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Location:
Westport Bess

Report Type:
Arboricultural Survey
Arboricultural Impact Assessment
Arboricultural Method Statement

Ref:
ARB/AE/3527

Date:
April 2025

Contents

Appendices

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 by Andrew Elliott on the 22nd October 2024.

1.3 **Scope of the report:**

- This report provides arboricultural information and advice in relation to the proposed construction and operation of a Battery Energy Storage System (BESS) development and its associated infrastructure.
- It should be used to guide the planning design and construction process in order to minimise potential damage to retained trees and hedges.
- Section 4 provides a summary of the potential impacts on the current tree population and outlines countermeasures to help minimise damage.
- Sections 5-7 provide a method statement that details all measures recommended for adequate tree protection including any special construction measures to be utilised.

1.4 It is possible that trees inspected within this survey may also be habitat for a variety of species. It is not within the remit of this report to investigate matters other than arboricultural issues.

2 Site Information

2.1 The site is currently in agricultural grazing use. Figure 1 shows the survey area:

Figure 1: Site.

2.2 Tree and hedgerow cover on the site is located around the periphery of the field with the majority of tree stock being on the boundary and off-site.

2.3 **Ancient Woodland:**

Off-site areas to the south of the site are shown on the Nature Scot Ancient Woodland Inventory as Type 2b woodland - *long established (of plantation origin)*. Following inspection of the trees and also consideration of plans and aerial photographs of the site between the 1940-50's, it is clear that these sections of land have been subject to clearance with only the easterly section of ground having been restocked as conifer plantation (Tree Group 2).

3 Tree Category Explanation

3.1 The criteria used for evaluating how suitable each tree is for retention within a development is that suggested within 5837:2012.

3.2 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 requires keeping proposed features and alterations to ground levels outside root protection areas and crown spreads so as to ensure that trees remains in an adequate condition post-development. Root protection areas and crown spreads are displayed upon the Tree Constraints Plan (Appendix 2).

3.2.2 **Category B** trees are those of moderate quality and value, and of a condition that they could 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 could and in some cases should be retained where possible, but where they form a constraint to design 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 Tree Category Explanation (cont)

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 trees and hedgerows around the site (see Appendix 6).

4.2 **Potential Conflict 1: Loss of trees and hedges to allow construction.**
No trees require removal. A small section of Hedgerow 2 will require removal to allow access.
Mitigation / Countermeasure: No mitigation or countermeasures can be undertaken to allow for the retention of this hedge sections given the design requirements. The arboricultural and visual impact of the proposals is considered to be minimal and will be limited to the immediate location with minimal visual impact on the wider landscape.

4.3 **Potential Conflict 2: Damage to retained 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 in accordance with BS5837, by the installation of appropriate protective fencing and maintaining the agreed construction exclusion zones as shown within Appendix 7.

4.4 **Potential Conflict 3: Damage to trees due to the installation of services.**
Damage can be caused to roots during the installation or replacement of utilities runs.
Mitigation / Countermeasure: No new service runs will be located within the retained tree RPA's. All proposed 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 Undertake hedgerow removal as detailed at Appendix 2.

5.3 Stumps: Where hedge stumps can remain in-situ they should be ground to below ground level. Where complete removal is necessary, roots will require severance or separation from any retained neighbouring hedgerow roots prior to extraction – this can be achieved by severing all of the subject stump root tissue in the top 0.5m of soil (this must only be done outside of the root protection areas of adjacent retained trees), following this stumps can be extracted carefully - monitoring for any deeper root connections starting to cause soil disturbance near retained plants - these roots can then also be severed if encountered.

5.4 Prior to any site works commencing, the fencing needs to be erected according to the locations found on the Tree Protection Plan (Appendix 7). The fence should conform to the specification and locations shown within Appendices 3 & 7.

5.5 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.

7.3 Post development landscaping should be kept to a minimum within the root protection areas of retained trees. No ground excavation or mechanised ground treatments / rotavation will be undertaken within the protected areas, with all landscaping being undertaken by hand or with hand operated machinery.

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	Beech	SM	40	1	5.5	4	3	4	4	0.5	N	Previously had crown removed at 4m.	40+	C1	No work required
2	Beech	M	80	1	7	4	5	4	3	2	N	Previously had crown removed at 4m. Multi-stemmed form with decay noted at 4m and failed branch.	40+	B1	No work required
3	Beech	SM	48	2-5	7	4	2	3	3	2	N	Co-dominant stems.	40+	B1	No work required
4	Beech	M	66	1	10	4	4	6	5	2	N	Ganoderma spp fungal fruiting bodies at base - decay causing organism.	20+	B1	Remove if target potential increases
5	Apple	M	26	1	3	2	0.5	2	1	1.5	N	Small suppresssd stem.	20+	C1	No work required
6	Ash	SM	30	1	5.5	2	3	3	3	0.5	N	Off-site. Decline in crown - suspected Ash Dieback.	10+	C1	No work required
7	Hawthorn	M	15	1	4	1	1	2	0.5	1	N	Not on topographical data - location estimated. Small tree on boundary. Upper crown dieback.	20+	C1	No work required
8	Hawthorn	M	30	1	5	2	2	3	1	1.5	N	Not on topographical data - location estimated. Small tree on boundary.	20+	C1	No work required
9	Ash	SM	38	1	6	3	5	4	3	0	N	Not on topographical data - location estimated. Extensive crown decline - suspected Ash Dieback.	10+	C1	Consider removal

No.	Species	Age	DBH	Stems	Height	Crown Spread				CH	EstD	General Observations	EstCont	BS Cat	Recommendation
						N	S	E	W						
10	Beech	M	80	1	15	6	6	7	6	5	N	Off-site.	40+	B1	No work required
11	Beech	M	70	1	13	4	6	7	5	2	N		40+	B1	No work required
12	Beech	SM	25	1	5	3	2	5	2	2	N	Suppressed form.	40+	B2	No work required
13	Beech	EM	41	1	6	3	3	2	3	1.5	N	Suppressed form. Stem decay.	40+	B2	No work required
14	Beech	EM	48	1	6	3	3	2	2	1.5	N	Suppressed form. Stem decay.	40+	B2	No work required
15	Beech	EM	48	1	6	3	3	4	2	1.5	N	Suppressed form. Stem decay.	40+	B2	No work required
16	Beech	EM	58	1	8	4	5	4	5	2	N	Upper stem decay.	40+	B1	No work required
17	Beech	SM	17	1	5	2	0.5	2	1	3	N	Suppressed form. Stem decay.	20+	C1	No work required
18	Beech	EM	54	1	9	5	5	5	4	2	N	Upper stem decay.	40+	B1	No work required
19	Beech	EM	60	2-5	12	5	5	5	4	2	N	Upper crown decline. Co-dominant stems.	40+	B1	No work required
20	Beech	EM	50	1	6	3	4	3	3	2	N	Suppressed form.	40+	B2	No work required
21	Beech	EM	50	2-5	9	5	4	3	3	2	N	Co-dominant stems.	40+	B1	No work required
22	Beech	EM	52	1	9	5	5	4	3	2	N		40+	B1	No work required

No.	Species	Age	DBH	Stems	Height	Crown Spread				CH	EstD	General Observations	EstCont	BS Cat	Recommendation
						N	S	E	W						
23	Beech	EM	55	1	9	5	5	5	3	2	N		40+	B1	No work required
24	Ash	SM	25	1	7	3	3	3	2	2	N	Stem decay. Crown decline - suspected Ash Dieback.	10+	C1	No work required
25	Hawthorn	SM	15	1	4	2	2	2	2	0.5	N	Small multi-stemmed bush.	40+	C1	No work required
26	Hawthorn	SM	15	1	4	2	2	2	2	0.5	N	Small multi-stemmed bush.	40+	C1	No work required
27	Hawthorn	SM	15	1	4	2	2	2	2	0.5	N	Small multi-stemmed bush.	40+	C1	No work required
28	Ash	SM	24	1	7	3	3	4	3	2	N		40+	B2	No work required
29	Apple	EM	36	2-5	7	3	5	4	4	1.5	N		40+	B1	No work required
30	Wych Elm	EM	33	1	7	0.5	6	4	3	1	N		40+	B1	No work required
31	Ash	SM	30	1	6	4	3	3	5	2	N	Crown decline - suspected Ash Dieback.	10+	C1	No work required
32	Beech	EM	60	1	11	3	4	5	4	1.5	N	Co-dominant stems.	40+	B1	No work required
33	Beech	EM	55	1	9	3	5	5	4	2	N	Co-dominant stems. Main stem decline.	40+	B2	No work required
34	Beech	EM	33	1	9	3	3	3	3	2	N		40+	B1	No work required
35	Beech	EM	33	1	8.5	3	3	3	3	2	N		40+	B1	No work required

No.	Species	Age	DBH	Stems	Height	Crown Spread				CH	EstD	General Observations	EstCont	BS Cat	Recommendation
						N	S	E	W						
36	Beech	EM	35	2-5	8	3	3	4	3	2	N	Co-dominant stems.	40+	B1	No work required
37	Beech	EM	35	1	7	3	3	4	2	2	N		40+	B1	No work required
38	Beech	EM	35	1	6	3	3	5	4	2	N		40+	B1	No work required
39	Beech	EM	40	1	7	3	5	3	4	2	N	Upper crown dieback.	40+	B2	No work required
40	Beech	EM	63	1	7	4	5	5	3	2	N	Upper crown dieback.	40+	B1	No work required
41	Beech	EM	40	2-5	6	4	4	4	2	2	N	Multi-stemmed.	40+	B2	No work required
42	Beech	EM	50	1	6	3	3	3	4	2	N	Crown decline.	40+	B2	No work required
43	Beech	EM	58	1	7	4	4	2	4	3	N	Crown decline.	20+	B2	No work required
44	Beech	EM	55	2-5	6	3	1	2	1	3	N	Multi-stemmed. Extensive crown decline - 90% dead.	10+	C1	Remove if target potential increases
45	Beech	SM	60	5+	12	5	5	5	5	0.5	Y	Not on topographical data - location estimated. Off-site. Multi-stemmed.	40+	B1	No work required

Group Data

Group Number	Dominant Species	Lesser Species	DBH	Average Height	Age	Average Spread	Condition/Comments	Recommendations	EstCont	BS Cat
1	Goat Willow		15	7	SM	3	Not on topographical data - location estimated. Small dense group of multi-stemmed Willow on verge.	No work required	10+	C2
2	Scots Pine Larch spp	Ash	50	18	SM	4	Off-site. Conifer plantation 2-4m spacings. Sparse natural herb or shrub layer evident. Overhang into site 2-3m with occasional increase to 4-5 by Ash that have self-seeded on fenceline - Ash Dieback noted.	No work required	20+	B2
3	Hawthorn Apple Goat Willow	Beech	15	4	M	2	Sparse linear group. Mostly scrubby multi-stemmed Thorn but with occasional Crab Apple and smaller suppressed Beech. Individually of low quality.	No work required	20+	B2
4	Beech	Birch spp Ash	30	10	SM	3	Linear band of trees. Planted at 2-4m spacings. Some minor deline - damp ground and drainage issues.	No work required	40+	B2

Hedgerow Data

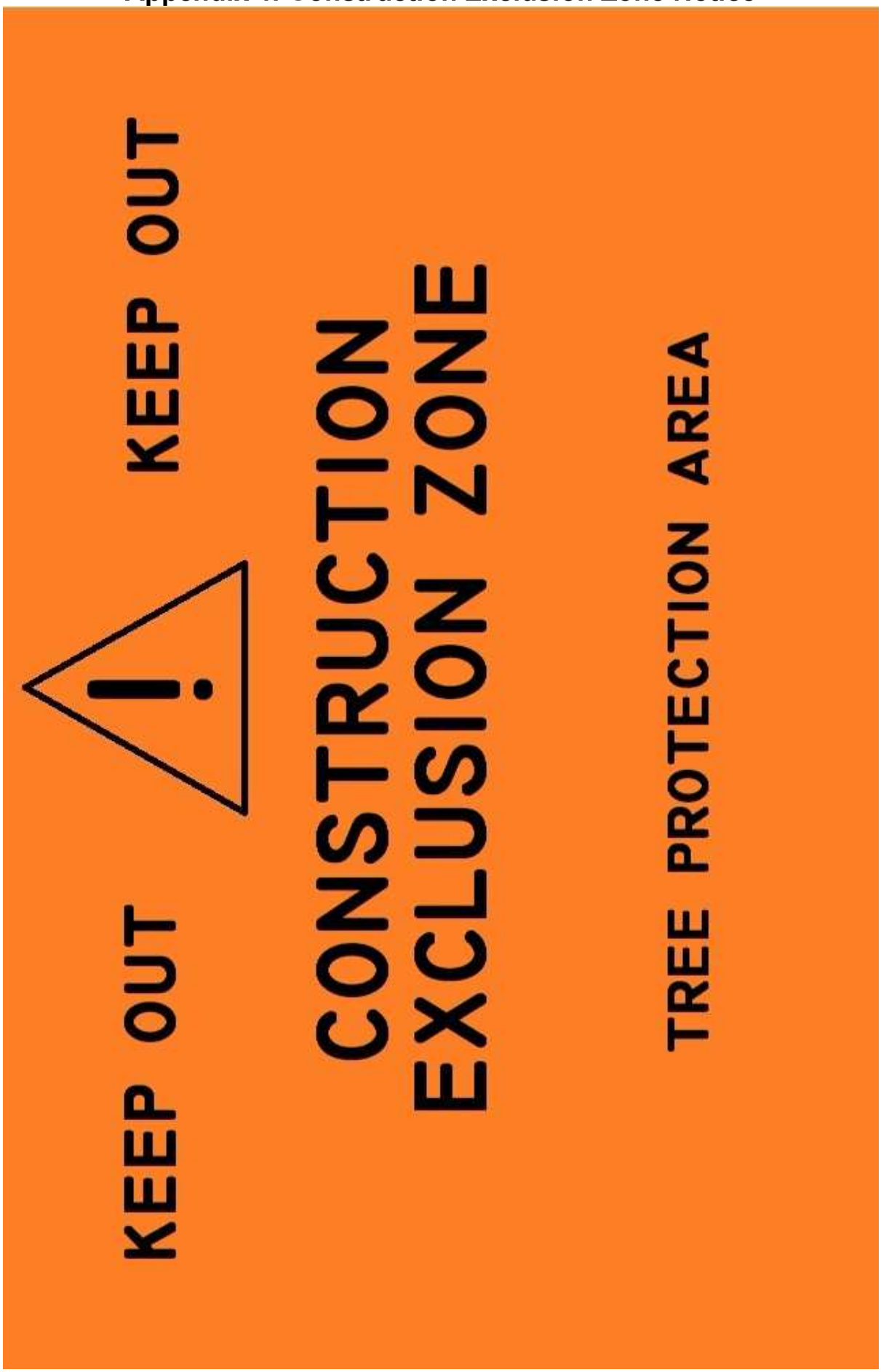
Hedge Number	Dominant Species	Lesser Species	Age	Average Height	Average Depth	Historically Managed Height	Historically Managed Depth	Condition/Comments	Recommendations	EstCont	BS Cat
1	Hawthorn		M	2	0.5	As current height	As current depth	Well maintained field boundary. Some large gaps at southern end but generally cohesive.	No work required	40+	B2
2	Hawthorn Beech Blackthorn	Apple	M	2	0.5	As current height	As current depth	Well maintained field boundary. Some large gaps at southern end but generally cohesive.	Remove short section for access point	40+	B2

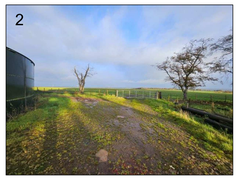
Appendix 2: Arboricultural Tasks Sequence Tables

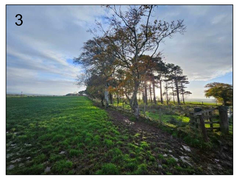
Tree or Group Number	Pre-Construction Stage	Construction Stage	Post Construction Stage
Section of Hedgerow 2. (highlighted in red at Appendix 6).	Remove.		
All trees	Adhere to Section 5. Install protective fencing as per Appendices 3 & 7. Attach tree protection notice as per Appendix 4.	Adhere to specification within Section 6.	Adhere to specification within Section 7.

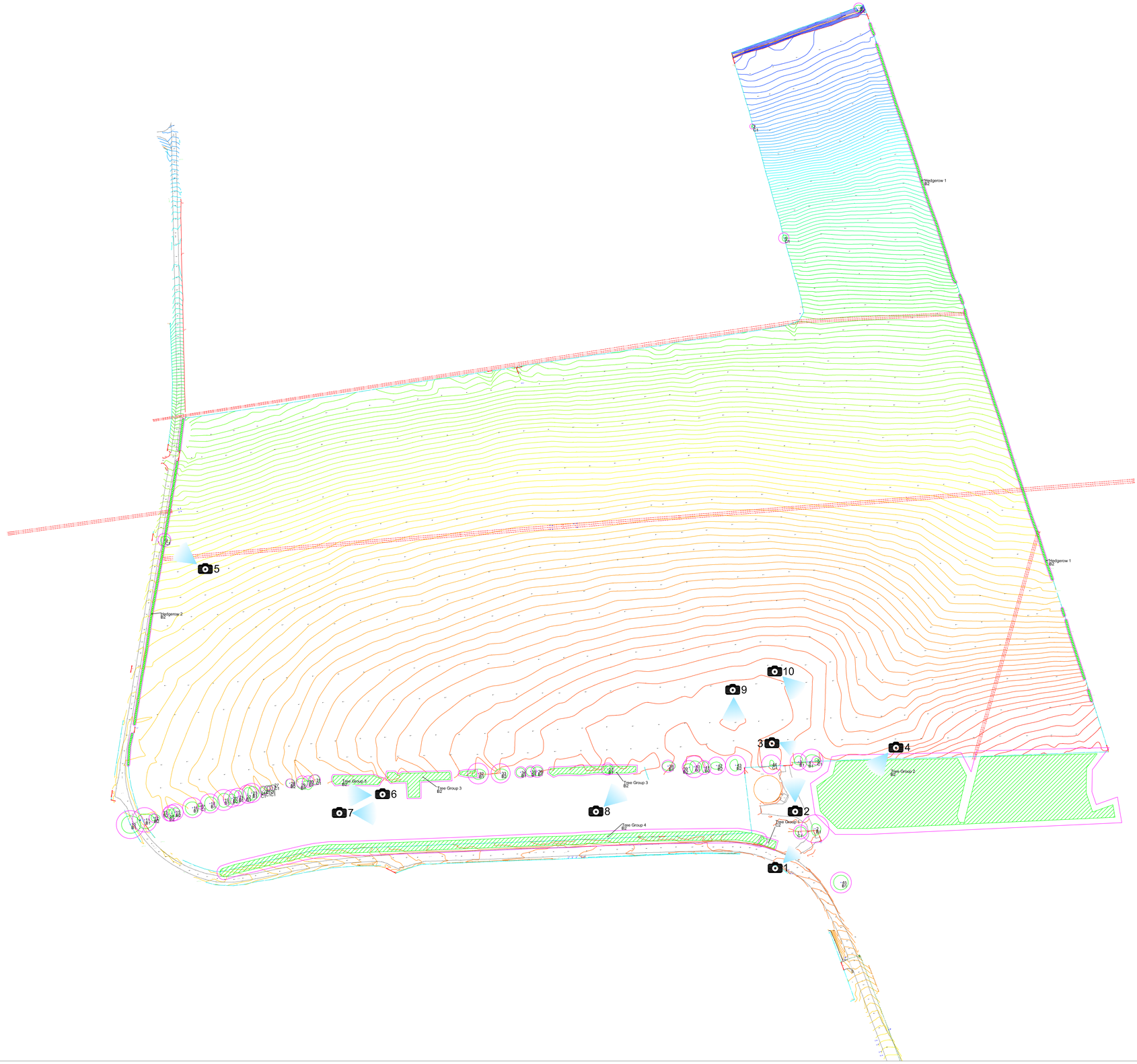
Appendix 3 : Protective Fencing Specification

Appendix 4: Construction Exclusion Zone Notice









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Tree Position - BS5837 Category A

Tree Position - BS5837 Category B

Tree Position - BS5837 Category C

Root Protection Area - to remain free from disturbance (merged where over-lapping)

Group of Trees

Hedgerow

1/G1/H1 Tree/Group/Hedgerow Number

A1/B1/ C1/U BS5837 Retention Category

1 Photo Number, Position and Aspect

1:1000

0 10 20 30 40 50 60 70 80 90 100 [m]

APPENDIX 5

Drawing Title: Tree Constraints Plan

Project: Westport BESS

Drawing Number: ARB/AE/3527/TCP

Date: October 2024

Scale: 1:1000 @ A0

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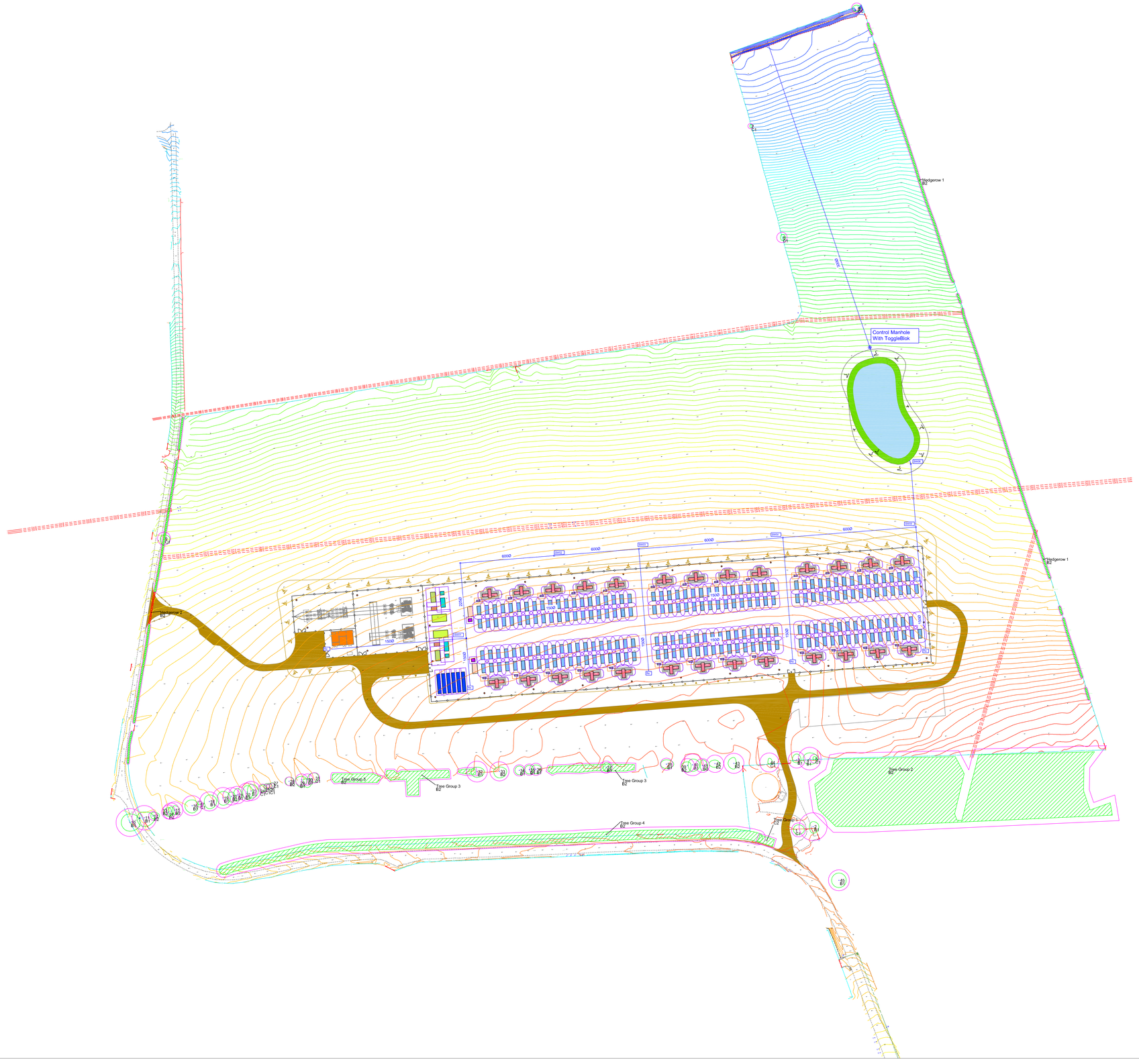

Tree Position - BS5837 Category A

Tree Position - BS5837 Category B

Tree Position - BS5837 Category C

Root Protection Area - to remain free from disturbance (merged where over-lapping)

Group of Trees

Hedgerow

1/G1/H1 Tree/Group/Hedgerow Number

A1/B1/ C1/U BS5837 Retention Category

1:1000

0 10 20 30 40 50 60 70 80 90 100 [m]

Hedgerow - section to be removed

APPENDIX 6

Drawing Title: Tree Impact Plan

Project: Westport BESS

Drawing Number: ARB/AE/3527/TiP

Date: March 2025

Scale: 1:1000 @ A0

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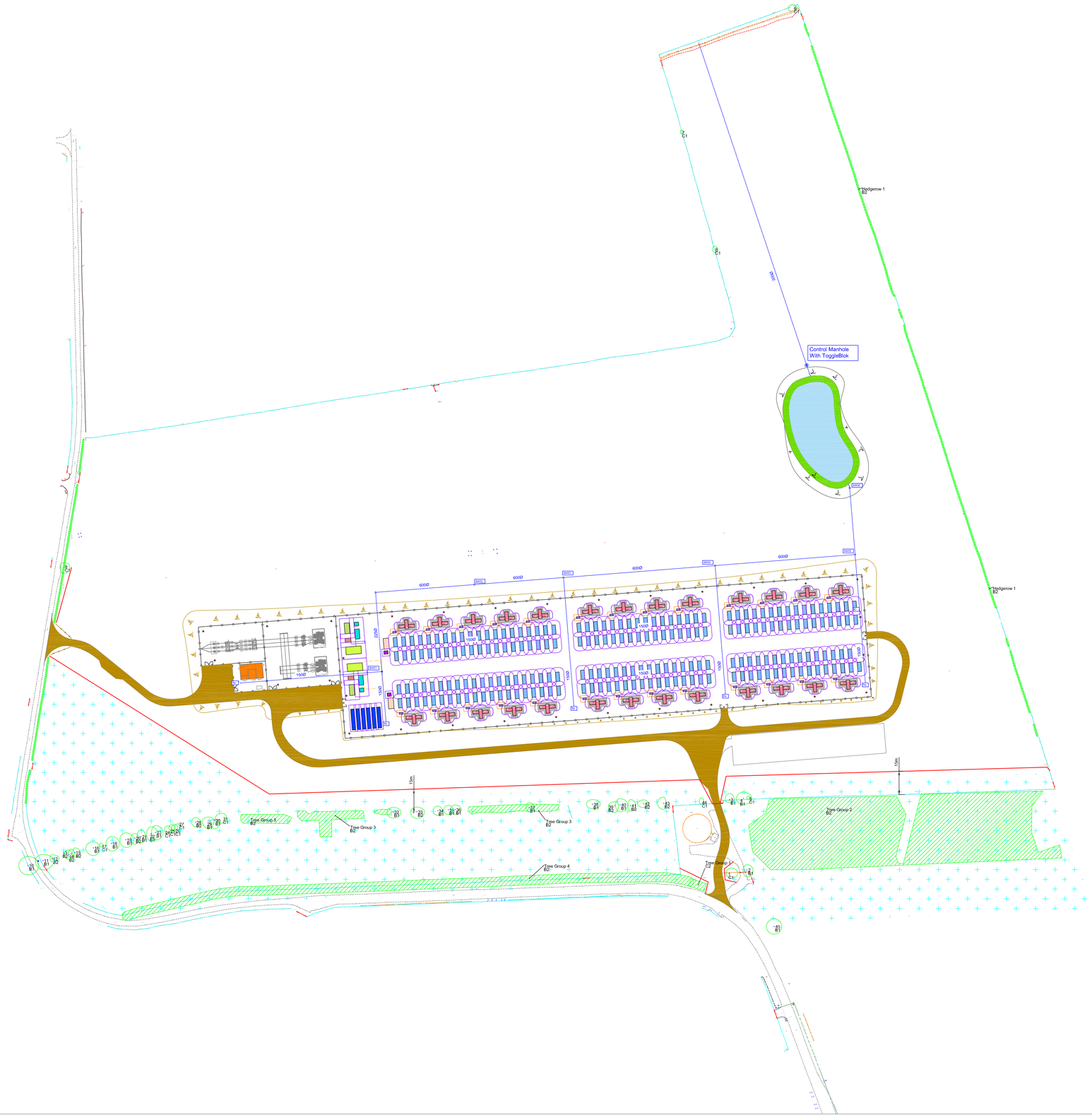

Tree Position - BS5837 Category A

Tree Position - BS5837 Category B

Tree Position - BS5837 Category C

Root Protection Area - to remain free from disturbance (merged where over-lapping)

Group of Trees

Hedgerow

1/G1/H1 Tree/Group/Hedgerow Number

A1/B1/
C1/U BS5837 Retention Category

1:1000

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Temporary Protection Fence

Construction Exclusion Zone

APPENDIX 7

Drawing Title: Tree Protection Plan

Project: Westport BESS

Drawing Number: ARB/AE/3527/TpP

Date: April 2025

Scale: 1:1000 @ A0