** – an area based on the RPA in m<sup>2</sup> identified by an arboriculturist, to be protected during development, including demolition and construction work, by the use of barriers and/or ground protection fit for purpose to ensure the successful long-term retention of a tree.

### Supporting information

- 2.11 This report should be read in conjunction with the following supporting documents attached to this report.

Document	Reference	Location
Arboricultural Method Statement	N/A	Section 2
Tree Schedule	220301-PD-10	Appendix A
Tree Work Schedule	220301-PD-12	Appendix A
Tree Survey Plan	220301-P-10	Appendix B
Tree Works Plan	220301-P-11	Appendix B
Tree Protection Plan	220301-P-12	Appendix B
Cellular Confinement System	N/A	Appendix C
Ground Protection	N/A	Appendix D

### 3 Observations & Context

#### Site visit

- 3.1 The site was visited by Charles McCorkell on 29 and 30 March 2022. The purpose of the visit was to survey trees and hedgerows located on and adjacent to the site which may be of significance to the proposed development. The survey was carried out in accordance with BS 5837:2012 and from ground level only.

#### Site location and description

- 3.2 The Application Site is located on the eastern side of Athgoe Road, to the south of Newcastle Main Street (Map 1). It is a greenfield site with mixed native hedgerows and mature trees. The area surrounding the site contains residential properties to the east and north and agricultural land to the south and west.



**Map 1 (Google 2022):** Dashed yellow line highlighting the area of the proposed development within the local area.



## View of the site and trees



**Photo 1:** View of the lime trees (T903 to T906) located adjacent to Athgoe Road next to the existing site entrance.



**Photo 2:** View of the neighbouring Leyland cypress trees (G8 & G11) located adjacent to the northern boundary.





**Photo 3:** View of the neighbouring Leyland cypress trees (G12) located adjacent to the northern boundary. The trees within this group have been poorly pruned in the past.



**Photo 4:** View of the eastern boundary mixed hedgerow (H32) that has been poorly managed in the past.





**Photo 5:** View of the central mixed native hedgerow (H28) and mature ash tree (T27).



**Photo 6:** View of the eastern boundary mixed native hedgerow (H34).





**Photo 7:** View of the late-mature ash tree (T38) that is in poor structural condition.



**Photo 8:** View of the western boundary mixed native hedgerow and mature trees (T43 to H46).

## 4 Local Planning Policy

### Development Plan 2016-2022

- 4.1 The current South Dublin County Council Development Plan 2016-2022 contains several policies that relate to trees. These include:

#### **G2 Objective 5**

To integrate Green Infrastructure as an essential component of all new developments;

#### **G2 Objective 9**

To preserve, protect and augment trees, groups of trees, woodlands and hedgerows within the County by increasing tree canopy coverage using locally native species and by incorporating them within design proposal and supporting their integration into the Green Infrastructure network;

#### **HCL15 Objective 3**

To protect existing trees, hedgerows, and woodlands which are of amenity or biodiversity value and/or contribute to landscape character and ensure that proper provision is made for their protection and management in accordance with Living with Trees: South Dublin County Council's Tree Management Policy 2015-2020.

### Development Plan 2022-2028

- 4.2 The Draft County Development Plan 2022-2028 contains the following policies that relate to trees and are to be considered:

#### **G11 Objective 1**

To establish a coherent, integrated and evolving GI Network across South Dublin County with parks, open spaces, hedgerows, trees including public street trees and native mini woodlands (Miyawaki-Style), grasslands, protected areas and rivers and streams and other green and blue assets forming strategic links and to integrate and incorporate the objectives of the GI Strategy throughout all relevant land use plans and development in the County.

#### **G15 Objective 3**

To ensure compliance with the South Dublin Climate Change Action Plan and the provisions of the Council's Tree Management Strategy.

- Increase the County's tree canopy cover by promoting annual planting, maintenance preservation and enhancement of trees, woodlands and hedgerows within the County using locally native species and supporting their integration into new development.

### **GI5 Objective 6**

To provide more tree cover across the county, in particular to areas that are lacking trees.

### **NCBH11 Objective 3**

To protect and retain existing trees, hedgerows, and woodlands which are of amenity and/or biodiversity and/or carbon sequestration value and/or contribute to landscape character and ensure that proper provision is made for their protection and management taking into account Living with Trees: South Dublin County Council's Tree Management Policy (2015-2020) or any superseding document and to ensure that where retention is not possible that a high value biodiversity provision is secured as part of the phasing of any development to protect the amenity of the area.

## **Tree Management Policy 2015-2020**

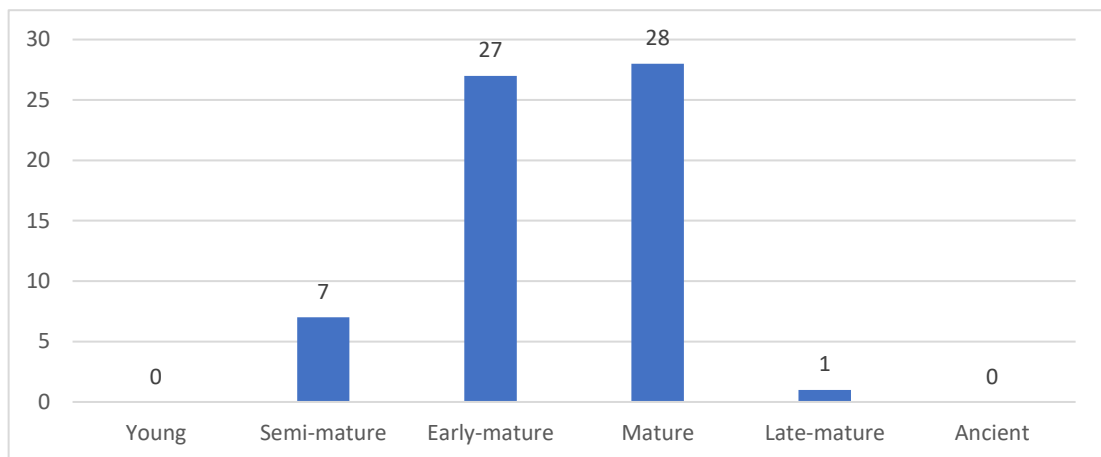
- 4.3 The South Dublin County Council Tree Management Policy 'Living with Trees' 2015-2020 contains information within Chapter 7 Trees and Development that relates to the retention, protection and planting of trees on development sites. Relevant points within this section include:
- The Council will use its powers to ensure that where it is conducive with the objectives of the County Development Plan, and other planning objectives there is maximum retention of trees on new development sites.
  - In the processing of planning applications, the Council will seek the retention of trees of high amenity / environmental value taking consideration of both their individual merit and their interaction as part of a group or broader landscape feature.
  - On construction sites all work must be in accordance with British Standard 5837 (2012): Trees in Relation to Design, Demolition and Construction – Recommendations.
  - The Council will promote the replacement of trees removed to facilitate approved planning and development of urban spaces, buildings, streets, roads, infrastructural projects and private development sites.

## 5 Technical Information

### Tree data

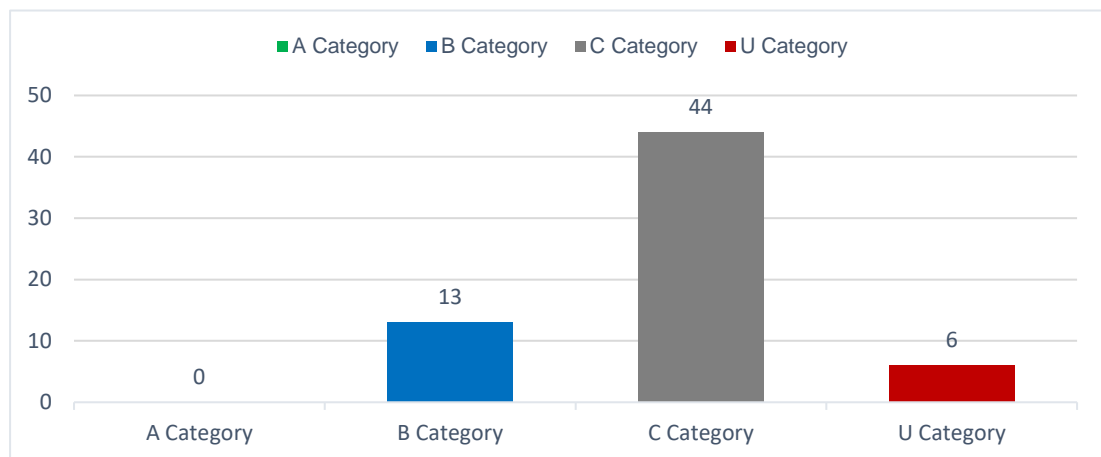
- 5.1 The Tree Survey Plan at Appendix B illustrates the location of trees, the extent of the spread of their crowns, and their root protection areas. Dimensions, comments and information for each tree are given in the Tree Schedule at Appendix A.

### Life stage analysis



*Figure 1: Life stage analysis of the 63 survey entries recorded.*

### BS5837 (2012) category breakdown

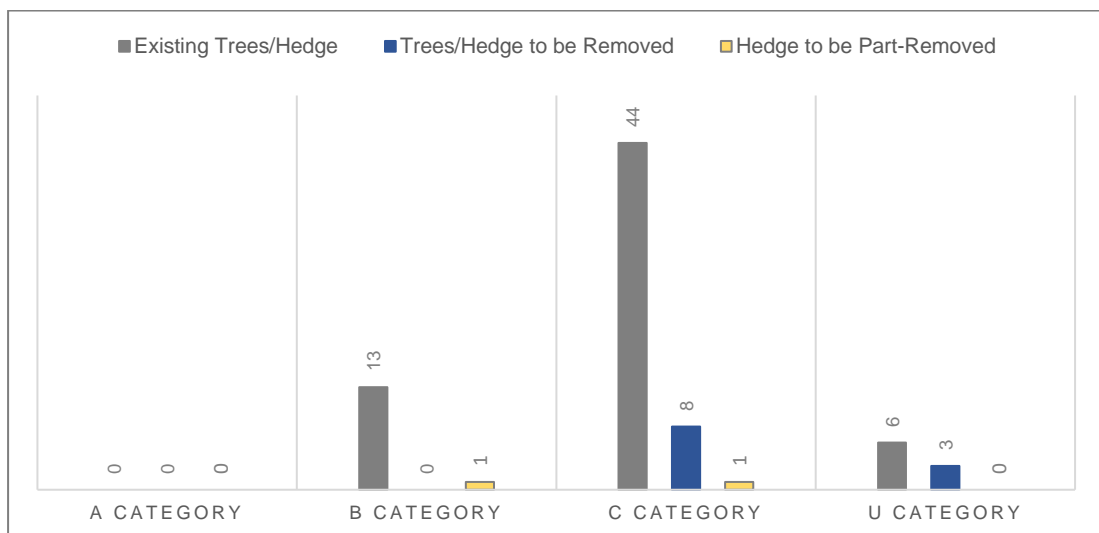


*Figure 2: Breakdown of BS5837:2012 categories of the 63 survey entries recorded.*

## 6 Analysis of the Proposal in Respect of Trees

### Arboricultural Impacts

- 6.1 **Loss of trees** – The proposed development will require the removal of eight low quality trees (C Category); three poor quality trees (U Category); and the partial removal of one moderate quality hedgerow (B Category) and one low quality hedgerow (C Category).
- 6.2 The proposed removals are specified within the Tree Work Schedule at Appendix A and are highlighted in the Tree Works Plan at Appendix B. A breakdown of trees and groups to be removed / part removed according to their BS5837:2012 category is outlined in Figure 3.



**Figure 3:** Breakdown of the tree and hedge removals required as part of the development.

- 6.3 The proposed development has been carefully designed to minimise the removal of trees and hedgerows. Although removals are required, these are primarily trees of low and poor quality and value. By designing to retain hedgerows and trees throughout the site, the impact the development proposal will have on the local surrounding area is considered to be negligible.
- 6.4 **Tree and hedgerow management works** – The lateral growth of hedgerows is required to be pruned to provide sufficient clearance for development works to be carried out. The extent of these pruning works is shown in the Tree Works Plan at Appendix B.
- 6.5 It has also been proposed that tree management works are carried out on several retained trees. These works will include crown lifting low growing laterals to improve



pedestrian clearance and reducing canopies, removing ivy, and removing deadwood for arboricultural reasons given the site's change of use.

- 6.6 The proposed works have been assessed and are considered to be minor. They will not be detrimental to the health of the trees or hedgerows concerned or negatively impact their character or visual appearance within the local area. Details of the proposed works are specified within the Tree Work Schedule at Appendix A and their location within the site is shown in the Tree Works Plan at Appendix B.
- 6.7 **Site access** – The existing site access can be used to construct the development without adversely impacting retained trees or hedgerows, provided the appropriate tree protection measures, as specified within the Tree Protection Plan at Appendix B, are installed.
- 6.8 **Compound area** – The proposed site compound area has not yet been designed; however, there is sufficient space available throughout the site to avoid any unnecessary impacts to retained trees and hedgerows, provided the tree protection measures, as detailed within the Tree Protection Plan at Appendix B, are adhered.
- 6.9 **Construction operations** – The proposed development requires the construction of footpaths and cycle paths within the RPAs of retained trees. To minimise damage or loss of roots, these areas, as highlighted in the Tree Protection Plan at Appendix B, are required to be constructed using a low impact no-dig design.
- 6.10 A no-dig design involves constructing the proposed hard surface above existing ground level using a cellular confinement system, refer to an example in Appendix C. The finishing surface material must be permeable in order to maintain water infiltration and gaseous exchange within the tree's rooting area. This will ensure that major damage does not occur to the roots of the tree or the structure and function of the soil in which it is growing.
- 6.11 **Drainage and services** – The proposed drainage and lighting layouts are shown in the Tree Protection Plan at Appendix B. The proposal has been carefully designed to avoid impacting retaining trees and although some minor incursions do occur within RPAs, they are not considered to be significant.
- 6.12 Where excavation works are required within the RPAs of retained trees to construct detention basins and headwalls, these works must be carried out under arboricultural supervision. Exposed roots will be cleanly pruned using a sharp and sterile pruning tool suitable to the size of the root to be cut. These works will be assessed by the

arboricultural consultant, who will recommend additional tree management works, if required, to ensure the tree can be retained.

- 6.13 The proposed service runs for lighting are required to be relocated outside the designated Tree Protection Zone or installed using appropriate hand tools, such as an air-lance, to retain significant roots and minimise impacting trees. All such works are required to be carried out under arboricultural supervision.
- 6.14 ***Tree protection measures*** – All retained trees can be successfully protected during the proposed development works by using robust fencing measures which comply with the recommendations outlined within BS 5837:2012. The location and specification of tree protection measures are highlighted in the Tree Protection Plan at Appendix B.
- 6.15 The Tree Protection Plan highlights areas of no-dig construction within the RPAs of retained trees. It will be necessary, during the main development works, that these areas remain protected until they are required to be constructed. This can be achieved by installing additional protective fencing as specified on the Tree Protection Plan, or by installing suitable ground protection measures that are in accordance with industry best practice guidance, as stated within Section 6.2.3.3 of BS 5837:2012, refer to Appendix D. All ground protection must be fit for purpose and capable of supporting any traffic using the area without being distorted or causing compaction of the underlying soil.

### **Arboricultural mitigation**

- 6.16 A detailed landscape plan has been designed and will form part of the planning application for the development proposal. This design includes the planting of a large number of new high-quality trees and hedgerows.
- 6.17 The proposed new planting will mitigate the loss of trees required to facilitate the development and will significantly enhance the tree and hedge cover throughout the site and within the local area. This will have a positive impact on local canopy cover and the character and appearance of development and surrounding landscape.

## **7 Discussion & Conclusion**

### **General Change**

- 7.1 The proposed development has been carefully designed to minimise the impact on the existing trees and hedgerows. Although removals are required, these have been kept to a minimum and are primarily trees of low quality and limited value. The loss of these trees has been assessed and will have an insignificant impact on the character and appearance of the site and the local surrounding landscape.

### **New Landscaping**

- 7.2 The proposed design has taken the loss of trees into consideration and included new high-quality tree and hedge planting that will enhance the amenities and visual appearance of the development and contribute to the character of the local surrounding area. The proposed new tree planting will mitigate the loss of trees and increase the canopy cover within the local area.
- 7.3 A diverse selection of tree species should be planted to increase the resilience of the tree population on the site and within the local area due to the current risks posed by pests, diseases and climate change.

### **Sustainability**

- 7.4 The approach to trees and landscape on the site is sustainable; best practice guidance has been followed to identify the key trees for arboricultural and landscape value and the majority of trees to be removed are of low quality and value.
- 7.5 The landscape opportunities on the site for new trees can mitigate the loss of trees and improve canopy cover; bringing a positive benefit to the site and the local area generally.

### **Proposal in relation to local planning policy**

- 7.6 The proposal complies with local planning policy as it relates to trees. Although the removal of trees is required, these are not considered to be of high public amenity value and new high-quality planting has been proposed to mitigate their loss.
- 7.7 The proposal has been assessed in accordance with best practice BS5837:2012 and provided the recommendations as detailed within this report are followed, all retained trees and hedgerows can be successfully protected for the duration of construction.

## **Arboricultural impacts and mitigation**

- 7.8 Constraints posed by trees and hedgerows have been assessed and where impacts occur, these have been identified specifically in this report and can be addressed using sensitive design and construction measures.
- 7.9 The protection of retained trees and hedgerows on this site during the proposed development works can be achieved by continuing to follow the recommendations in BS5837:2012 and by compliance with suitably drafted planning conditions.

## 8 Recommendations

- 8.1 The proposal should be carried out in accordance with the recommendations outlined within this report.

### **Tree Protection**

- 8.2 The positioning of tree protective barriers and ground protection should be installed as detailed in the Tree Protection Plans at Appendix B.
- 8.3 The protective fencing measures and ground protection to be installed must comply with the recommendations outlined within BS5837:2012.
- 8.4 No materials or equipment other than those required to install tree protection will be delivered to the site until all fencing and ground protection is in place.
- 8.5 Engineering details of the proposed hard surfaces within tree RPAs must be designed to comply with BS5837:2012. These must be reviewed and agreed upon in advance of any construction works commencing on site by the arboricultural consultant.
- 8.6 Site supervision should be carried out by an arboricultural consultant at key stages of the project to ensure that retained trees can be successfully protected during the development. Details of supervision are included within the Arboricultural Method Statement at Section 2 of this report.

### **Tree Works**

- 8.7 All tree works are required to be carried out in accordance with best working practice BS3998:2010 – *Tree Work Recommendations* and by a reputable arboricultural contractor.

### **Arboricultural mitigation**

- 8.8 Tree planting is proposed to mitigate the loss of trees and must be carried out and maintained as specified by the Landscape Architect.
- 8.9 All new tree planting must be carried out in accordance with BS 8545:2014 *Trees: from nursery to independence in the landscape. Recommendations.*
- 8.10 New tree planting should take into consideration the mature growing size of the trees proposed, to ensure that a harmonious relationship between trees and buildings and hard surfaces can be sustained for the long term, without the need for unnecessary pruning works or removals.

## Section 2: Arboricultural Method Statement

<b>Introduction</b>
<p>This report has been prepared in accordance with British Standard 5837: Trees in relation to design, demolition and construction – Recommendations (2012) which provides a methodology for the assessment and protection of trees and other significant vegetation on development sites.</p>
<b>Sequence of Operations</b>
<ul style="list-style-type: none"><li>• Proposed tree works.</li><li>• Installation of tree protection measures.</li><li>• Enabling works, including the installation of a site compound.</li><li>• Construction, including the installation of drainage and services.</li><li>• Landscaping.</li></ul> <p><i>Alternative sequences can be discussed and agreed upon with the local authority and project manager if required.</i></p>
<b>Supervision</b>
<p>All key / critical activities that will affect trees during construction will be inspected and monitored by the approved arboricultural consultant.</p> <ul style="list-style-type: none"><li>• Pre-commencement meeting with the site manager to discuss tree protection measures;</li><li>• Inspection of tree works and protection measures prior to the commencement of works;</li><li>• Monthly site visits to inspect tree protection measures;</li><li>• Supervision during the installation of drainage and services within tree RPAs;</li><li>• Supervision during the installation of no-dig surfaces within tree RPAs;</li><li>• Supervision during any other works that may affect retained trees; and</li><li>• Tree inspection upon completion.</li></ul>

<b>Arboricultural Method Statement</b>	
<b>Scope</b>	<b>Methodology</b>
<b>Pre-commencement meeting</b>	<p>Prior to the commencement of works, a meeting between the arboricultural consultant and site manager will be held in order to discuss the tree protection measures and proposed works required in close proximity to trees.</p> <p>Contact details of all parties will be circulated to ensure all team members are able to communicate correctly.</p> <p>The site manager will be responsible for the protection of all retained trees for the duration of the project. Whenever necessary, the site manager will engage the arboricultural consultant to ensure trees are adequately protected.</p> <p>The appointed arboricultural consultant will be available for verbal advice throughout site works.</p>
<b>Tree Works</b>	<p>Please refer to the Tree Schedule at Appendix A for a list of all proposed tree works. The location of trees to be removed is highlighted in the Tree Works Plan at Appendix B.</p> <p>It is the responsibility of the Site Manager to ensure all tree works have been approved by the local planning authority.</p> <p>All tree works will be carried out by a reputable arboricultural contractor in accordance with the recommendations given in BS 3998:2010 – Tree Work Recommendations.</p> <p>All tree works should be carried out in accordance with Section 40 of the Wildlife Act 1976 and Section 46 of the Wildlife (Amendment) Act 2000.</p> <p>It is the responsibility of the arboricultural contractor to ensure that no protected species are harmed whilst carrying out site clearance or tree surgery works.</p>
<b>Tree Protection</b>	<p>The position of protective fencing for construction is shown on the Tree Protection Plan at Appendix B.</p> <p>Protective fencing must be constructed and installed using the BS5837:2012 fencing specification as detailed on the Tree Protection Plan at Appendix B. Alternatives to those shown must be agreed in advance by the client approved, arboricultural consultant.</p>



	<p>Ground protection measures must be installed in accordance with industry best practice guidance as stated within Section 6.2.3.3 of BS 5837:2012, refer to Appendix D. They must be fit for purpose and capable of supporting any traffic entering or using the site without being distorted or causing compaction of underlying soil.</p> <p>No materials or equipment other than those required to erect protective fencing will be delivered to the site before the fencing is installed.</p> <p>Signs will be fixed to every third panel stating, <i>'Tree Protection Area Keep Out – Any incursion into the protected area must be with the agreement of the local authority or arboricultural consultant'</i>.</p> <p>The main contractor will inform the local authority and the arboricultural consultant that tree protection is in place before site clearance works commence.</p> <p>No alteration, removal or repositioning of the tree protection will take place during construction without the prior consent of the arboricultural consultant.</p>
<b>Compound Area</b>	<p>The site compound must be located outside the designated TPZs as highlighted in the Tree Protection Plan at Appendix B.</p> <p>No excavation works within tree RPAs are permitted to install temporary services for site cabins and facilities. Any temporary services within tree RPAs must be above ground and protected accordingly.</p> <p>No operating generators or toxic liquids will be stored within the RPAs of retained trees during construction.</p> <p>Overhanging tree canopies must be taken into consideration when transporting, installing and removing site cabins near tree crowns. A banksman will be present during this process to ensure that all operations are carried out in a controlled manner and no part of the cabin meets overhanging tree crowns.</p>
<b>Areas of No-Dig</b>	<p>Proposed areas of hard standing within tree RPAs must be constructed using a cellular confinement system, or similar approved, and will be carried out under arboricultural supervision using the following methodology;</p> <p>The existing vegetation within the proposed footprint will be sprayed using a suitable herbicide that is not detrimental to trees and the area left for the prescribed timescale.</p>

	<p>Once vegetation has died off, the area will be raked and if levelling is required this will be carried out through the spreading of lawn sand or good quality topsoil.</p> <p>Once levelled, the area will be covered by a permeable membrane onto which the cellular system will be laid. This will then be infilled with 20-40mm angular non-fine aggregate and edged with pressure-treated pegged timber board or similar.</p> <p>The finishing surface layer will consist of permeable hard surface material.</p> <p>The system must be installed in accordance with the manufactures specification.</p>
<p><b>Drainage and Service Installation</b></p>	<p>All methods of work for the installation of drainage runs or services within the RPAs of retained trees will follow the guidance within Table 3 of BS 5837 (2012), or National Joint Utilities Group (NJUG) <i>Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees</i>. Volume 4, issue 2, London NJUG 2007.</p> <p>For excavation works, roots greater than 25mm in diameter will be retained where possible and will be immediately wrapped in dry hessian to prevent desiccation and temperature fluctuations. Roots will be pushed aside to allow for runs to be installed.</p> <p>In some cases, individual roots may be pruned, making a clean cut with a suitable sharp sterile tool (e.g. secateurs or hand saw). Prior to root pruning taking place, the contractor will consult the arboricultural consultant.</p> <p>Trenches should not remain open for more than one day. If this is unavoidable, any exposed roots should be watered and covered with hessian until the area is backfilled with soil.</p> <p>No machinery will be permitted within the TPZ at any time unless ground protection is installed and agreed upon with the arboricultural consultant beforehand. The requirement for temporary ground protection must be installed in accordance with Section 6.2.3.3 of BS 5837:2012, refer to Appendix D.</p> <p>Prior to drainage or service installation works commencing within RPAs, the arboricultural consultant will be contacted, and a date agreed for a site meeting to run through the proposed methods of work on-site with the site manager and relevant site operatives.</p>

<p><b>General Principals to Avoid Damage to Trees</b></p>	<p>All tree works will be carried out in accordance with the recommendations given in BS 3998 (2010).</p> <p>No fires will be permitted within 20m of the crown of any tree.</p> <p>No changes in soil levels will take place within the tree protection zones without the prior written consent of the local authority.</p> <p>No materials, vehicles, plant or personnel will be permitted into the tree protection zones at any time without the prior consent of the arboricultural consultant.</p> <p>Any liquid materials spilt on site will be immediately cleared up and removed from the site. If liquid fuel or cement products are spilt within 2m of the tree protection zone, the contractor will report the incident to the arboricultural consultant immediately.</p> <p>The contractor will report any damage to trees or shrubs, whether caused by construction activities or from any other cause, to the arboricultural consultant immediately.</p>
<p><b>Landscape Operations</b></p>	<p>All landscape operations within the protected area will be carried out by hand, using hand tools only.</p> <p>No dumping of spoil or rubbish, parking of vehicles or plant, storage of materials or temporary accommodation will be undertaken within the TPZs.</p> <p>Soil levels will not be increased or reduced within the RPAs of trees without prior agreement from the arboricultural consultant.</p>

## Appendix A - Schedule

Document	Reference	Revision
Tree Schedule	220301-PD-10	-
Tree Work Schedule	220301-PD-12	A

220301 - Newcastle South

Tree ID	No. Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)								Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m <sup>2</sup> )	RPR (m)	Life expectancy (yrs)	BS Category
					N	NE	E	SE	S	SW	W	NW									
Hedge H1	6 x Cupressocyparis leylandii (Leyland Cypress)	5.0	15 AVE	1								0.0		Semi Mature	Structural condition Fair. Physiological condition Fair. Arboricultural work - Recent. Height and stem diameter are average for group.	29/03/2022	10.2	1.8	10-20	C2	
Tree T2	1 Acer pseudoplatanus (Sycamore)	14.0	90	1	5.5		6.5		6.0		6.5	2.0		Mature	Structural condition Fair. Physiological condition Fair. Access to inspect base - Not possible. Root damage - Suspected. Unable to inspect tree closely as located in neighbouring property.	29/03/2022	366.4	10.8	20-40	B2	
Tree T3	1 Acer pseudoplatanus (Sycamore)	5.0	18	1	1.0		1.0		3.0		2.0	2.0		Semi Mature	Structural condition Poor. Physiological condition Fair. Access to inspect base - Restricted / obscured. Crown conflict - Structure / boundary / wire / tree. Ivy or climbing plant. Poor past pruning. Pruning wounds - Decayed. Suppressed crown - Major. Unbalanced crown - Major.	29/03/2022	14.7	2.2	10-20	C2	
Tree T4	1 Acer pseudoplatanus (Sycamore)	7.0	30	1	1.0		3.0		5.0		2.5	1.5		Early Mature	Structural condition Poor. Physiological condition Fair. Access to inspect base - Not possible. Crown conflict - Structure / boundary / wire / tree. Ivy or climbing plant. Poor past pruning. Pruning wounds - Decayed. Suppressed crown - Major. Unbalanced crown - Major. Unable to inspect tree closely as located in neighbouring property.	29/03/2022	40.7	3.6	10-20	C2	
Tree T5	1 Acer pseudoplatanus (Sycamore)	14.0	54 COM	2	4.5		5.0		4.0		4.0	1.5		Mature	Structural condition Fair. Physiological condition Fair. Access to inspect base - Restricted / obscured. Crown conflict - Structure / boundary / wire / tree. Deadwood - Minor. Fork - Weak with included bark. Ivy or climbing plant. Unable to inspect tree closely as located in neighbouring property.	29/03/2022	132.3	6.5	20-40	B2	

Stem **green** Estimated value  
 Stem **AVE** Average stem diameter for tree groups  
 Stem **COM** Combined stem diameter in accordance with BS5837  
 L.B. Height of lowest branch attachment (m) - where relevant

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# 220301 - Newcastle South

Tree ID	No. Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)								Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m <sup>2</sup> )	RPR (m)	Life expectancy (yrs)	BS Category
					N	NE	E	SE	S	SW	W	NW									
Tree T6	1 Acer pseudoplatanus (Sycamore)	13.0	45	1	5.5		5.0		2.0		4.0		2.0		Early Mature	Structural condition Fair. Physiological condition Fair. Access to inspect base - Not possible. Competition - Adjacent trees. Root damage - Suspected. Suppressed crown - Minor. Unbalanced crown - Minor. Unable to inspect tree closely as located in neighbouring property.	29/03/2022	91.6	5.4	20-40	C2
Hedge H7	1 x Cupressocyparis leylandii (Leyland Cypress)	2.0	15	1									0.0		Early Mature	Structural condition Fair. Physiological condition Fair. Height and stem diameter are average for group. Neighbouring hedgerow, quantities not recorded. Slight overhang beyond boundary. Hedge has been cut back and topped.	29/03/2022	10.2	1.8	10-20	C2
Group G8	22 x Cupressocyparis leylandii (Leyland Cypress) 5 Sambucus nigra (Elder)	5.5	20 AVE	1									0.0		Early Mature	Structural condition Good. Physiological condition Good. Competition - Adjacent trees. Height and stem diameter are average for group. Neighbouring trees, quantities estimated only. Lateral growth overhanging boundary by approx. 3.5m.	29/03/2022	18.1	2.4	20-40	C2
Tree T9	1 Sambucus nigra (Elder)	4.5	31 COM	7	3.0		4.0		4.0		4.0		0.0		Early Mature	Structural condition Poor. Physiological condition Fair. Bark wound - Minor. Decay / structural defect - Base. Multi-stemmed. Natural regeneration.	29/03/2022	45.6	3.8	0-10	U
Tree T10	1 Acer platanoides (Norway Maple)	9.0	25	1	3.5		3.5		3.5		3.5		2.0		Early Mature	Structural condition Fair. Physiological condition Good. Access to inspect base - Not possible. Fork - Weak with included bark. Unable to inspect tree closely as located in neighbouring property.	29/03/2022	28.3	3.0	10-20	C1
Group G11	60 x Cupressocyparis leylandii (Leyland Cypress)	5.0	15 AVE	1									0.0		Early Mature	Structural condition Good. Physiological condition Good. Competition - Adjacent trees. Height and stem diameter are average for group. Neighbouring trees, quantities estimated only. Lateral growth overhanging boundary by approx. 1.5m.	29/03/2022	10.2	1.8	20-40	C2

Stem **green** Estimated value

Stem **AVE** Average stem diameter for tree groups

Stem **COM** Combined stem diameter in accordance with BS5837

L.B. Height of lowest branch attachment (m) - where relevant

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# 220301 - Newcastle South

Tree ID	No. Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)								Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m <sup>2</sup> )	RPR (m)	Life expectancy (yrs)	BS Category
					N	NE	E	SE	S	SW	W	NW									
Group G12	95 x Cupressocyparis leylandii (Leyland Cypress)	13.0	35 AVE	1									0.0		Early Mature	Structural condition Fair. Physiological condition Fair. Arboricultural work - Historic. Competition - Adjacent trees. Deadwood - Minor. Height and stem diameter are average for group. Neighbouring trees, quantities estimated only. Overhanging lateral growth has been reduced back to the boundary in the past.	29/03/2022	55.4	4.2	10-20	C2
Hedge H22	1 Sambucus nigra (Elder)	5.0	20 AVE	1									0.0		Early Mature	Structural condition Fair. Physiological condition Fair. Hedgerow - Neglected / overgrown. Natural regeneration. Height and stem diameter are average for group. Hedgerow is largely located on western side of ditch and comprises mainly of naturally regenerate blackthorn. Quantities not recorded, only species mix. Rejuvenation works are required to improve the quality of hedgerow.	29/03/2022	18.1	2.4	20-40	C2
	1 Rubus fruticosus s. (Blackberry/Bramble)																				
	1 Rosa canina (Dog-rose)																				
	1 Prunus spinosa (Blackthorn/Sloe)																				
	1 Hedera helix (Common Ivy)																				
	1 Crataegus monogyna (Common Hawthorn/Quick/May)																				
	1 Acer pseudoplatanus (Sycamore)																				
Tree T23	1 Sambucus nigra (Elder)	5.5	31 COM	7	2.5	1.5	2.0	2.5					2.0		Early Mature	Structural condition Fair. Physiological condition Fair. Arboricultural work - Recent. Branch - Broken. Multi-stemmed.	29/03/2022	45.6	3.8	10-20	C2

Stem **green** Estimated value

Stem **AVE** Average stem diameter for tree groups

Stem **COM** Combined stem diameter in accordance with BS5837

L.B. Height of lowest branch attachment (m) - where relevant

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# 220301 - Newcastle South

Tree ID	No. Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)								Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m <sup>2</sup> )	RPR (m)	Life expectancy (yrs)	BS Category	
					N	NE	E	SE	S	SW	W	NW										
Group G24	4 Salix caprea (Goat Willow/Great Sallow)	7.0	25 AVE	1										0.0		Early Mature	Structural condition Fair. Physiological condition Fair. Competition - Adjacent trees. Fork - Weak with included bark. Natural regeneration. Height and stem diameter are average for group. Group of self-seeded goat willow, one tree has been uprooted.	29/03/2022	28.3	3.0	20-40	C2
Tree T25	1 Fraxinus excelsior (Ash)	13.0	50	1	6.5	7.5	5.5	4.5						1.5		Early Mature	Structural condition Fair. Physiological condition Fair. Access to inspect base - Restricted / obscured. Deadwood - Minor. Ivy or climbing plant. Tree is not tagged as access to stem is restricted. Tree is located on western side of ditch.	29/03/2022	113.1	6.0	10-20	C2
Tree T26	1 Fraxinus excelsior (Ash)	11.0	57 COM	2	4.5	5.5	6.5	5.5						1.5		Mature	Structural condition Poor. Physiological condition Fair. Access to inspect base - Not possible. Deadwood - Minor. Decay / structural defect - Principal stems. Tree is not tagged as access to stem is restricted. Tree is located on western side of ditch. Main stem is contorted and infected with bacterial canker of Ash.	29/03/2022	147.0	6.8	10-20	C2
Tree T27	1 Fraxinus excelsior (Ash)	13.5	50 COM	2	7.0	8.5	8.0	6.0						2.0		Mature	Structural condition Fair. Physiological condition Fair. Access to inspect base - Not possible. Deadwood - Minor. Ivy or climbing plant. Tree is not tagged as access to stem is restricted. Tree is located on western side of ditch.	29/03/2022	113.1	6.0	10-20	C2

Stem **green** Estimated value

Stem **AVE** Average stem diameter for tree groups

Stem **COM** Combined stem diameter in accordance with BS5837

L.B. Height of lowest branch attachment (m) - where relevant

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# 220301 - Newcastle South

Tree ID	No. Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)								Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m <sup>2</sup> )	RPR (m)	Life expectancy (yrs)	BS Category
					N	NE	E	SE	S	SW	W	NW									
Hedge H28	1	Sambucus nigra (Elder)	5.0	25 AVE	1										Mature	Structural condition Fair. Physiological condition Fair. Hedgerow - Neglected / overgrown. Natural regeneration. Height and stem diameter are average for group. The majority of hedge species are located on the western side of the ditch. Quantities not recorded, only species mix.	29/03/2022	28.3	3.0	40+	B2
	1	Salix caprea (Goat Willow/Great Sallow)																			
	1	Rubus fruticosus s. (Blackberry/Bramble)																			
	1	Prunus spinosa (Blackthorn/Sloe)																			
	1	Hedera helix (Common Ivy)																			
	1	Crataegus monogyna (Common Hawthorn/Quick/May)																			
	1	Corylus avellana (Common Hazel)																			

Stem **green** Estimated value

Stem **AVE** Average stem diameter for tree groups

Stem **COM** Combined stem diameter in accordance with BS5837

L.B. Height of lowest branch attachment (m) - where relevant

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# 220301 - Newcastle South

Tree ID	No. Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)								Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m <sup>2</sup> )	RPR (m)	Life expectancy (yrs)	BS Category						
					N	NE	E	SE	S	SW	W	NW															
Hedge H29	1	Sambucus nigra (Elder)	5.0	25 AVE	1									0.0		Mature	Structural condition Fair. Physiological condition Fair. Hedgerow - Neglected / overgrown. Natural regeneration. Height and stem diameter are average for group. Hedgerow located on both sides of the ditch. Rejuvenation works are required to improve hedge quality. Quantities not recorded, only species mix.	29/03/2022	28.3	3.0	20-40	B2					
	1	Rubus fruticosus s. (Blackberry/Bramble)																									
	1	Prunus spinosa (Blackthorn/Sloe)																									
	1	Hedera helix (Common Ivy)																									
	1	Crataegus monogyna (Common Hawthorn/Quick/May)																									
Hedge H30	1	Rubus fruticosus s. (Blackberry/Bramble)	4.0	15 AVE	1									0.0		Early Mature	Structural condition Fair. Physiological condition Fair. Hedgerow - Neglected / overgrown. Natural regeneration. Height and stem diameter are average for group. Sparse section of hedgerow overgrown in brambles. Section of hedgerow on western side of ditch only. Quantities not recorded, only species mix. Rejuvenation works required to improve quality of hedgerow.	29/03/2022	10.2	1.8	10-20	C2					
	1	Hedera helix (Common Ivy)																									
	1	Crataegus monogyna (Common Hawthorn/Quick/May)																									
	1	Corylus avellana (Common Hazel)																									

Stem **green** Estimated value

Stem **AVE** Average stem diameter for tree groups

Stem **COM** Combined stem diameter in accordance with BS5837

L.B. Height of lowest branch attachment (m) - where relevant

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# 220301 - Newcastle South

Tree ID	No. Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)								Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m <sup>2</sup> )	RPR (m)	Life expectancy (yrs)	BS Category
					N	NE	E	SE	S	SW	W	NW									
Group G31	10 x Cupressocyparis leylandii (Leyland Cypress)	15.0	50 AVE	1									0.0		Mature	Structural condition Fair. Physiological condition Fair. Altered ground level - Historic. Deadwood - Minor. Root damage - Suspected. Height and stem diameter are average for group. Quantities of species estimated only.	29/03/2022	113.1	6.0	10-20	C2
Hedge H32	1 Taxus baccata (Yew)	5.0	20 AVE	1									0.0		Early Mature	Structural condition Fair. Physiological condition Fair. Hedgerow - Neglected / overgrown. Natural regeneration. Height and stem diameter are average for group. Hedgerow has been poorly managed in the past. Ownership of hedgerow is unknown. Quantities not recorded, only species mix. Rejuvenation works required to improve quality of hedgerow.	29/03/2022	18.1	2.4	20-40	C2
1 Sambucus nigra (Elder)																					
1 Rubus fruticosus s. (Blackberry/Bramble)																					
1 Prunus spinosa (Blackthorn/Sloe)																					
1 Hedera helix (Common Ivy)																					
1 Fraxinus excelsior (Ash)																					
1 Crataegus monogyna (Common Hawthorn/Quick/May)																					
1 Corylus avellana (Common Hazel)																					

Stem **green** Estimated value

Stem **AVE** Average stem diameter for tree groups

Stem **COM** Combined stem diameter in accordance with BS5837

L.B. Height of lowest branch attachment (m) - where relevant

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# 220301 - Newcastle South

Tree ID	No. Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)								Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m <sup>2</sup> )	RPR (m)	Life expectancy (yrs)	BS Category	
					N	NE	E	SE	S	SW	W	NW										
Hedge H33	1	Sambucus nigra (Elder)	5.0	25 AVE	1									0.0		Mature	Structural condition Fair. Physiological condition Fair. Hedgerow - Neglected / overgrown. Natural regeneration. Height and stem diameter are average for group. Overgrown native hedgerow located on both sides of the ditch. Ownership unknown. Quantities not recorded, only species mix.	29/03/2022	28.3	3.0	20-40	B2
	1	Rubus fruticosus s. (Blackberry/Bramble)																				
	1	Prunus spinosa (Blackthorn/Sloe)																				
	1	Hedera helix (Common Ivy)																				
	1	Crataegus monogyna (Common Hawthorn/Quick/May)																				
	1	Corylus avellana (Common Hazel)																				

Stem **green** Estimated value

Stem **AVE** Average stem diameter for tree groups

Stem **COM** Combined stem diameter in accordance with BS5837

L.B. Height of lowest branch attachment (m) - where relevant

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# 220301 - Newcastle South

Tree ID	No. Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)								Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m <sup>2</sup> )	RPR (m)	Life expectancy (yrs)	BS Category
					N	NE	E	SE	S	SW	W	NW									
Hedge H34	1 1 1 1 1 1	5.0	25 AVE	1								0.0		Mature	Structural condition Fair. Physiological condition Fair. Hedgerow - Neglected / overgrown. Natural regeneration. Height and stem diameter are average for group. Mixed native hedgerow located on both sides of the ditch. Hedgerow overgrown with brambles and several naturally regenerated goat willow. Quantities not recorded, only species mix.	29/03/2022	28.3	3.0	40+	B2	
Tree T35	1	9.0	29 COM	2	4.0	4.0	3.5	4.5				1.0		Early Mature	Structural condition Fair. Physiological condition Fair. Access to inspect base - Not possible. Tree is located on eastern side of ditch. Unable to inspect tree closely due to dense scrub.	29/03/2022	38.5	3.5	10-20	C2	
Tree T36	1	12.5	75	1	8.5	9.0	7.5	8.0				1.0		Mature	Structural condition Fair. Physiological condition Fair. Access to inspect base - Not possible. Branch weight - Heavy. Ivy or climbing plant. Tree is not tagged as access to stem is restricted. Tree located on southern side of ditch. Unable to inspect tree closely due to dense scrub.	29/03/2022	254.5	9.0	10-20	C2	

Stem **green** Estimated value

Stem **AVE** Average stem diameter for tree groups

Stem **COM** Combined stem diameter in accordance with BS5837

L.B. Height of lowest branch attachment (m) - where relevant

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# 220301 - Newcastle South

Tree ID	No. Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)								Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m <sup>2</sup> )	RPR (m)	Life expectancy (yrs)	BS Category
					N	NE	E	SE	S	SW	W	NW									
Tree T37	1 Fraxinus excelsior (Ash)	12.5	55	1	5.5		6.5		6.5		5.0		1.5		Mature	Structural condition Fair. Physiological condition Fair. Access to inspect base - Not possible. Deadwood - Minor. Ivy or climbing plant. Tree is not tagged as access to stem is restricted. Tree located on southern side of ditch. Unable to inspect tree closely due to dense scrub.	29/03/2022	136.8	6.6	10-20	C2
Tree T38	1 Fraxinus excelsior (Ash)	18.0	110	1	8.0		11.0		7.5		10.0		2.5		Late Mature	Structural condition Poor. Physiological condition Fair. Access to inspect base - Restricted / obscured. Branch weight - Heavy. Bark wound - Major. Decline - Suspected. Decay / structural defect - Principal stems. Pruning wounds - Decayed. Root damage - Suspected. Shedding limb / limbs - Historic. Shedding limb / limbs - Major. Tree is not tagged as access to stem is restricted. Tree located on southern side of ditch. Unable to inspect tree closely due to dense scrub.	30/03/2022	547.4	13.2	10-20	C2
Hedge H39	1 Sambucus nigra (Elder) 1 Rubus fruticosus s. (Blackberry/Bramble) 1 Prunus spinosa (Blackthorn/Sloe) 1 Hedera helix (Common Ivy) 1 Crataegus monogyna (Common Hawthorn/Quick/May)	5.0	25 AVE	1									0.0		Mature	Structural condition Fair. Physiological condition Fair. Arboricultural work - Historic. Excavation within root zone - Recent. Hedgerow - Neglected / overgrown. Natural regeneration. Root damage - Suspected. Height and stem diameter are average for group. Mixed native hedgerow located on both sides of the ditch. Hedgerow overgrown with brambles and several naturally regenerated blackthorn. Sections of hedgerow on southern side of ditch have been damaged. Quantities not recorded, only species mix.	30/03/2022	28.3	3.0	20-40	B2
Tree T40	1 Ulmus procera (English Elm)	6.0	25	1	3.5		3.5		3.5		3.5		1.0		Early Mature	Structural condition Poor. Physiological condition Dead. Dutch elm disease. Dead tree / trees. Unable to inspect tree closely due to dense scrub.	30/03/2022	28.3	3.0	0-10	U

Stem **green** Estimated value

Stem **AVE** Average stem diameter for tree groups

Stem **COM** Combined stem diameter in accordance with BS5837

L.B. Height of lowest branch attachment (m) - where relevant

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# 220301 - Newcastle South

Tree ID	No. Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)								Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m <sup>2</sup> )	RPR (m)	Life expectancy (yrs)	BS Category
					N	NE	E	SE	S	SW	W	NW									
Hedge H41	1	Acer pseudoplatanus (Sycamore)	5.5	30 AVE	1								0.0		Mature	Structural condition Good. Physiological condition Good. Hedgerow - Neglected / overgrown. Natural regeneration. Height and stem diameter are average for group. Mixed native hedgerow located on both sides of the ditch. Hedgerow overgrown with brambles and several naturally regenerated blackthorn. Quantities not recorded, only species mix.	30/03/2022	40.7	3.6	40+	B2
	1	Cerasus avium (Wild Cherry)																			
	1	Crataegus monogyna (Common Hawthorn/Quick/May)																			
	1	Hedera helix (Common Ivy)																			
	1	Prunus spinosa (Blackthorn/Sloe)																			
	1	Rubus fruticosus s. (Blackberry/Bramble)																			
	1	Sambucus nigra (Elder)																			
	1	Ulmus procera (English Elm)																			
Tree T42	1	Fraxinus excelsior (Ash)	14.0	50	1	4.0	5.0	6.0	5.0	3.0			3.0		Mature	Structural condition Fair. Physiological condition Fair. Access to inspect base - Not possible. Competition - Adjacent trees. Deadwood - Minor. Ivy or climbing plant. Tree is not tagged as access to the stem is restricted. Unable to inspect tree closely due to dense scrub. Tree is located on the eastern side of ditch.	30/03/2022	113.1	6.0	10-20	C2

Stem **green** Estimated value

Stem **AVE** Average stem diameter for tree groups

Stem **COM** Combined stem diameter in accordance with BS5837

L.B. Height of lowest branch attachment (m) - where relevant

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# 220301 - Newcastle South

Tree ID	No. Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)								Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m <sup>2</sup> )	RPR (m)	Life expectancy (yrs)	BS Category
					N	NE	E	SE	S	SW	W	NW									
Tree T43	1 Fraxinus excelsior (Ash)	9.0	30	1		4.0		4.5		4.0		4.0	2.0		Early Mature	Structural condition Fair. Physiological condition Fair. Access to inspect base - Not possible. Ivy or climbing plant. Tree is located on western side of ditch, ownership unknown. Tree is not tagged as access to stem is restricted. Unable to inspect tree closely due to dense scrub.	30/03/2022	40.7	3.6	10-20	C2
Tree T44	1 Fraxinus excelsior (Ash)	13.0	55	1		5.0		7.0		7.0		6.0	2.0		Mature	Structural condition Fair. Physiological condition Fair. Access to inspect base - Not possible. Competition - Adjacent trees. Ivy or climbing plant. Tree is located on western side of ditch, ownership unknown. Unable to inspect tree closely due to dense scrub.	30/03/2022	136.8	6.6	20-40	C2
Tree T45	1 Fraxinus excelsior (Ash)	14.0	55	1		3.0		7.0		4.0		4.0	4.0		Mature	Structural condition Fair. Physiological condition Poor. Access to inspect base - Not possible. Competition - Adjacent trees. Crown conflict - Structure / boundary / wire / tree. Die-back - Upper crown. Decline - Suspected. Ivy or climbing plant. Tree is located on western side of ditch, ownership unknown. Unable to inspect tree closely due to dense scrub. Suspected ash dieback.	30/03/2022	136.8	6.6	0-10	U

Stem **green** Estimated value

Stem **AVE** Average stem diameter for tree groups

Stem **COM** Combined stem diameter in accordance with BS5837

L.B. Height of lowest branch attachment (m) - where relevant

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# 220301 - Newcastle South

Tree ID	No. Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)								Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m <sup>2</sup> )	RPR (m)	Life expectancy (yrs)	BS Category
					N	NE	E	SE	S	SW	W	NW									
Hedge H46	1 Crataegus monogyna (Common Hawthorn/Quick/May)	5.5	25 AVE	1									0.0		Mature	Structural condition Fair. Physiological condition Fair. Hedgerow - Neglected / overgrown. Natural regeneration. Height and stem diameter are average for group. Mixed native hedgerow located mainly on neighbouring side of ditch. Site side comprises elder and bramble natural regeneration. Quantities not recorded, only species mix.	30/03/2022	28.3	3.0	20-40	B2
	1 Hedera helix (Common Ivy)																				
	1 Prunus spinosa (Blackthorn/Sloe)																				
	1 Rubus fruticosus s. (Blackberry/Bramble)																				
	1 Sambucus nigra (Elder)																				
Tree T47	1 Fraxinus excelsior (Ash)	10.0	70	1		7.0		5.5		6.0		7.0	2.0		Mature	Structural condition Poor. Physiological condition Fair. Decay / structural defect - Extensive. Decay / structural defect - Open cavity / cavities. Ivy or climbing plant. Tree is not tagged as access to the stem is restricted. Unable to inspect tree closely due to dense scrub. Boundary tree, ownership unknown. Could be managed as a pollard going forward.	30/03/2022	221.7	8.4	0-10	U

Stem **green** Estimated value

Stem **AVE** Average stem diameter for tree groups

Stem **COM** Combined stem diameter in accordance with BS5837

L.B. Height of lowest branch attachment (m) - where relevant

The survey information in this schedule has been gathered following a BS5837 survey for planning purposes. Where hazardous trees have been noted recommendations for works may have been made but this survey cannot be relied upon as a full health and safety assessment of the trees.

# 220301 - Newcastle South

Tree ID	No. Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)								Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m <sup>2</sup> )	RPR (m)	Life expectancy (yrs)	BS Category
					N	NE	E	SE	S	SW	W	NW									
Hedge H48	1	5.0	25 AVE	1									0.0		Mature	Structural condition Fair. Physiological condition Fair. Hedgerow - Neglected / overgrown. Natural regeneration. Height and stem diameter are average for group. Section of mixed native hedgerow growing along line of old wall. Quantities not recorded, only species mix.	30/03/2022	28.3	3.0	20-40	B2
	1		Hedera helix (Common Ivy)																		
	1		Rubus fruticosus s. (Blackberry/Bramble)																		
	1		Sambucus nigra (Elder)																		
Shrub S49	1	2.0	10 AVE	1									0.0		Early Mature	Structural condition Fair. Physiological condition Fair. Natural regeneration. Height and stem diameter are average for group. Section comprising mainly brambles with some elder along boundary wall. Quantities not recorded, only species mix.	30/03/2022	4.5	1.2	20-40	C2
	1		Rubus fruticosus s. (Blackberry/Bramble)																		
	1		Sambucus nigra (Elder)																		
Tree T901	1	6.5	34	1		4.0	3.5	3.5	3.5	1.5			Early Mature	Structural condition Fair. Physiological condition Good. Arboricultural work - Historic. Crown conflict - Structure / boundary / wire / tree.	29/03/2022	52.3	4.1	40+	B2		
Tree T902	1	6.5	31	1		4.0	4.5	4.5	4.0	2.0			Early Mature	Structural condition Fair. Physiological condition Good. Arboricultural work - Historic. Crown conflict - Structure / boundary / wire / tree. Ivy or climbing plant. Tree has been topped beneath cables in the past.	29/03/2022	43.5	3.7	40+	B2		

Stem **green** Estimated value

Stem **AVE** Average stem diameter for tree groups

Stem **COM** Combined stem diameter in accordance with BS5837

L.B. Height of lowest branch attachment (m) - where relevant

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# 220301 - Newcastle South

Tree ID	No. Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)								Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m <sup>2</sup> )	RPR (m)	Life expectancy (yrs)	BS Category	
					N	NE	E	SE	S	SW	W	NW										
Tree T903	1 Tilia x vulgaris (Common Lime)	6.0	29	1		3.5		3.5		3.5		3.5		2.0		Early Mature	Structural condition Fair. Physiological condition Good. Arboricultural work - Historic. Epicormic growth - Base. Ivy or climbing plant.	29/03/2022	38.0	3.5	40+	B2
Tree T904	1 Tilia x vulgaris (Common Lime)	6.0	24	1		3.0		3.0		3.0		3.0		1.5		Semi Mature	Structural condition Fair. Physiological condition Fair. Arboricultural work - Historic. Branch - Broken. Ivy or climbing plant.	29/03/2022	26.1	2.9	20-40	C2
Tree T905	1 Tilia x vulgaris (Common Lime)	6.0	22	1		3.0		2.5		2.0		2.5		2.0		Semi Mature	Structural condition Fair. Physiological condition Good. Arboricultural work - Historic. Epicormic growth - Base. Ivy or climbing plant.	29/03/2022	21.9	2.6	20-40	C2
Tree T906	1 Tilia x vulgaris (Common Lime)	5.0	18	1		2.0		2.0		2.0		2.0		2.0		Semi Mature	Structural condition Fair. Physiological condition Poor. Arboricultural work - Historic. Excavation within root zone - Suspected. Ivy or climbing plant. Root damage - Suspected.	29/03/2022	14.7	2.2	10-20	C2
Tree T907	1 Tilia x vulgaris (Common Lime)	5.0	17	1		2.0		2.0		1.0		1.0		2.0		Semi Mature	Structural condition Poor. Physiological condition Fair. Arboricultural work - Historic. Excavation within root zone - Historic. Root damage - Suspected.	29/03/2022	13.1	2.0	10-20	C2
Tree T908	1 Fraxinus excelsior (Ash)	7.0	61 COM	6		6.0		5.0		6.0		4.5		1.0		Mature	Structural condition Poor. Physiological condition Fair. Access to inspect base - Not possible. Coppice stool - Coppice origin / Mature stems. Deadwood - Minor. Fork - Weak with included bark. Ivy or climbing plant. Multi-stemmed. Unable to inspect tree closely due to ivy cover. Tree growing on top of the bank. Ownership of tree unknown.	29/03/2022	169.6	7.3	10-20	C2
Tree T909	1 Acer pseudoplatanus (Sycamore)	13.0	53 COM	2		5.5		2.0		5.5		6.0		3.0		Mature	Structural condition Fair. Physiological condition Fair. Arboricultural work - Historic. Bark wound - Minor. Competition - Adjacent trees. Crown conflict - Structure / boundary / wire / tree. Epicormic growth - Base. Suppressed crown - Minor. Unbalanced crown - Minor. Ownership of tree unknown.	29/03/2022	127.8	6.4	20-40	C2

Stem **green** Estimated value

Stem **AVE** Average stem diameter for tree groups

Stem **COM** Combined stem diameter in accordance with BS5837

L.B. Height of lowest branch attachment (m) - where relevant

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# 220301 - Newcastle South

Tree ID	No. Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)								Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m <sup>2</sup> )	RPR (m)	Life expectancy (yrs)	BS Category
					N	NE	E	SE	S	SW	W	NW									
Tree T911	1 x Cupressocyparis leylandii (Leyland Cypress)	13.0	55	1	5.5	2.0	6.0	6.0				0.0		Mature	Structural condition Fair. Physiological condition Fair. Competition - Adjacent trees. Suppressed crown - Minor. Unbalanced crown - Minor.	29/03/2022	136.8	6.6	20-40	C2	
Tree T912	1 x Cupressocyparis leylandii (Leyland Cypress)	14.0	55	1	2.0	4.5	7.0	4.0				0.0		Mature	Structural condition Poor. Physiological condition Fair. Bark wound - Minor. Deadwood - Minor. Exposed crown - Recent. Leaning trunk - Minor.	29/03/2022	136.8	6.6	10-20	C2	
Tree T913	1 x Cupressocyparis leylandii (Leyland Cypress)	14.0	60	1	5.0	5.0	7.0	5.0				0.0		Mature	Structural condition Fair. Physiological condition Fair. Competition - Adjacent trees. Deadwood - Minor.	29/03/2022	162.9	7.2	20-40	C2	
Tree T914	1 Fraxinus excelsior (Ash)	14.0	67 COM	2	6.0	6.0	5.5	5.5				1.0		Mature	Structural condition Fair. Physiological condition Fair. Access to inspect base - Restricted / obscured. Deadwood - Minor. Decay / structural defect - Base. Ivy or climbing plant. Tree is not tagged as access to stem is restricted. Tree is located on western side of ditch. Unable to inspect tree closely due to ivy cover.	29/03/2022	203.6	8.0	10-20	C2	
Tree T915	1 Ulmus procera (English Elm)	6.0	20	1	2.5	3.5	2.5	2.5				2.0		Semi Mature	Structural condition Poor. Physiological condition Dead. Dutch elm disease. Dead tree / trees.	29/03/2022	18.1	2.4	0-10	U	
Tree T916	1 Ulmus procera (English Elm)	6.0	25	1	3.5	3.5	2.5	2.5				2.0		Early Mature	Structural condition Poor. Physiological condition Dead. Dutch elm disease. Dead tree / trees.	29/03/2022	28.3	3.0	0-10	U	
Tree T917	1 Fraxinus excelsior (Ash)	15.0	75	1	7.0	7.5	8.0	7.0				1.5		Mature	Structural condition Fair. Physiological condition Fair. Access to inspect base - Restricted / obscured. Deadwood - Minor. Ivy or climbing plant. Tree is located on western side of ditch. Unable to inspect tree closely due to ivy cover.	29/03/2022	254.5	9.0	20-40	C2	
Tree T918	1 Fraxinus excelsior (Ash)	9.0	35 COM	2	4.5	3.0	3.0	3.0				1.5		Early Mature	Structural condition Fair. Physiological condition Fair. Crown conflict - Structure / boundary / wire / tree. Ivy or climbing plant.	29/03/2022	56.5	4.2	10-20	C2	

Stem **green** Estimated value

Stem **AVE** Average stem diameter for tree groups

Stem **COM** Combined stem diameter in accordance with BS5837

L.B. Height of lowest branch attachment (m) - where relevant

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Page 16 of 18

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# 220301 - Newcastle South

Tree ID	No. Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)								Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m <sup>2</sup> )	RPR (m)	Life expectancy (yrs)	BS Category
					N	NE	E	SE	S	SW	W	NW									
Tree T919	1 Fraxinus excelsior (Ash)	12.0	49 COM	3	5.5		5.0		5.0		4.5		1.5		Early Mature	Structural condition Fair. Physiological condition Fair. Deadwood - Minor. Fork - Weak with included bark. Ivy or climbing plant.	29/03/2022	111.7	6.0	10-20	C2
Tree T920	1 Fraxinus excelsior (Ash)	11.0	49 COM	2	5.0		5.0		5.0		5.0		1.5		Early Mature	Structural condition Fair. Physiological condition Fair. Fork - Weak with included bark. Fused stems. Ivy or climbing plant. Tree is located on the eastern side of the fence.	29/03/2022	110.8	5.9	10-20	C2
Tree T921	1 Fraxinus excelsior (Ash)	11.5	46 COM	3	8.0		6.0		6.0		6.5		1.0		Early Mature	Structural condition Fair. Physiological condition Fair. Fork - Weak with included bark. Ivy or climbing plant.	29/03/2022	99.5	5.6	10-20	C2
Tree T923	1 Fraxinus excelsior (Ash)	14.0	68 COM	4	8.0		8.0		7.0		7.0		1.0		Mature	Structural condition Fair. Physiological condition Fair. Access to inspect base - Restricted / obscured. Competition - Adjacent trees. Coppice stool - Coppice origin / Mature stems. Fork - Weak with included bark. Ivy or climbing plant. Leaning trunk - Minor. Bacterial canker of Ash. Tree is located on eastern side of ditch.	30/03/2022	213.8	8.2	10-20	C2
Tree T924	1 Fraxinus excelsior (Ash)	14.0	90	1		7.5		8.5		8.5		9.0	1.0		Mature	Structural condition Fair. Physiological condition Fair. Branch weight - Heavy. Deadwood - Minor. Ivy or climbing plant. Tree is located on southern side of ditch, ownership is unknown.	30/03/2022	366.4	10.8	10-20	C2
Tree T925	1 Sambucus nigra (Elder)	6.0	27 COM	2		3.0		3.0		3.5		3.0	2.0		Early Mature	Structural condition Fair. Physiological condition Fair. Bark wound - Mechanical. Decay / structural defect - Base. Structural impact - Potential. Tree stem immediately adjacent to wall.	30/03/2022	34.8	3.3	10-20	C2

Stem **green** Estimated value

Stem **AVE** Average stem diameter for tree groups

Stem **COM** Combined stem diameter in accordance with BS5837

L.B. Height of lowest branch attachment (m) - where relevant

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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 health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality</li> </ul> <p>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7</p>			<b>RED</b>
	<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>  <b>Trees of high quality</b>  with an estimated remaining life expectancy of at least 40 years	Tree 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.	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture).	<b>GREEN</b>
<b>Category B</b>  <b>Trees of moderate quality</b>  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.	Trees with material conservation or other cultural value.	<b>BLUE</b>
<b>Category C</b>  <b>Trees of low quality</b>  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.	Trees with no material conservation or other cultural value.	<b>GREY</b>

# 220301-PD-12-A - Planning Tree Works Schedule

220301 - Newcastle South

CHARLES MCCORKELL  
ARBORICULTURAL CONSULTANCY

ID	No. / Species	BS5837 Category	Purpose of works Recommended works	Status
H7	1 <i>x Cupressocyparis leylandii</i> Leyland Cypress	C2	<b>To facilitate development</b> Reduce lateral limb / limbs. Lateral growth of hedge to be reduced as highlighted on the Tree Works Plan.	Proposed
G8	5 <i>Sambucus nigra</i> Elder 22 <i>x Cupressocyparis leylandii</i> Leyland Cypress	C2	<b>To facilitate development</b> Reduce lateral limb / limbs. Lateral growth of hedge to be reduced as highlighted on the Tree Works Plan.	Proposed
T9	1 <i>Sambucus nigra</i> Elder	U	<b>To facilitate development</b> Fell - Ground level.	Proposed
G11	60 <i>x Cupressocyparis leylandii</i> Leyland Cypress	C2	<b>To facilitate development</b> Reduce lateral limb / limbs. Lateral growth of hedge to be reduced as highlighted on the Tree Works Plan.	Proposed
G12	95 <i>x Cupressocyparis leylandii</i> Leyland Cypress	C2	<b>To facilitate development</b> Reduce lateral limb / limbs. Lateral growth of hedge to be reduced as highlighted on the Tree Works Plan.	Proposed
H22	1 <i>Acer pseudoplatanus</i> Sycamore 1 <i>Crataegus monogyna</i> Common Hawthorn/Quick/May 1 <i>Hedera helix</i> Common Ivy 1 <i>Prunus spinosa</i> Blackthorn/Sloe 1 <i>Rosa canina</i> Dog-rose 1 <i>Rubus fruticosus s.</i> Blackberry/Bramble 1 <i>Sambucus nigra</i> Elder	C2	<b>To facilitate development</b> Reduce lateral limb / limbs. Lateral growth of hedge to be reduced as highlighted on the Tree Works Plan.	Proposed
T25	1 <i>Fraxinus excelsior</i> Ash	C2	<b>To facilitate development</b> Lift low canopy - Specified extent. Crown lift low canopy to 2.5m above ground level <b>Good arboricultural practice</b> Deadwood - Remove. <b>Good arboricultural practice</b> Climbing plant - Sever.	Proposed Proposed Proposed
T26	1 <i>Fraxinus excelsior</i> Ash	C2	<b>To facilitate development</b> Fell - Ground level.	Proposed

ID	No. / Species	BS5837 Category	Purpose of works Recommended works	Status
T27	1 <i>Fraxinus excelsior</i> Ash	C2	<b>To facilitate development</b> Lift low canopy - Specified extent. Crown lift low canopy to 2.5m above ground level	Proposed
			<b>Good arboricultural practice</b> Deadwood - Remove.	Proposed
			<b>Good arboricultural practice</b> Climbing plant - Sever.	Proposed
H28	1 <i>Corylus avellana</i> Common Hazel	B2	<b>To facilitate development</b> Reduce lateral limb / limbs. Lateral growth of hedge to be reduced as highlighted on the Tree Works Plan.	Proposed
	1 <i>Crataegus monogyna</i> Common Hawthorn/Quick/May		<b>To facilitate development</b> Fell - Ground level. Part removal of group as highlighted on the Tree Works Plan.	Proposed
	1 <i>Hedera helix</i> Common Ivy			
	1 <i>Prunus spinosa</i> Blackthorn/Sloe			
	1 <i>Rubus fruticosus s.</i> Blackberry/Bramble			
	1 <i>Salix caprea</i> Goat Willow/Great Sallow			
	1 <i>Sambucus nigra</i> Elder			
H29	1 <i>Crataegus monogyna</i> Common Hawthorn/Quick/May	B2	<b>To facilitate development</b> Reduce lateral limb / limbs. Lateral growth of hedge to be reduced as highlighted on the Tree Works Plan.	Proposed
	1 <i>Hedera helix</i> Common Ivy			
	1 <i>Prunus spinosa</i> Blackthorn/Sloe			
	1 <i>Rubus fruticosus s.</i> Blackberry/Bramble			
	1 <i>Sambucus nigra</i> Elder			
H30	1 <i>Corylus avellana</i> Common Hazel	C2	<b>To facilitate development</b> Fell - Ground level. Part removal of group as highlighted on the Tree Works Plan.	Proposed
	1 <i>Crataegus monogyna</i> Common Hawthorn/Quick/May			
	1 <i>Hedera helix</i> Common Ivy			
	1 <i>Rubus fruticosus s.</i> Blackberry/Bramble			

ID	No. / Species	BS5837 Category	Purpose of works Recommended works	Status
H32	1 <i>Corylus avellana</i> Common Hazel	C2	<b>To facilitate development</b> Reduce lateral limb / limbs. Lateral growth of hedge to be reduced as highlighted on the Tree Works Plan.	Proposed
	1 <i>Crataegus monogyna</i> Common Hawthorn/Quick/May			
	1 <i>Fraxinus excelsior</i> Ash			
	1 <i>Hedera helix</i> Common Ivy			
	1 <i>Prunus spinosa</i> Blackthorn/Sloe			
	1 <i>Rubus fruticosus s.</i> Blackberry/Bramble			
	1 <i>Sambucus nigra</i> Elder			
	1 <i>Taxus baccata</i> Yew			
H34	1 <i>Corylus avellana</i> Common Hazel	B2	<b>To facilitate development</b> Reduce lateral limb / limbs. Lateral growth of hedge to be reduced as highlighted on the Tree Works Plan.	Proposed
	1 <i>Crataegus monogyna</i> Common Hawthorn/Quick/May			
	1 <i>Hedera helix</i> Common Ivy			
	1 <i>Prunus spinosa</i> Blackthorn/Sloe			
	1 <i>Rubus fruticosus s.</i> Blackberry/Bramble			
	1 <i>Salix caprea</i> Goat Willow/Great Sallow			
	1 <i>Sambucus nigra</i> Elder			
T36	1 <i>Fraxinus excelsior</i> Ash	C2	<b>To facilitate development</b> Lift low canopy - Specified extent. Crown lift low canopy to 2.5m above ground level	Proposed
			<b>Good arboricultural practice</b> Reduce crown by - 10%.	Proposed
			<b>Good arboricultural practice</b> Deadwood - Remove.	Proposed
			<b>Good arboricultural practice</b> Climbing plant - Sever.	Proposed
T37	1 <i>Fraxinus excelsior</i> Ash	C2	<b>To facilitate development</b> Lift low canopy - Specified extent. Crown lift low canopy to 2.5m above ground level	Proposed
			<b>Good arboricultural practice</b> Climbing plant - Sever.	Proposed
			<b>Good arboricultural practice</b> Deadwood - Remove.	Proposed

ID	No. / Species	BS5837 Category	Purpose of works Recommended works	Status
T38	1 <i>Fraxinus excelsior</i> Ash	C2	To facilitate development Fell - Retain high stump. Leave as an 8m monolith for habitat reasons.	Proposed
H39	1 <i>Crataegus monogyna</i> Common Hawthorn/Quick/May 1 <i>Hedera helix</i> Common Ivy 1 <i>Prunus spinosa</i> Blackthorn/Sloe 1 <i>Rubus fruticosus s.</i> Blackberry/Bramble 1 <i>Sambucus nigra</i> Elder	B2	To facilitate development Reduce lateral limb / limbs. Lateral growth of hedge to be reduced as highlighted on the Tree Works Plan.	Proposed
T904	1 <i>Tilia x vulgaris</i> Common Lime	C2	To facilitate development Fell - Ground level.	Proposed
T905	1 <i>Tilia x vulgaris</i> Common Lime	C2	To facilitate development Fell - Ground level.	Proposed
T906	1 <i>Tilia x vulgaris</i> Common Lime	C2	To facilitate development Fell - Ground level.	Proposed
T907	1 <i>Tilia x vulgaris</i> Common Lime	C2	To facilitate development Fell - Ground level.	Proposed
T908	1 <i>Fraxinus excelsior</i> Ash	C2	To facilitate development Fell - Ground level.	Proposed
T914	1 <i>Fraxinus excelsior</i> Ash	C2	To facilitate development Lift low canopy - Specified extent. Crown lift low canopy to 2.5m above ground level Good arboricultural practice Deadwood - Remove.	Proposed
			Good arboricultural practice Climbing plant - Sever.	Proposed
T915	1 <i>Ulmus procera</i> English Elm	U	To facilitate development Fell - Ground level.	Proposed
T916	1 <i>Ulmus procera</i> English Elm	U	To facilitate development Fell - Ground level.	Proposed
T917	1 <i>Fraxinus excelsior</i> Ash	C2	To facilitate development Lift low canopy - Specified extent. Crown lift low canopy to 2.5m above ground level Good arboricultural practice Deadwood - Remove.	Proposed
			Good arboricultural practice Climbing plant - Sever.	Proposed
T919	1 <i>Fraxinus excelsior</i> Ash	C2	To facilitate development Lift low canopy - Specified extent. Crown lift low canopy to 2.5m above ground level Good arboricultural practice Reduce crown by - 15%.	Proposed

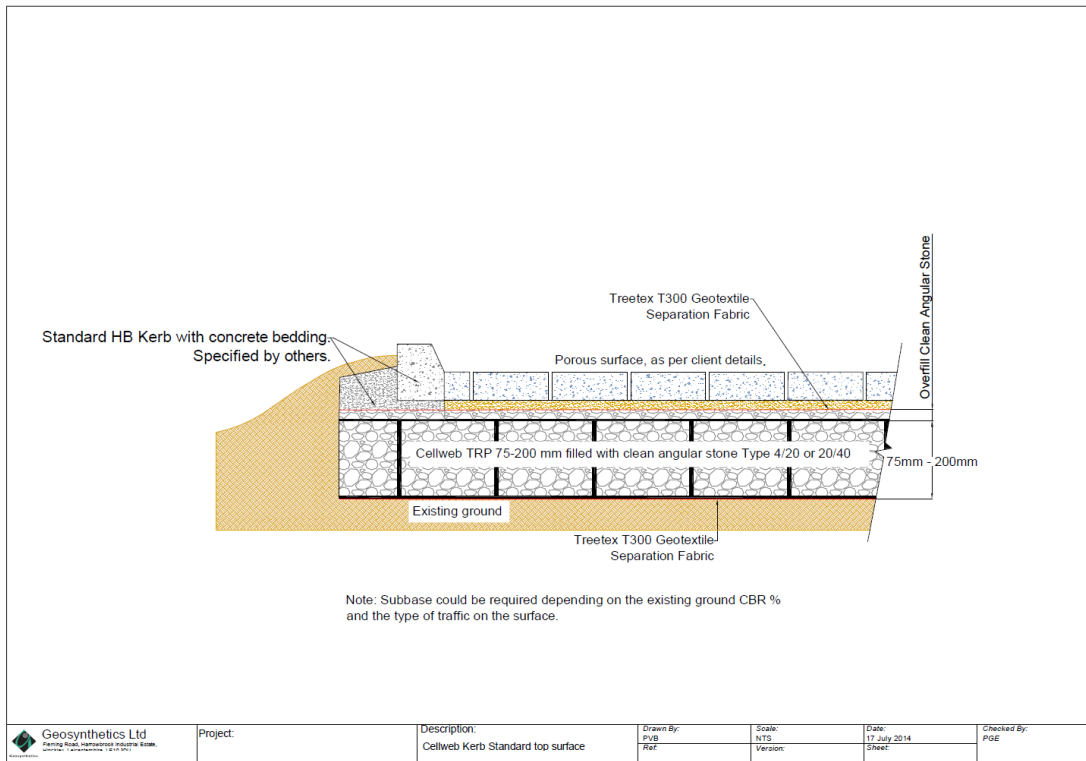
ID	No. / Species	BS5837 Category	Purpose of works Recommended works	Status
T920	1 <i>Fraxinus excelsior</i> Ash	C2	<b>To facilitate development</b> Lift low canopy - Specified extent. Crown lift low canopy to 2.5m above ground level  <b>Good arboricultural practice</b> Reduce crown by - 15%.	Proposed   Proposed
T921	1 <i>Fraxinus excelsior</i> Ash	C2	<b>To facilitate development</b> Fell - Ground level.	Proposed

## Appendix B - Plans

Document	Reference	Revision
Tree Survey Plan	220301-P-10	A
Tree Works Plan	220301-P-11	A
Tree Protection Plan	220301-P-12	A



# Appendix C – Cellular Confinement System



Castle Gardens



Ambleside Lake District



Harcourt Aboretum

(Geosynthetics Limited / Web: [www.geosyn.co.uk](http://www.geosyn.co.uk))

## Appendix D – Ground Protection

### BS5837:2012 - Section 6.2.3.2 - Ground Protection Measures

for pedestrian movements only, a single thickness of scaffold boards placed either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100 mm depth of woodchip), laid onto a geotextile membrane



Scaffold Boards

100mm Woodchip

Geotextile Membrane

for pedestrian-operated plant up to a gross weight of 2 t, proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane;



Inter-linked Ground Protection

150mm Woodchip

Pegged Timber Edge

Geotextile Membrane

for wheeled or tracked construction traffic exceeding 2 t gross weight, an alternative system (e.g. proprietary systems or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the likely loading to which it will be subjected.



Geotextile Membrane

Cellular confinement system

20-40 Clean Angular Stone

**Address:** 12 Churchfield Grove, Ashbourne, Co. Meath

**Email:** [charles@cmarbor.com](mailto:charles@cmarbor.com)

**Tel:** +353 85 843 7015

**Web:** [www.cmarbor.com](http://www.cmarbor.com)