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Location:
1 Cleadon Meadows
Cleadon
Sunderland

Report Type:
Arboricultural Survey
Arboricultural Impact Assessment
Arboricultural Method Statement
Tree Protection Plan

Ref:
ARB/AE/2587

Date:
January 2024

Contents

1 Introduction

2 Site Information

3 Tree Quality Assessment

4 Design Proposals and Arboricultural Impact Assessment

5 Arboricultural Method Statement - Pre-construction & Site Preparation Works

6 Arboricultural Method Statement - Tree Protection Measures During Construction

7 Arboricultural Method Statement - Tree Protection Measures Post-construction

Appendices

1 Tree Details

2 Arboricultural Tasks Sequence Table

3 Tree Protection Fencing Specification

4 Construction Exclusion Zone Notice

5 Tree Constraints Plan

6 Tree Impact Plan & Tree Protection Plan

1 Introduction

1.1 This report has been prepared by Andrew Elliott of Elliott Consultancy Ltd on behalf of the applicant.

1.2 Elliott Consultancy Ltd was commissioned to visit the site to inspect the trees and to produce an arboricultural report in accordance with British Standard 5837:2012 '*Trees in Relation to Design, Demolition & Construction*'. An initial inspection of the trees was undertaken on the 30th April 2021.

1.3 **Scope of the report:**

- This report provides arboricultural information and advice in relation to the proposed construction of a detached outbuilding – as shown within Appendix 6.
- It should be used to guide the construction process in order to minimise potential damage to retained trees.
- Section 4 provides a summary of the design proposals and their impact on the current tree population.
- Sections 5-7 provide a method statement that details all measures recommended for adequate tree protection including any special construction measures to be utilised.
- Within the Arboricultural Tasks Sequence Table (Appendix 2), is a timescale for implementation of any tree works and protective measures in reference to the development period.

1.4 Trees can be protected by Tree Preservation Order or by merit of location within a Conservation Area; advice should be sought from the relevant planning department if such restrictions have been placed on the site.

1.5 **Prior to site works commencing, the Arboricultural Method Statement needs to be passed to the site manager or contractor and used as reference during the development period, with particular attention paid to Sections 5-7, and Appendices 2-6.**

2 Site Information

2.1 1 Cleadon Meadows is a two-storey residential dwelling set within its own garden. Figure 1 shows the extent of the property: (**N.b.** Trees outside of the project area may also have been considered to ensure protection during construction).



Figure 1: Site with project area highlighted

2.2 Tree cover within and adjacent to the site is limited to Sycamores (Trees 1, 2, & 3). Tree survey data is included in Appendix 1.

2.3 Any visibility constraints encountered are noted within the survey data (Appendix 1).

3 Tree Quality Assessment

3.1 BS5837:2012 notes that all trees apart from those with stem diameters <150mm or classified as Category U should be viewed as a site constraint. When inspected, each tree and or group feature is assigned one of four categories that signify how suitable that tree/group would be for retention within any development proposals, and therefore the degree to which it should constrain the site. The four categories are as follows:

3.2.1 **Category A** trees are those of high quality and value, and of a condition whereby they could make a substantial contribution to the site. Such trees should be retained and offered adequate consideration during the design phase and physical protection during the construction phase in accordance with BS 5837:2012. This means keeping proposed features and alterations to ground levels outside of root protection areas and crown spreads to ensure that trees remain in adequate condition post-development.

3.2.2 **Category B** trees are those of moderate quality and value, and of a condition that still make a substantial contribution to the site. Category B trees should be retained wherever possible and offered adequate consideration during the design phase and physical protection during the construction phase in accordance with BS 5837:2012.

3.2.3 **Category C** trees are considered to be of low quality and value, or lacking stature, but of an adequate condition to remain in the short-term. These trees can also be retained if required but where they form a significant constraint to development their removal should be considered. Where they are to be retained they should be afforded adequate consideration during the design phase and physical protection during the construction phase in accordance with BS 5837:2012.

3.2.4 **Category U** trees are of such a condition that any existing value would be lost within 10 years. As a result it is recommended that Category U trees are not considered a constraint for development and are removed prior to construction commencing.

3.3 In addition to the four main categories explained above, each tree/group is assigned a sub-category which signifies its overriding value as determined by the surveyor, which is noted by adding a suffix of 1, 2 or 3 alongside the category letter. 1 signifies that the trees/groups main value is arboricultural e.g. it may be a particularly good example or may be rare. A 2 signifies that the overriding factor was due to the landscape value that the tree/group provides e.g. it may be part of a group feature such as a screen. A 3 indicates that a cultural factor was the overriding value e.g. it may have historical or commemorative importance.

4 Design Proposals and Arboricultural Impact

4.1 This section concentrates on the proposals and how they relate to the current trees on and adjacent to the site (as shown within Appendix 6).

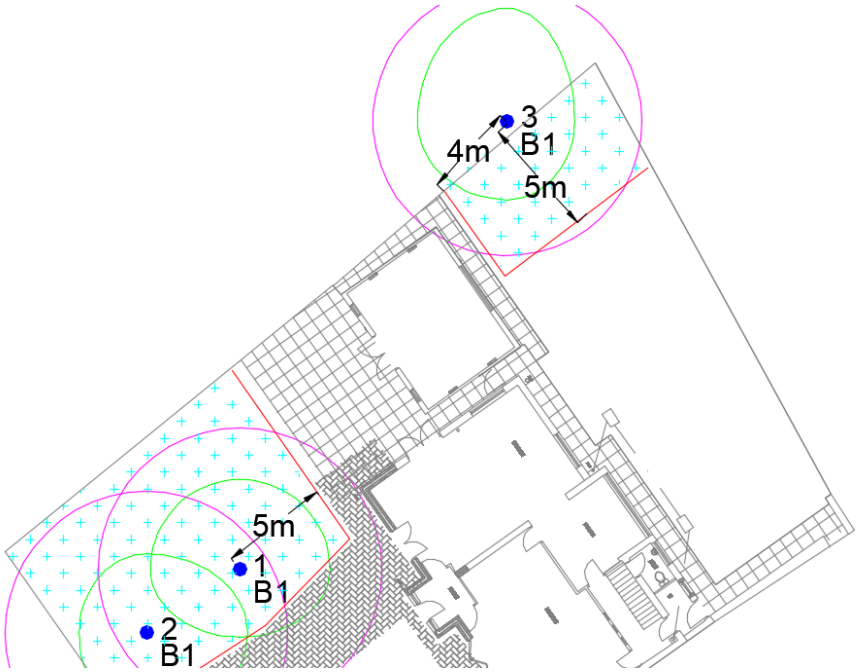
4.2 **Potential Conflict 1: Loss of trees to allow construction.**

No trees require removal to allow construction.

Mitigation / Countermeasure: No mitigation or countermeasures are required.

4.3 **Potential Conflict 2: Damage to trees due to the proximity of the proposed works.**

The new building and surrounding hard-surfaced area are located close to root protection areas (RPA's) and could cause damage to underlying roots.



Mitigation / Countermeasure: The location of the garage is outside of the RPA's, and the encroachment by hard-surfacing is very limited (<2%) and therefore not considered significant or likely to have a detrimental impact on tree condition.

4.4 **Potential Conflict 3: Damage to trees during construction.**

Retained trees may be damaged due to a variety of reasons during the development process.

Mitigation / Countermeasure: All retained trees can be protected during the construction process by the installation of appropriate protective fencing and maintaining the agreed construction exclusion zones as shown within Appendix 7. This is in accordance with BS5837. Access to the construction area will be via the current driveway which is within the RPA's of Trees 1 & 2; however as this area is already hard-surfaced, no further tree protection or anti-compaction measures are considered necessary.

4.5 **Potential Conflict 4: Location of utility runs within Root Protection Areas.**

Damage can be caused to roots during the installation or replacement of utilities runs.

Mitigation / Countermeasure: No new utility runs must be located within any of the retained trees root protection areas. Any works to existing utilities will be undertaken with regard for the retained tree cover and will be in accordance with NJUG (National Joint Utility Group) recommendations.

5 Pre-construction and Site Preparation Works

5.1 Refer to Appendix 2 for stage specific tasks.

5.2 Prior to any further site works commencing, the fencing needs to be erected according to the locations found on the Tree Protection Plan (Appendix 6). The fence should conform to the specification shown within Appendix 3. All weather notices should be attached to the fencing marked with the following: '*Construction Exclusion Zone - Keep Out'* (a notice is provided within Appendix 4).

5.3 At the beginning of the construction phase, the site manager will appoint a delegated site representative who shall be responsible for continued checking of the protective fencing to ensure it remains compliant with the exclusion zone.

6 Tree protection measures during construction

6.1 Refer to Appendix 2 for stage specific tasks.

6.2 All ground levels where trees are located should be maintained. Changes to soil levels adjacent to trees can severely affect the trees structural integrity and its ability to gain moisture and nutrients from the surrounding soil. Unavoidable level changes that may affect retained trees, and not already accounted for within this method statement, should be assessed by a qualified arboriculturalist so that any mitigation or special construction techniques can be considered.

6.3 Building material storage and operations that can contaminate soil, such as cement mixing, must be confined to areas outside the RPA's.

6.4 Fires should not be lit.

6.5 The trees should not be used to attach notices, cables or other services.

6.6 The installation of any underground services near or adjacent to trees on the site shall conform to the requirements of National Joint Utilities Group publication Volume 4 (November 2007).

7 Tree protection measures post-construction

7.1 Refer to Appendix 2 for stage specific tasks.

7.2 Only once all construction works have been completed can the protective fencing be removed.

Appendix 1: Tree Data

Key to tree survey headings:

- **Tag –** Tree number corresponding to plans & tags
- **Species –**Common name of each tree
- **DBH –** 'Diameter at breast height' in mm taken on stem at 1.5m.
- **Hgt –** Height in metres of each tree
- **Crown spread: North, South, East, West –** Crown spread in metres to x4 cardinal points from centre of stem
- **CH –** Crown clearance from ground to lowest branches
- **EstD** – Estimated dimensions
- **Age –** Age-class of tree: Y = Young, SM = Semi-mature, M = Mature, OM = Over-mature.
- **General observations –** details both Physiological and structural Condition
- **Est Con –** Estimated life expectancy / contribution to the landscape (in years): 0-10, 10-20, 20-40, 40+
- **Recommendations –** Any recommendations that, regardless of land use, require attention.
- **BS. Cat –** Retention category. **A**, **B**, **C**, or **U**. For retained trees **A** being of the highest quality, **C** being the lowest. Category **U** trees for removal regardless of design. Category A, B, & C are given sub-catagories1, 2, & 3 – details of which are shown in appendices.

Tree Survey Data

No.	Species	Age	DBH	Stems	Height	Crown Spread				CH	EstD	General Observations	EstCont	BS Cat	Recommendation
						N	S	E	W						
1	Sycamore	M	52	1	13	4	3	4	4	5	N		40+	B1	No work required
2	Sycamore	M	52	1	14	4	4	5	3	7	N		40+	B1	No work required
3	Sycamore	SM	60	2-5	11	3	3	4	3	3	Y	Offsite. Not on topographical plan - location estimated. Twin stems - single cohesive canopy & treated as single tree.	40+	B1	No work required

Appendix 2: Arboricultural Tasks Sequence Tables

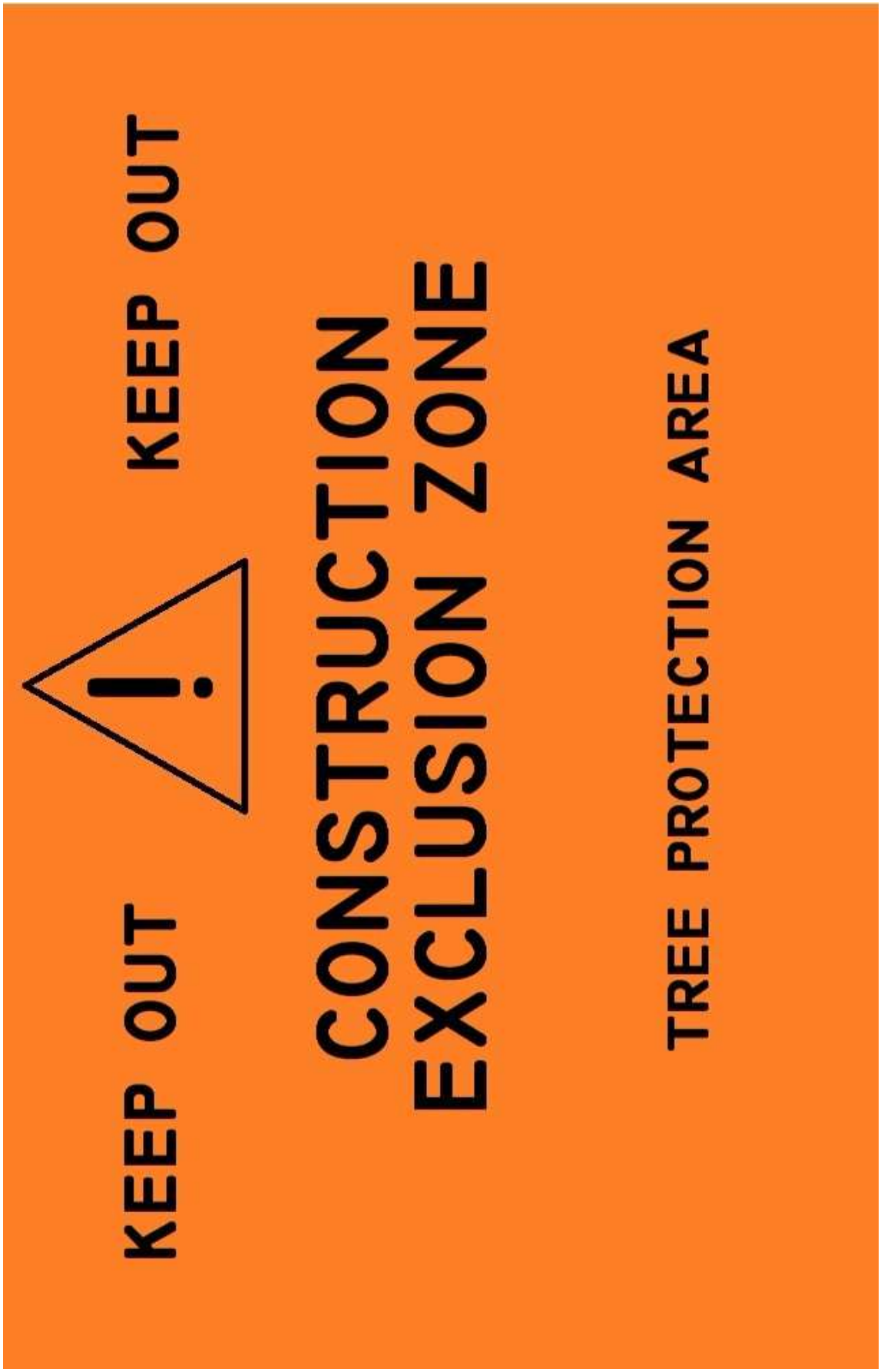
Tree or Group Number	Pre-Construction Stage	Construction Stage	Post Construction Stage
All trees.	Adhere to Section 5. Install protective fencing as per Appendices 3, & 6. Attach tree protection notice as per Appendix 4.	Adhere to specification within Section 6.	Adhere to specification within Section 7.

Appendix 3 : Protective Fencing Specification

Tree Protection Fence

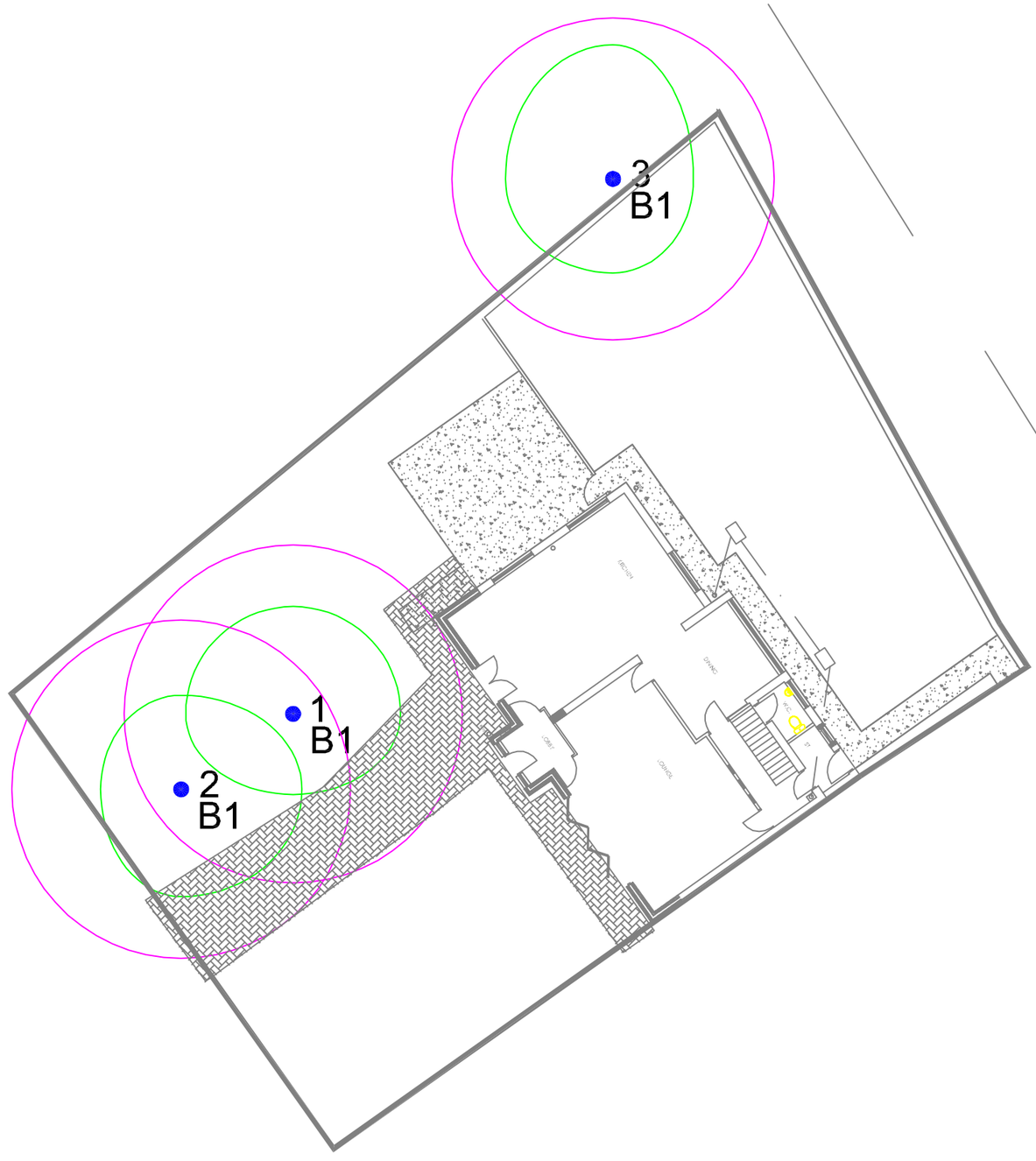


Appendix 4: Construction Exclusion Zone Notice



1:200

0 2 4 6 8 10 12 14 16 18 20 [m]



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Tree Position - BS5837 Category B

Tree Position - BS5837 Category C

Root Protection Area

1/G1 Tree/Group

A1/B1/ C1/U BS5837 Retention Category

APPENDIX 5

Drawing Title: Tree Constraints Plan

Project: 1 Cleadon Meadows

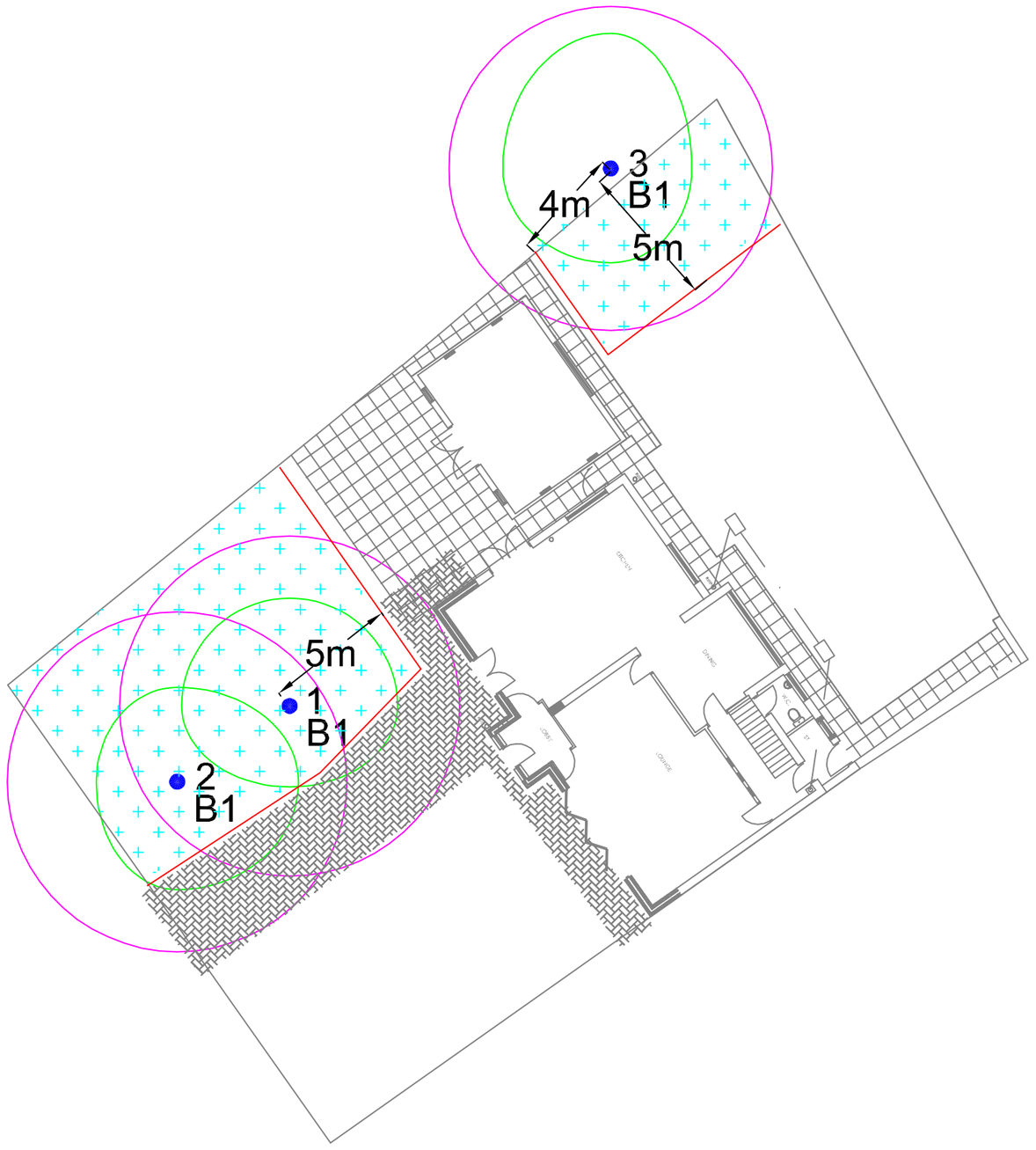
Drawing Number: ARB/AE/2487/TCP

Date: January 2024

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Tree Position - BS5837 Category B

Tree Position - BS5837 Category C

Root Protection Area

1/G1 Tree/Group

A1/B1/ C1/U BS5837 Retention Category

Tree Protection Fence

Construction Exclusion Zone

APPENDIX 6

Drawing Title: Tree Protection Plan

Project: 1 Cleadon Meadows

Drawing Number: ARB/AE/2487/TpP

Date: January 2024

Scale: 1:200 @ A3