CASTLE SURVEYS LTD

Arboricultural Impact Assessment

Site:
Hunter Rise, Beckermet, CA21 2YP

Client:
Wilson Homes

Date:
15th May 2025

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Document Quality Assurance

Revision	Date	Author	Signature	Reviewed
V1	15th May 2025	Jack Barnard *BSc(Hons) MArborA MICFor*		CW

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Limitations

The contents of this report are valid at the time of writing. Castle Surveys shall not be liable for any use of this report other than for the purposes for which it was produced. Due to the dynamic nature of trees, this report is valid for 12 months.

Any alteration to the application site or development proposals could change the current circumstances and invalidate this report and any recommendations.

The tree survey was a preliminary assessment from ground level and observations were made solely from visual inspection for the purposes of an assessment relevant to planning and development. This report is not a tree risk assessment and should not be construed as such. While every attempt has been made to provide a realistic and accurate assessment of the trees' condition at the time of inspection, it may have not been appropriate, or possible, to view all parts or all sides of every tree to fulfil the assessment criteria of a tree risk assessment.

This is not an ecological report. Where protected species may be present, prior to any works commencing ecological advice must be sought. The Wildlife and Countryside Act 1981 (as amended) and the Conservation of Species and Habitat Regulations 2017 provide statutory protection for birds, bats and other species that can inhabit trees. Great care is required to avoid disturbance to those species and consideration should be given to the timing of tree works to avoid an offence under the above legislation. Where such species are suspected, the project ecologist or Natural England should be contacted for advice.

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1. Introduction

1.1 Principal Author

1.1.1 The report's Principal Author is Jack Barnard *BSc (Hons), MArborA, MICFor (Chartered Arboriculturist)*. Jack has over nine years of professional experience in arboricultural consultancy and has worked on projects ranging from large master planning proposals to commercial and residential sites throughout the UK. Jack is a Professional Member of the Arboricultural Association (AA) and Institute of Chartered Foresters (ICF) and is therefore required to uphold the professional and ethical standards within their codes of conduct. Jack is also LANTRA certified to undertake Professional Tree Inspections.

1.1.2 The information stated within this report is a true and accurate reflection of both the Site conditions at the time of the survey, as well as the professional opinion of the Principal Author.

1.2 Purpose

1.2.1 This Arboricultural Impact Assessment (AIA) has been commissioned by Wilson Architects ('the Client'). This AIA is prepared in relation to the Proposed Development at Hunter Rise, Beckermet, CA21 2YP ('the Site') (see the site aerial image and red line boundary at Appendix 1).

1.2.2 Castle Surveys is instructed to fulfil the initial requirements of BS5837:2012 and Cumberland Council ('the Council'). The Council require an AIA to make an informed decision on our client's full planning application.

1.3 Castle's Instruction

1.3.1 The extent of instruction for this project is threefold:

i. A BS5837:2012 tree survey - this is an assessment of all trees on or within influencing distance of the Site, capturing data relating to each tree's size and condition, as well as quantifying each tree or group's amenity value and life expectancy.

ii. A Tree Constraints Plan and Tree Schedule - delineating the findings of the BS5837:2012 tree survey. Trees are superimposed onto a topographical survey or OS Map to show their reference number (e.g. T1), canopy spread, retention categorisation and Root Protection Area (RPA).

iii. An Arboricultural Impact Assessment (AIA) – this is a report that assesses the trees and the potential impacts associated with the Proposed Development and its construction requirements.

1.4 Site Description

1.4.1 The Site is a rectangular parcel of land located to the south of Hunters Rise, approximately centred at grid reference: NY 01716 06797. Access to the Site can be gained from the east off Morass Rd, Beckermet. The Site comprises open lawn space with belts of trees framing the northern and southern extent. The Site is framed by residential properties on all sides.

2. Proposed Development

2.1 Description

2.1.1 The Proposed Development is for the construction of 9no. new residential plots with their associated access, driveways and gardens.

2.2 Reference Documents

2.2.1 The following documentation has been referenced as part of this impact assessment:

Table 1 *Documents and Plans Provided.*

Document Description	Reference No.	Prepared By	Date
Topographical Survey	25071-25-01	Castle Surveys Ltd	February 2025
Proposed Site Layout	250515 24121-P-001	Wilson Architects	May 2025

3. Statutory and Non-statutory Legislation

3.1 National Planning Policy Framework (NPPF) (December 2024)

Tree Policies

3.1.1 When determining planning applications, the Council should apply the following principles from the NPPF:

- Paragraph 136

  "Trees make an important contribution to the character and quality of urban environments, and can also help mitigate and adapt to climate change. Planning policies and decisions should ensure that new streets are tree-lined52, that opportunities are taken to incorporate trees elsewhere in developments (such as parks and community orchards), that appropriate measures are in place to secure the long-term maintenance of newly-planted trees, and that existing trees are retained wherever possible. Applicants and local planning authorities should work with highways officers and tree officers to ensure that the right trees are planted in the right places, and solutions are found that are compatible with highways standards and the needs of different users."

- Paragraph 187 (A, C & D)

  "When determining planning applications, local planning authorities should apply the following principles:

  a) if significant harm to biodiversity 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 planning permission should be refused;

  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 and a suitable compensation strategy exists; and

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate."

3.1.2 The NPPF also provides the following definitions:

*"**Ancient or veteran tree:** A tree which, because of its age, size and condition, is of exceptional biodiversity, cultural or heritage value. All ancient trees are veteran trees. Not all veteran trees are old enough to be ancient, but are old relative to other trees of the same species. Very few trees of any species reach the ancient life-stage.*

***Ancient woodland:** An area that has been wooded continuously since at least 1600 AD. It includes ancient semi-natural woodland and plantations on ancient woodland sites (PAWS).*

***Irreplaceable habitat:** Habitats which would be technically very difficult (or take a very significant time) to restore, recreate or replace once destroyed, taking into account their age, uniqueness, species diversity or rarity. They include ancient woodland, ancient and veteran trees, blanket bog, limestone pavement, sand dunes, salt marsh and lowland fen."*

3.1.3 None of the surveyed trees or groups are considered to be relevant within these definitions.

3.2 Tree Preservation Orders and Conservation Areas

3.2.1 The Council has been contacted to establish whether any trees contained within the survey are protected by either a Tree Preservation Order (TPO) or are within a Conservation Area.

3.2.2 The Councils Development Control department were contacted on the 14th May 2025 to confirm the status of tree protection associated with the Site. To date no response has been received. This report will be updated and reissued following the confirmation of TPO and Conservation Area status.

3.3 Felling Licence

3.3.1 Tree felling is restricted under the Forestry Act 1967. Under this act, there is an exemption from the need for a felling licence for "*Felling trees immediately required for the purpose of carrying out development authorised by planning permission (granted under the Town and Country Planning Act 1990) ...*"

3.3.2 If full planning permission is granted, any trees which have been identified for removal as part of the planning application (in this instance, included within this AIA), are exempt from this statutory protection. However, outline planning permission does not provide an exemption to the regulations that control tree felling in the Forestry Act 1967.

4. Baseline Tree Survey

4.1 Site Visit

4.1.1 Henry Warren-Hastings *FdSc MArborA* completed the tree survey on the 6th of February 2025. All tree inspections were undertaken from ground level, and no climbing or further assessments were undertaken. Weather conditions during the survey were clear and bright and did not form a constraint to the assessment.

4.2 Method of Data Collection

4.2.1 The tree survey was completed without reference to the Proposed Development, as detailed in paragraph 4.4.1.1 of BS5837:2012. However, the Proposed Development has been assessed as part of this report.

4.2.2 Tree locations have been plotted using a combination of a topographical survey, an ordinance survey plan, aerial imagery and measurements taken onsite. The survey recorded trees either as individual specimens or as groups, where these trees were aerodynamically, culturally, or visually important as groups.

4.2.3 The tree numbers associated with each tree are cross-referenced within the Tree Schedule and with the associated plans at Appendix 3 and 4, respectively. The complete methodology for data collection is provided at Appendix 2 and was carried out in accordance with BS5837:2012.

4.2.4 It should be noted that *Table 1* of BS5837:2012 only gives recommendations in relation to the remaining years. A tree may be considered to have a long remaining life, however, still be of a lower category given its maturity, condition, or overall impact on the Site.

4.2.5 The location of each tree and their associated constraints including canopy spread and Root Protection Areas (RPAs) with and without the Proposed Development are illustrated on plan numbers CS-001 and CS-002 both at Appendix 4.

4.2.6 Category A and B trees are considered to provide a substantial contribution to a site and should be retained and incorporated into the Proposed Development where possible and feasible. Category C and U trees are of low quality or are young specimens, which can be readily replaced. These trees should not be considered a constraint to the Proposed Development. However, it is considered desirable that trees be retained wherever possible, as this ensures a continuity of canopy cover and helps contribute to a mature landscape.

4.3 Summary of Data

4.3.1 A total of 4no. individual trees, 6no. groups of trees and 1no. hedgerow have been surveyed. These include 1no. category A, 4no. category B, 5no. category C and 1no. category U retention value.

4.3.2 The trees onsite are predominantly semi- mature to mature common ash, sycamore, common hazel and common hawthorn. The majority of trees form part of cohesive groups along the boundaries, forming significant screening from the residential properties beyond. The trees appear to have been historically cut back from the Site boundaries, with many having unusual forms as a result.

4.3.3 The trees offsite to the south (G2) are located adjacent to a large retaining wall limiting their root extension growth to the southeast. The Root Protection Areas (RPA) of these specimens have been offset to the northwest to reflect this.

Figure 1 - View of the northern boundary of the Site.

Figure 2 - View of the southern boundary of the Site.

5. Impact Assessment

5.1 Relationship between Site Layout and Trees

5.1.1 To implement the Proposed Development, there is a requirement to remove 2no. groups of trees, both of category C retention value.

5.1.2 A breakdown of the proposed tree removal is outlined in the table below. Full specification of tree removal is provided within the complete Tree Schedule at Appendix 3. All trees which are directly or indirectly impacted by the Proposed Development are illustrated on plan CS-002 at Appendix 4.

Table 2 *Trees to be removed for proposed works.*

Reason for removal	Work required	Tree retention category				Total
		A	B	C	U	
Remove due to a direct conflict with Plot 1	Fell to ground level	-	-	G5	-	**1**
Remove due to a direct conflict with the proposed access road		-	-	G4	-	**1**
Total		**0**	**0**	**2**	**0**	**2**

5.1.3 Section 5.1.1 of BS5837:2012 recognises that the competing needs of development mean that trees are only one factor requiring consideration. It also states that misplaced tree retention can be

detrimental on a site where it will cause excessive pressure on those retained trees and could necessitate their removal in the future.

5.1.4 As there are neither aged nor veteran trees proposed for removal, the principles for refusal within the NPPF would not be considered applicable. The Proposed Development is in line with the Local Plan as it retains trees identified as important within the Site.

5.1.5 Both G4 (common hawthorn) and G5 (sycamore, common hawthorn & common ash) are considered to be of limited arboricultural merit, however, do offer elements of screening value from the land to the west.

Figure 3 - View of G4 from the east within the Site

Figure 4 - View of G5 from the east within the Site.

5.1.6 As shown if Figure 3, G4 is a small group of hawthorn located on the western boundary of the Site. G4 is relatively small, providing partial screening. Its removal is not considered a constraint to the Proposed Development.

5.1.7 As shown in Figure 4, G5 is a dense untidy collection of common ash and sycamore located on a bund on the western boundary of the Site. G5 is heavily mutually suppressed with an impaired structural condition. The removal of these specimens is not considered a constraint to the Proposed Development with suitable compensation planting.

5.1.8 Work undertaken by Sharon Durdant-Hollamby and other industry leaders indicates an average DBH (diameter at breast height) increase of 0.98cm a year for younger trees in an urban environment. The stem diameter of urban trees increases between 0.94-1cm a year (*White, J., 1998)*. From research by Forest Research (*Vaz Monteiro, M., Levanič, T., Doick, K.J. 2017*), a correlation can be found between stem diameter and canopy size, and the tables below show the calculations required.

1.4 x stem diameter in cm to the power of .45
Small (12cm girth) – growing at 0.98cm per year – 10 years = 9.8cm

	Stem Diameter (cm)	Canopy diameter (m)	Canopy radius (Squared)	Canopy area m^2
Year 1	3.8	2.6	1.3 (1.69)	5.3
10	13.6	4.53	2.26 (5.13)	11.3
20	23.4	5.8	2.9 (8.41)	26.4
30	33.2	6.7	3.4 (11.56)	36.3
40	33.2	7	3.5 (12.25)	38.5

Medium 14cm girth or m/s growing at 0.98cm per year – 10 years = 9.8cm

	Stem Diameter (cm)	Canopy diameter (m)	Canopy radius (Squared)	Canopy area m^2
Year 1	4.5	2.8	1.4 (2)	6.28
10	14.2	3.8	1.9 (3.6)	16.11
20	24	5.8	2.9 (8.4)	26.4
30	33.9	6.8	3.4 (11.6)	36.5
40	43.6	7.7	3.85 (14.8)	46.5

Large tree 25 girth or m/s growing at 0.98cm per year – 10 years = 9.8cm

	Stem Diameter (cm)	Canopy diameter (m)	Canopy radius (Squared)	Canopy area m^2
Year 1	8	3	1.5 (2.25)	7
10	17.8	5.2	2.6 (6.8)	21.3
20	27.6	6.2	3.1 (9.61)	30.2
30	37.4	7.1(adjustedto8)	4 (16)	50.2
40	47.2	8 (adjusted to 10)	5 (25)	78.5

Table 1 - average forecasted growth patterns for newly planted trees

5.1.9 Given that most of the Site will remain as soft landscaping, newly planted trees are anticipated to establish relatively well if suitable aftercare is provided. It is assumed that small trees (12cm girth) will be planted, achieving 136mm DBH and 2.26m radial canopy spread within 10 years. Each planted tree would then provide an 11.3m^2 area of canopy cover.

5.1.10 As part of the Proposed Development 182m^2 canopy area is proposed for removal. On this basis, the Proposed Development should include a minimum of 16no. new trees to recreate the value lost within 10 years. New plantings should be placed along the roadside, fulfilling the requirements of the NPPF.

5.1.11 Tree planting should incorporate a diverse mix of native and non-native species. This variety will help mitigate the risks posed by pests, diseases, and climate change, ensuring the Site's adaptability to future conditions.

5.1.12 Given the significant planting included within the Proposed Development, the tree loss is considered to be a short-term loss in canopy cover and amenity value within the Site, however it is considered to be a mid to long-term gain and as such tree removal should not be considered a constraint to the

Proposed Development.

6. Above Ground Constraints

6.1 Tree Canopies

6.1.1 The distribution of tree canopy cover on and within influencing distance of the Site is illustrated on the Tree Constraints Plan (CS-001) at Appendix 4.

6.1.2 The Tree Schedule lists the vertical clearance from ground level to the first significant branching of individual trees. This measurement informs the level of accessibility and potential for development beneath tree canopies.

6.1.3 Factors such as the mature height, size, form, shading and species-specific nuisances must be considered. The proximity of retained trees to structures must also take into consideration amenity factors. This AIA has considered the area surrounding each tree to enable a satisfactory relationship between the Proposed Development and the tree.

6.1.4 Additional factors for consideration include how comfortable future inhabitants of the properties will feel about trees in close proximity to their homes. This serves to protect retained trees from pressure to be felled or undergo surgery once the houses are occupied.

6.1.5 To ensure the successful retention of trees, a Construction Exclusion Zone (CEZ) must be established. The CEZ must take into consideration the factors outlined above and ensure that retained trees are not harmed during the construction process.

6.2 Proposed Pruning Work

6.2.1 As part of the Proposed Development, there is a requirement to carry out the following work:

- H1 – Cutback in line with past management to ensure sufficient space for construction.

6.2.2 All work must be carried out in accordance with BS3998:2010. Work must be undertaken by a suitably qualified arborist.

6.3 Shading

6.3.1 Where shading is unavoidable, the potential adverse impacts should be balanced with the positive aspects of retaining a degree of canopy shade. BS5837:2012 (para. 5.3.4, a) NOTE 1) states that *"shading can be desirable to reduce glare or excessive solar heating, or to provide comfort during hot weather. The combination of shading, wind speed/turbulence reduction and evapotranspiration effects of trees can be utilised in conjunction with the design of buildings and spaces to provide local microclimatic benefits".*

6.3.2 The impact of shade on the Proposed Development is not considered to be significant or negative. The rear garden areas of the Site will have partial shade from T1 (sycamore) and G6 (sycamore, common hazel, common hawthorn, common ash, common holly, blackthorn & elder), however as the plots are situated to the southeast, shading will be limited to directly under the canopy only.

6.4 Future Growth

6.4.1 The future growth of trees at the Site is not considered to be a significant constraint to the Proposed Development. Boundary trees may require minor future pruning. This can be addressed by pruning lateral growth and secondary branches that encroach on the built structures.

6.5 Leaves, Fruit, and Honeydew

6.5.1 Leaves and fruit do not pose a significant constraint to the Proposed Development as an adequate offset has been provided between retained trees and the proposed built structures.

6.5.2 Given the proximity of so many trees off-site towards the northeast, leaf fall may cause a problem across the entire Site in autumn. It is recommended that gutter grates be installed throughout the Proposed Development to avoid regular blockages.

7. Below Ground Constraints

7.1 Root Protection Area (RPA)

7.1.1 The RPA of trees has been calculated as prescribed by BS5837:2012 and these are illustrated on the Tree Constraints Plan at Appendix 4. In addition to this, each tree's numerical RPA value is provided within the Tree Schedule at Appendix 3. The Tree Schedule provides both the RPA radius in metres from the centre of the stem and the total area for the RPA in square metres.

7.1.2 In general, the RPA is a circular area with a radius 12 times the diameter of a tree measured at 1.5 metres for single-stemmed trees. For trees with more than one stem, one of two calculation methods should be used. In all cases, the stem diameter(s) should be measured in accordance with Annex C, and the RPA should be guided by Annex D of BS5837:2012.

7.1.3 The shape of the RPA and its exact location will depend upon arboricultural considerations and ground conditions. The RPA may be altered and/or offset from a centred circle if there are existing RPA incursions. The total area of the RPA will not be altered from that prescribed by BS5837:2012.

7.1.4 The RPA is an area in which no groundwork should be undertaken without due care taken in relation to the retained tree(s). This is to avoid soil compaction, changes in levels or soil contamination, which could alter the tree's condition and/or stability.

7.2 RPA Incursions

7.3 Installation of Greenfix Geoweb

7.3.1 Due to the level of incursion into the RPA of G2, it will be necessary to install a Greenfix Geoweb (or comparable specification) tree root protection system to construct the proposed footpath and driveway. The location of the Greenfix Geoweb is illustrated on the Tree Protection Plan (CS-004) at Appendix 4 as a yellow honeycomb hatch.

7.3.2 The Greenfix Geoweb will be installed before any plant/vehicular movement or building works. The Greenfix Geoweb will be 200mm in depth and installed above the existing ground level. This will reduce the likelihood of ground compaction and ensure good infiltration of rainwater run-off into the ground within the RPA.

7.3.3 This is supported within NOTE 1 of clause 7.4.2 of BS5837:2012 in that: an appropriate sub-base option for new hard surfacing includes three-dimensional cellular confinement systems. Alternatively, piles, pads or elevated beams can be used to support surfaces to bridge over the RPA or, following exploratory investigations to determine location, to provide support within the RPA while allowing the retention of roots greater than 25mm in diameter.

Greenfix Geoweb installation methodology

7.3.4 To ensure that foreseeable damage does not occur, whilst installing the Greenfix Geoweb system, the Arboricultural Clerk of Works (ACoW) will be on-site throughout. The full installation methodology is detailed below:

7.3.5 **Stage 1** – Ground Preparation

- Remove existing surfacing under the supervision of the project Arboriculturist. Project arboriculturist to review existing ground conditions and advise on any de-compaction required before moving on to the next stage.
- Fill any hollows that may be in the exposed ground with no fines 4/20mm clean angular stone.
- Place Root-Tex 30 Geotextile over the area to be protected ensuring laps with a minimum of 300mm.

- Mark out the area to be protected with edging detail. For example Timber boards.

7.3.6 **Stage 2** – Installation of Greenfix Geoweb

- Roll out Root-Tex 30 Geotextile to cover the area to be protected.
- Insert 4 equally spaced steel pins along the width of the panel.
- Expand the panel over the Root-Tex 30 and the pins, extend to the required length, and then pin across the opposite panel end.
- Pin along the length of the panel on each side.
- If full panels are not being used, then ensure the cells have been expanded to their full dimension.
- Staple or cable tie any adjacent panels together.
- The Geoweb panels can be cut to shape if required with a heavy-duty Stanley Knife.

7.3.7 **Stage 3** – Filling the Greenfix Geoweb

- Fill the cells of the Geoweb with a 4/20mm or 40/20mm clean angular stone.
- Allow 25mm overfill for any settlement of the stone into the cells.
- If the area is to be trafficked immediately, slightly increase the amount of surcharge overfill to a maximum of 50mm over the Geoweb with 4/20mm or 40/20mm clean angular stone.

7.3.8 **Stage 4** – Finish Surfacing Details

- Place Root-Tex 10 separation fabric over the filled Geoweb.
- Lay sand/gravel bedding material as per to manufacturer's recommendations.
- Lay the final surface as per the engineers' recommendations.
- The installation, following the above process, should ensure that no damage is caused to the trees which are to be retained, as a result of the proposed development.
- The final surface should be constructed from a porous surface to ensure good infiltration of water and air to the soil below.
- The final levels will be increased by the depths of the Geoweb system, plus the depth of any surface finish. The new levels will need to be graded to meet the existing levels outside the subject area.

7.4 Infrastructure

7.4.1 No information relating to infrastructure has been provided as part of this assessment. However, there is sufficient space outside of the RPA for infrastructure to be located. All services and infrastructure MUST NOT enter the CEZ.

7.5 Tree Protection Fencing

7.5.1 Trees to be retained will remain unharmed by the Proposed Development, subject to the adoption of tree protection measures during the construction works. To ensure the successful retention of trees, a Construction Exclusion Zone (CEZ) must be established. It is critical that all tree barriers are installed and erected, and the CEZ enforced prior to the commencement of any works on-site. Following the installation of tree barriers, a site meeting must be undertaken with the Tree Officer to ensure the satisfaction of all parties prior to any on-site works commencing.

7.5.2 No work is permitted within the CEZ. There will be no groundwork without prior written approval from the Council. No access will be allowed to this area, including for the storage or movement of materials or machinery.

7.5.3 No excavations or increases in soil level within the CEZ are permitted without prior written approval from the LPA.

7.5.4 Care should be exercised if plant or machinery are required onsite. Wide or tall loads, or plant with booms, jibs and counterweights must not come into contact with the tree protection fencing or retained trees. Any traverse of plant in close proximity to trees should be conducted under the close observation of a banks-person. This will help to ensure that adequate clearance from trees is maintained at all times.

7.5.5 Any landscaping within the CEZ must avoid soil disturbance. Therefore, re-grading and rotavators are not permitted. Any agreed soil re-profiling to facilitate final agreed levels must be carried out by hand with topsoil.

7.5.6 There must be clear and visible signs attached to the protective fencing, displaying the notice “Construction Exclusion Zone - No Access” and the area will be regarded as sacrosanct by all. This will be checked prior to the commencement of work by the ACoW and Tree Officer, and by the ACoW throughout the course of development.

8. Recommendations

8.1.1 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. A Tree Protection Plan (CS-004) has been provided at Appendix 4.

8.1.2 It is critical that all protective fencing is installed and erected, and that the Construction Exclusion Zone (see Section 6.1 of this report for further information) is enforced prior to the commencement of any work on-site. Following the installation of tree protection, a” pre-commencement site meeting” will be undertaken with a suitably competent arboricultural consultant to ensure the satisfaction of all parties prior to any on-site work commencing. A file note will be produced outlining the outcome of the meeting and a copy provided to the Tree Officer.

8.1.3 For tree and root protection measures to work effectively, all personnel associated with the construction process must be familiar with the Tree Protection Plan.

8.1.4 Given the proximity of so many trees at the Site, leaf fall will be a problem across the entire Site in autumn. It is therefore recommended that grates be incorporated into the gutters of the Proposed Development to avoid regular blockages.

8.1.5 No information relating to infrastructure has been provided as part of this assessment. However, there is sufficient space outside of the RPA, towards the southeastern extent of the Proposed Development, for infrastructure to be located. All services and infrastructure MUST NOT enter the Construction Exclusion Zone (CEZ). See Section 6.1 within this report for further information on the CEZ.

8.1.6 Due to the level of incursion into the RPA of G2, it will be necessary to install a Greenfix Geoweb (or comparable specification) tree root protection system to construct the proposed footpath and driveway. The location of the Greenfix Geoweb is illustrated on the Tree Protection Plan (CS-004) at Appendix 4 as a yellow honeycomb hatch. The Greenfix Geoweb will be 200mm in depth and installed above the existing ground level.

9. Conclusions

9.1.1 A total of 4no. individual trees, 6no. groups of trees and 1no. hedgerow have been surveyed. These include 1no. category A, 4no. category B, 5no. category C and 1no. category U retention value. All trees at the Site and within influencing distance have been surveyed.

9.1.2 It has been considered desirable that trees and groups of trees should be retained wherever possible, although care has been exercised over misplaced tree preservation. Within the current site layout plan, there is a conflict with some trees that cannot be avoided, due to the size and scale of the building requirements. Therefore, mitigation proposals are considered.

9.1.3 To implement the Proposed Development, there is a requirement to remove 2no. groups of trees, both of category C retention value.

9.1.4 For a full breakdown of the proposed tree loss, see Section 5.1 of this report. The trees proposed for removal are of low arboricultural merit and are not visible from the wider environment. As such, their removal is not considered a constraint to the Proposed Development.

9.1.5 The trees proposed for removal within this report are neither considered aged nor veteran, and therefore, the principles for refusal within the NPPF would not be considered applicable.

10. References

British Standard 3998:2010 ‘Tree work – Recommendations’

British Standard 5837:2012 'Trees in Relation to Design, Demolition and Construction - Recommendations'

British Standard 8545:2014 ‘Trees: from Nursery to Independence in the Landscape – Recommendations’

National Planning Policy Framework (NPPF) 2024

The Forestry Act 1967

The Town and Country Planning (Tree Preservation) (England) Regulations 2012

The Town and Country Planning Act 1990

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Appendix 1: Aerial Photographs

Google Earth Pro Aerial Image (15.05.2025)

Hunter Rise, Beckermet, CA21 2YP

Arboricultural Impact Assessment

REF NO: 250207 25024 AIA V1
DATE: May 2025

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Appendix 2:
Survey Methodology

The tree survey was completed without reference to the Proposed Development, as detailed in paragraph 4.4.1.1 of BS5837:2012. However, the Proposed Development has been assessed as part of this report.

Whenever possible tree locations will be plotted with the use of a Topographical Survey. When a Topographical survey is not provided, tree locations will be plotted using a combination of an ordinance survey plan, aerial imagery and measurements taken onsite.

In accordance with BS5837:2012, small trees with a stem diameter of less than 75mm were not surveyed as they are considered to be readily replaceable or could be relocated with relative ease.

Each tree has been given an identification number as either an individual tree, group of trees, woodland, or hedgerow. The tree numbers associated with each tree are cross-referenced within the Tree Schedule and the associated plans at Appendix 3 and 4, respectively.

Tree species have been recorded with both common and scientific names.

All tree heights have been assessed using a clinometer. For groups of trees, woodlands, and hedgerows the lowest and highest height associated with the group has been recorded. Tree heights are given in metres.

Stem diameters were measured at 1.5 metres above ground level (unless otherwise stated) and are given in millimetres. For groups of trees, woodlands, and hedgerows the lowest and highest diameter associated has been recorded.

The canopy spread is measured at four cardinal points or is given as an average for the canopy. Average canopy spreads are typically used for groups of trees or where the crown is evenly weighted at the four cardinal points. The canopy spreads are measured in metres.

The height of the ground clearance is given in metres and is an estimate of the height of the first branch above ground level.

Age class is indicative and will vary between species. In the absence of detailed information on tree age, the following classification has been used:

Age Category	Description
Young	Trees aged less than one-third of life expectancy.
Semi-mature	Established specimen approaching one-third of life expectancy.
Early-mature	Trees have reached one-third to two-thirds of life expectancy.
Mature	Trees have reached over two-thirds of life expectancy.
Over-mature	Trees that are declining or moribund trees of low vigour.
Veteran	Specimens exhibiting features of biological, cultural, or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned.

The structural condition of each tree has been assessed and is summarised as:

Structural Condition	Description
Good	Few minor defects of little overall significance.
Fair	A significant defect or several small defects.
Poor	Major defects present or many small defects.

The physiological condition has been recorded to provide an indication of each tree's general health and vitality. The trees have been described thus:

Physiological Condition	Description
Good	In good health typical of the species.
Fair	Reasonable health with few defects.
Poor	Trees that exhibit significant defects which are irremediable or moribund trees.
Dead	The tree has died.

The estimated remaining contribution has been categorised as:

- Less than 10 years
- 10-20 years
- 20-40 years
- Over 40 years

The estimated remaining contribution has been based upon an assessment of the tree's potential safe useful life expectancy. The remaining contribution in years does not always directly correlate with the retention category of a tree, as an individual specimen may have a long remaining life but be of little significance in terms of development.

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Appendix 3:
Schedules

BS5837:2012 Cascade Chart

Complete Tree Schedule

BS5837:2012 Cascade Chart for Tree Quality Assessment

Category and Definition	Criteria (including subcategories where appropriate)			ID Colour on Plan
Trees to be considered for retention (see note)				
	1 - Mainly arboricultural qualities	2 - Mainly landscape qualities	3 - Mainly cultural values, including conservation	
Category A 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 forma l 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).	Light Green (000-255-000)
Category 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.	Trees with material conservation or other cultural value.	Mid Blue (000-000-255)
Category C Trees of low quality currently in adequate condition with at least 10 years life expectancy, or young trees with a stem diameter below 150mm.	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.	Grey (091-091-091)
Trees unsuitable for retention (see note)				
Category U 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.	· 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); · Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline; and/or · 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. *NOTE: Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.*			Dark Red (127-000-000)

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BS5837:2012 TREE SCHEDULE

SITE
Hunter Rise, Beckermet

DATE
6th February 2025

REFERENCE
250206 25024 TS V1

Tree No.	Common Name	Scientific Name	Height (m)	Stem Dia (mm)	Crown Spread (m)				Height of Crown Clearance (m)	Age Class	Phys Con	Struc Con	Additional notes	Preliminary recommendations	BS5837 Retention Category	RPA (m^2)	RPA Radius (m)
					N	E	S	W									
T1	Sycamore	*Acer pseudoplatanus*	15	565	6	8	6	5	4	Mature	Good	Good	Mature specimen located on the western boundary of the site. Situated within the rear garden of a property on Hunter Rise, northwest of the site. Single stem, forms structural canopy at c.8m. Historic pruning wounds associated with the scaffold forming good occlusion. Minor epicormic growth associated with the scaffold. Small diameter deadwood associated with the canopy. Canopy is biased to the east, growing into the site.	No work required at the time of assessment.	A1, 2	150	6.90
T2	Common ash	*Fraxinus excelsior*	14	1480	6	6	5	6	3	Mature	Fair	Fair	Mature specimen located within G6 on the northwest boundary of the site. Specimen has large basal cavity on the northwestern side, forming good occlusion. Epicormic growth associated with the base. Single stem, with dense ivy associated with the scaffold. Main apical stem has died off in the past, remaining scaffold shows signs of pollarding in the past, regrowth from these past pruning points has since established a new canopy. Small diameter deadwood associated with the canopy. Prominent specimen contributing to the wider boundary group.	No work required at the time of assessment.	C1, 2	984	17.70
T3	Common ash	*Fraxinus excelsior*	6	1400	0	0	0	0	0	Mature	Dead	Fair	Mature standing stump, with no remaining live growth. Of limited future potential but should be retained for the ecological benefits it provides.	No work required at the time of assessment.	U	887	16.80

CASTLE SURVEYS LTD

BS5837:2012 TREE SCHEDULE

SITE
Hunter Rise, Beckermet

DATE
6th February 2025

REFERENCE
250206 25024 TS V1

Tree No.	Common Name	Scientific Name	Height (m)	Stem Dia (mm)	Crown Spread (m)				Height of Crown Clearance (m)	Age Class	Phys Con	Struc Con	Additional notes	Preliminary recommendations	BS5837 Retention Category	RPA (m^2)	RPA Radius (m)
					N	E	S	W									
T4	Sycamore	*Acer pseudoplatanus*	13	425	4	5	5	3	2	Early-mature	Good	Fair	Early mature specimen located on the northern boundary of the site. Single stemmed specimen, epicormic growth associated with the base, has established into 2no. small diameter stems, growing into the canopy. Main stem bifurcates at c.5m. Specimen is visible upon entering Hunters Rise from the northeast.	No work required at the time of assessment.	B1, 2	82	5.10
G1	Sycamore, Common hawthorn, Plum, Elder	*Acer pseudoplatanus, Crataegus monogyna, Prunus domestica, Sambucus nigra*	4-8	75-195	4	4	4	4	3	Semi-mature	Good	Fair	Semi-mature group located on the southeast boundary of the site. Group primarily comprises sycamore stumps that have since put on regenerative growth. Now forming a coppice group. Group is situated on a raised area of ground between the field and a raised wall area. Group is of limited arboricultural merit.	No work required at the time of assessment.	C1, 2	18	2.40
G2	London plane, Common lime	*Platanus x hispanica, Tilia x europea*	15-16	775-800	6	6	6	6	2	Mature	Good	Fair	Mature group located on the southeast boundary of the site. Group is situated on raised wall area, contains 3no. mature trees forming a common cohesive canopy, specimens within group are single stemmed, each forming their structural canopy at c.3m. Minor ivy associated with the group. The two northernmost trees show past signs of unsympathetic pruning. And have epicormic growth associated with their canopies. Prominent specimens visible north and south, and from the properties to the east.	No work required at the time of assessment.	B1, 2	290	9.60

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BS5837:2012 TREE SCHEDULE

SITE
Hunter Rise, Beckermet

DATE
6th February 2025

REFERENCE
250206 25024 TS V1

Tree No.	Common Name	Scientific Name	Height (m)	Stem Dia (mm)	Crown Spread (m)				Height of Crown Clearance (m)	Age Class	Phys Con	Struc Con	Additional notes	Preliminary recommendations	BS5837 Retention Category	RPA (m^2)	RPA Radius (m)
					N	E	S	W									
G3	Sycamore, Common beech, Pedunculate oak	*Acer pseudoplatanus, Fagus sylvatica, Quercus robur*	14-18	290-1180	7	7	7	7	3.5	Mature	Fair	Good	Mature group located beyond the sites RLB to the south. Group contains a mixture of specimens, forming a common cohesive canopy. 3no. large specimens within group have recently been heavily, unsympathetically pruned, leaving an unsightly scaffold with only epicormic growth and minor regen. Some standing dead specimens present within the group, several other trees display significant dieback and have several cavities associated with their scaffold. Prominent group within the site, providing significant screening from the adjoining residential properties, however would benefit from sound arboricultural management.	No work required at the time of assessment.	B1, 2	625	14.10
G4	Common hawthorn	*Crataegus monogyna*	5	175-185	4	4	4	4	2	Semi-mature	Good	Fair	Semi mature group located on the southwest boundary of the site. Specimens growing on small area of raised ground, roots visible to the northeast. Minor ivy associated with the scaffold, small diameter deadwood associated with the canopy. Visible from Fleming Drive to the southwest. Group is of limited arboricultural merit.	Fell to ground level to implement the Proposed Development.	C1, 2	14	2.10
G5	Sycamore, Common hawthorn, Common ash	*Acer pseudoplatanus, Crataegus monogyna, Fraxinus excelsior*	4-8	85-265	5	5	5	5	2	Semi-mature	Fair	Fair	Semi mature group located on the western boundary of the site. Group contains coppice and self set specimens, forming a common cohesive canopy. Ivy associated with the group and small diameter deadwood associated with the canopy. Specimens within group are situated on fields edge, and provide a moderate boundary screen from the adjacent property on Fleming drive to the	Fell to ground level to implement the Proposed Development.	C1, 2	34	3.30

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BS5837:2012 TREE SCHEDULE

SITE
Hunter Rise, Beckermet

DATE
6th February 2025

REFERENCE
250206 25024 TS V1

Tree No.	Common Name	Scientific Name	Height (m)	Stem Dia (mm)	Crown Spread (m)				Height of Crown Clearance (m)	Age Class	Phys Con	Struc Con	Additional notes	Preliminary recommendations	BS5837 Retention Category	RPA (m^2)	RPA Radius (m)
					N	E	S	W									
G6	Sycamore, Common hazel, Common hawthorn, Common ash, Common holly, Blackthorn, Elder	*Acer pseudoplatanus, Corylus avellana, Crataegus monogyna, Fraxinus excelsior, Ilex aquifolium, Prunus spinosa, Sambucus nigra*	4.5-12	75-365	4	4	4	4	3	Early-mature	Good	Fair	Early mature group framing the northwest boundary of the site. Contains a mixture of specimens of varying size and condition. Group forms a common cohesive canopy. Group primarily contains early mature trees, as well as some younger self set specimens growing within. Ivy associated with the group. Standing dead specimens present within the group. Some specimens show signs of unsympathetic pruning. Group appears to have flail damage along the inside edge, field side. In the northern corner of the group is an mature, dead ash stem, c.4m tall with dense ivy throughout. Group provides a significant boundary screen from the adjacent properties on Hunter Rise, to the northwest.	No work required at the time of assessment.	B1, 2	28	3.00
H1	Common hawthorn, Common holly	*Crataegus monogyna, Ilex aquifolium*	2-3	75-200	3	3	3	3	1	Semi-mature	Good	Fair	Semi mature hedgerow located on the northern boundary of the site. Situated within the property to the north of the site. Forms a common cohesive canopy and provides a moderate boundary screen from the property to the north.	Cutback in line with past management to ensure sufficient space for construction.	C2	18	2.40

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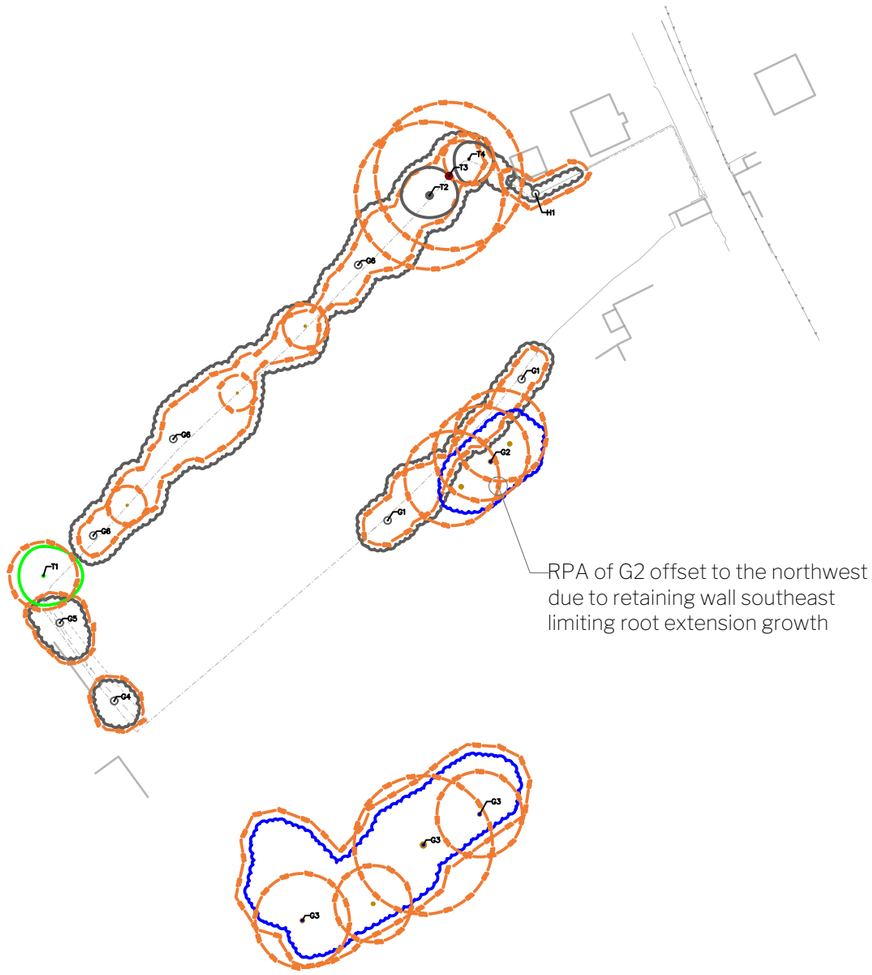
Appendix 4:
Plans

Tree Constraints Plan (CS-001)

Arboricultural Impact Plan (CS-002)

Tree Retention & Removals Plan (CS-003)

Draft Tree Protection Plan (CS-004)



RPA of G2 offset to the northwest due to retaining wall southeast limiting root extension growth

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PROJECT INFORMATION

PROJECT
Hunter Rise, Beckermet

PLAN TITLE
Tree Constraints Plan

DATE
February 2025

PLAN REFERENCE
250207 25024 TCP V1

PLAN NUMBER
OE-001

PLAN SCALE
1/1250 @ A3

LEGEND

RPA
RPA
RPA

Canopy Spread
Tree Stem
Root Protection Area

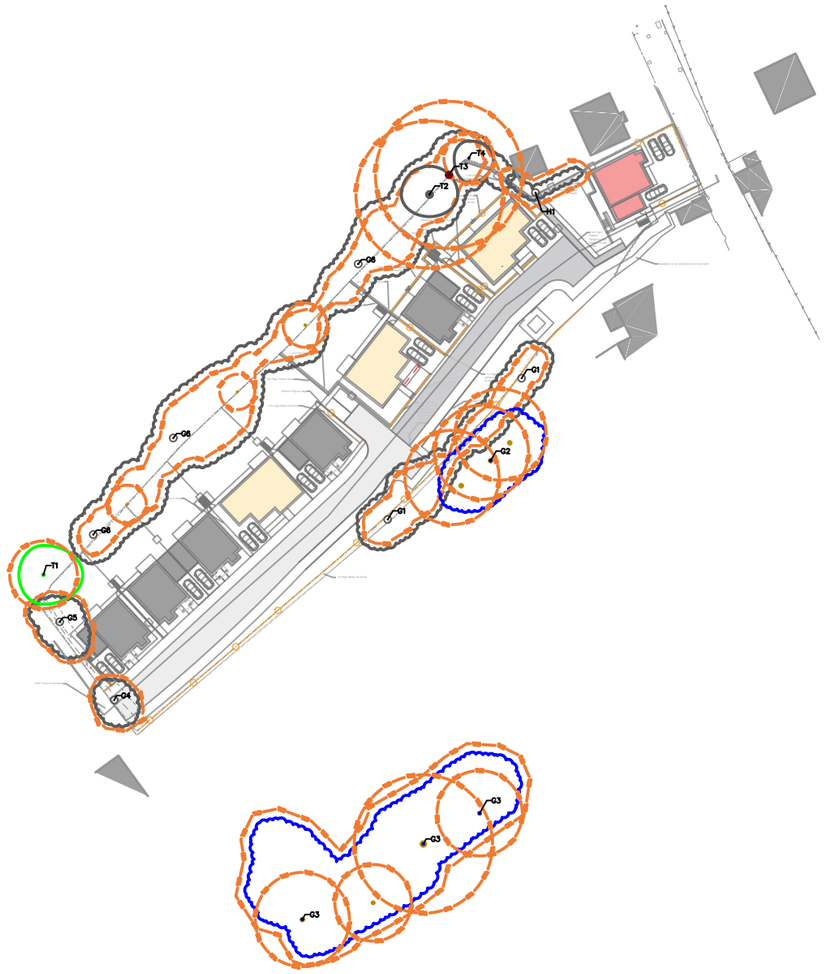
Category A - High Retention Value

Category B - Moderate Retention Value

Category C - Low Retention Value

Category U - No Retention Value

North



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PROJECT INFORMATION

PROJECT
Hunter Rise, Beckermet

PLAN TITLE
Arboricultural Impact Plan

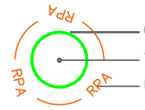
DATE
May 2025

PLAN REFERENCE
250207 25024 AIP V1

PLAN NUMBER
OE-002

PLAN SCALE
1/1250 @ A3

LEGEND



Canopy Spread
Tree Stem
Root Protection Area

Category A - High Retention Value

Category B - Moderate Retention Value

Category C - Low Retention Value

Category U - No Retention Value

North

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PROJECT INFORMATION

PROJECT
Hunter Rise, Beckermet

PLAN TITLE
Tree Retention & Removals Plan

DATE
May 2025

PLAN REFERENCE
250207 25024 TRRP V1

PLAN NUMBER
OE-003

PLAN SCALE
1/1250 @ A3

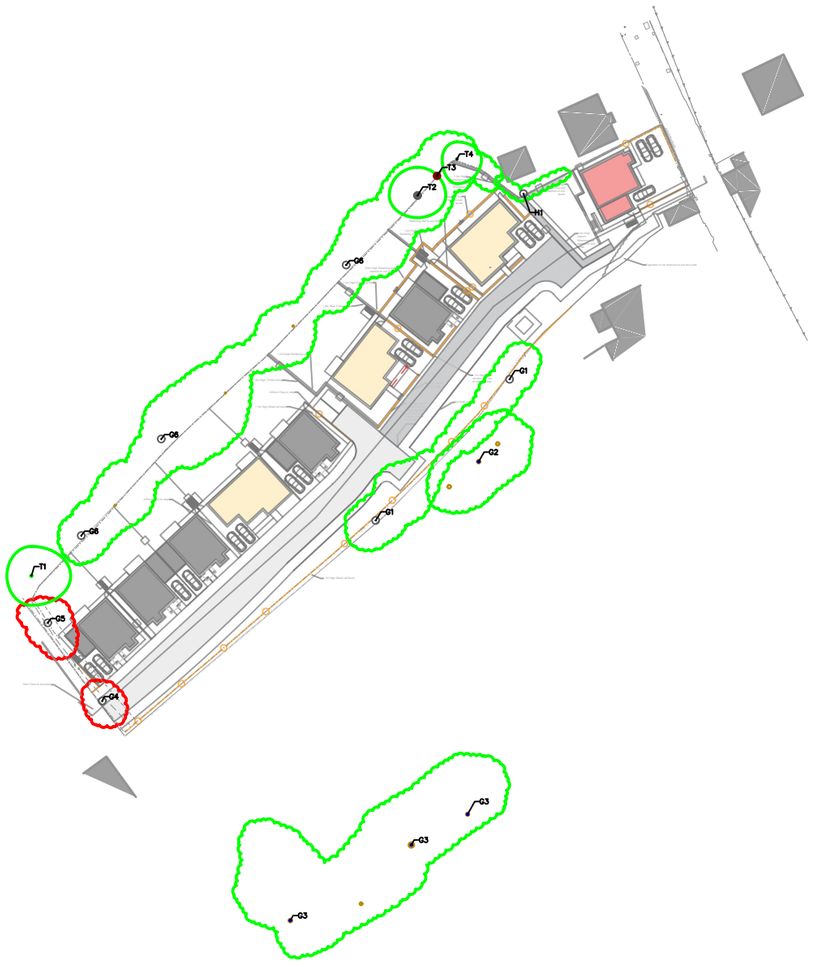
LEGEND

Canopy Spread

Tree Stem

Trees to be retained for development

Trees to be removed for development



North

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PROJECT INFORMATION

PROJECT
Hunter Rise, Beckermet

PLAN TITLE
Tree Protection Plan

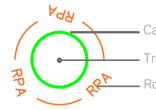
DATE
May 2025

PLAN REFERENCE
250207 25024 TPP V1

PLAN NUMBER
OE-004

PLAN SCALE
1/1250 @ A3

LEGEND



Canopy Spread
Tree Stem
Root Protection Area

Category A - High Retention Value

Category B - Moderate Retention Value

Category C - Low Retention Value

Category U - No Retention Value

TREE PROTECTION

Tree Protection Fencing

200mm Above Soil Surface

North

Tree Protection Fencing

The principal protection for the retained trees (above and below ground) and associated soils within the Site is through the erection of Tree Protection Fencing (TPF) to create a Construction Exclusion Zone (CEZ).

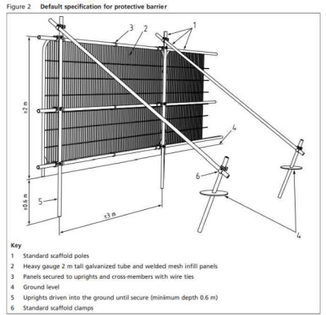
Prior to any on-site demolition or construction, tree protective measures and the CEZ must be in place. TPF Specification is shown in Figure 3 (BS5837:2012) - pictured here.

The following points are critical to the function of the CEZ:

- The protective tree fencing shall be maintained throughout the development phase.
- No materials, machinery, temporary structures, chemicals or fuel shall be stored within the CEZ.
- No excavations or increases in soil level within the CEZ are permitted without prior written approval from the LPA.
- Care should be taken to ensure that wide or tall loads or plant with booms, jibs and counterweights do not come into contact with retained trees. Any transit or traverse of plant in close proximity to trees should be conducted under the supervision of a banks person to ensure that adequate clearance from trees is maintained at all times
- Material which will contaminate the soil such as concrete mixing, diesel oil and vehicle washing must not be discharged within 10m of the tree stems. In the event of an accident or spillage the LPA must be notified.
- Fires must not be lit in a position where their flames can extend to within 5m of foliage, branches or trunk. This will depend on the size of the fire and the wind direction.
- Any landscaping within the CEZ must avoid soil disturbance. Therefore, re-grading and rotavators are not permitted. Any agreed soil re-profiling to facilitate final agreed levels must be carried out by hand with topsoil.

BS5837:2012 Figure 2

Figure 2 **Default specification for protective barrier**



Key
1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps