DUNBALLOCH FARM, BEAULY: BATTERY ENERGY STORAGE SYSTEM (BESS)
TREE MANAGEMENT FINAL REPORT
CLIENT: FIELD BEAULY LTD
12th DECEMBER 2024

Contents **Page**

1. **INTRODUCTION** 3

2. **SITE DESCRIPTION** 4

2.1 **Location** 4
2.2 **Description** 4
2.3 **Site Constraints** 4

3. **SURVEY METHODOLOGY** 4

4. **SURVEY RESULTS** 5

5. **ARBORICULTURAL IMPACT ASSESSMENT** 5

5.1 **Existing Access Track** 6
5.2 **Temporary Access Track for Construction** 6
5.3 **Permanent Access Track** 6
5.4 **BESS Footprint** 6

6. **PRELIMINARY ARBORICULTURAL METHOD STATEMENT** 6

6.1 **Mitigation** 6
6.2 **Construction of Protective Fencing** 6
6.3 **Construction Exclusion Zones (CEZ)** 8
6.4 **Special Construction Techniques** 8
6.5 **Installation of Underground Utilities** 9
6.6 **Ground Protection During Works Within CEZs** 9
6.7 **New Surfacing Within Root Protection Areas** 9
6.8 **Backfilling** 9

7. **ARBORICULTURAL SUPERVISION** 9

Appendices

Appendix I Schedule of Trees
Appendix II Tree Constraints Plan
Appendix III Tree Protection Plan

DUNBALLOCH FARM, BEAULY: BATTERY ENERGY STORAGE SYSTEM (BESS)
TREE MANAGEMENT FINAL REPORT
12th DECEMBER 2024

1. INTRODUCTION

The proposed development comprises a grid-connected Battery Energy Storage System (BESS) of up to 100 MW with associated infrastructure, earthworks, drainage, accesses and ancillary works (including landscaping and biodiversity enhancement).

The majority of the site is located on a mixed farm estate close by the settlement of Beauly. The farm comprises mixed grazing and woodland.

This survey has been undertaken by Dr Ben Lennon of Bowlts Chartered Surveyors on behalf of Field Beauly Ltd.

Bowlts Chartered Surveyors have been instructed to inspect significant trees that could be affected by proposed development and to prepare the following information to support the planning application:-

- a schedule of the relevant trees to include basic data and a condition assessment;
- an appraisal of the impact of the proposal on trees;
- a preliminary arboricultural method statement setting out standard protective measures and management for trees to be retained.

This report provides an analysis of the impact of the development proposal on trees and local amenity with additional guidance on appropriate management and protective measures. Its primary purpose is for the planning authority to review the tree information and consider its relative merits against the planning proposal. For the purposes of clarity, cable options have not been taken into consideration and will be considered at a later date.

The survey and resulting report have been produced in accordance with the best practice guidelines set out in BS 5837 (2012) Trees In Relation To Construction Sites: Recommendations.

2./

2. SITE DESCRIPTION

2.1 Location

The survey site is located to the south-east of Beauly, Inverness-shire.

Centroid Grid ref:	NH 523 445
Postcode:	IV4 7AY
What 3 Words:	///tissue.weeps.whirlwind

2.2 Description

The proposed development comprises a grid-connected Battery Energy Storage System (BESS) of up to 100 MW with associated infrastructure, earthworks, drainage, accesses and ancillary works (including landscaping and biodiversity enhancement). The project will import and export energy to and from the transmission network via the nearby Beauly substation. The project will include battery storage containers, transformers, substation, access tracks, grid connection powerlines, fencing and other associated infrastructure.

The majority of the site is located across mixed farm estates close by the settlement of Beauly. The farm comprises mixed grazing and woodland. The woodlands are largely broadleaved and mixed in character. The landscape character is defined by agricultural settlements and the treescape is rich in policy plantations, avenues and groups planting of trees suggestive of designed landscapes in the 19th Century. This has resulted in a landscape rich in older trees and woodlands.

2.3 Site Constraints

The development area is not constrained by any statutory designations. On a record search, there is shown to be no statutory designations. There are several features of potential heritage interest that are shown on the Canmore dataset. These do not appear to fall within the areas shown as part of the development area, although the fine detail of the cable routes may be affected and should be checked against records.

3. SURVEY METHODOLOGY

The site survey was undertaken on 29th November 2023 using information supplied by the client. Further information was supplied by the client regarding the details of infrastructure location.

In order to assess the impact of the proposed development, information was collected against the criteria below.

Once/

Once the trees were positioned, the tree data required in the BS5837:2012 process was collected for each tree:-

Tree no	As per plan
Species	Common name/ Botanical Name
Height	Metres
Diameter at 1 .5m from	cm
Crown spread (north)	Metres
Crown spread (east)	Metres
Crown spread (south)	Metres
Crown spread (west)	Metres
Age class	Young/Semi mature/Mature/Over mature/Veteran
Physical condition	Grading of physical condition assessment of roots through to foliage
Structural condition	Grading of structure, identifying potential weaknesses
Preliminary	Arboricultural recommendations
Category	A = High, B = Medium, C = Low, U = Unsuitable
Criteria	1 = Arboricultural value, 2 = Landscape value, 3 = Cultural/conservation value
Comments	Additional relevant information

Once the tree survey was completed in the field, the data was verified and downloaded into ArcMap. Analysis was undertaken to identify which trees were affected by the proposed development.

4. SURVEY RESULTS

The site was surveyed in relation to the proposed development. Trees were divided into categories depending on their level of cultural and ecological importance with A regarded as the most important and C as the least important (U as unsuitable). Definitions may be found in Appendix II.

Full and detailed tree survey data can be found in Appendix I.

5. ARBORICULTURAL IMPACT ASSESSMENT

The impacts on trees can be considered in several discrete sections:-

- existing access track;
- temporary Access track for construction;
- permanent access track;
- BESS footprint.

5.1/

5.1 **Existing Access Track**

It is understood that this track will not be used for construction purposes but following construction will be used for ongoing maintenance and access. This track seems to be well constructed with a sufficiently wide footprint to allow for maintenance and service traffic. Providing there is no aspiration to broaden the footprint, there is likely to be no impact on surrounding trees. Some branches may need to be lopped to facilitate access. Providing this is carried out with the correct tools, there is unlikely to be any long-term negative impact on any surrounding trees.

5.2 **Temporary Access Track for Construction**

This runs from a point on the A862 chose for its improved visibility to provide temporary access for construction traffic to the site. The splay enters between a row of young roadside trees; 601 and 636. 601 is a young goat willow, 636 is a row of young alders. While all native species, none are deemed to be of high value or importance. It is not clear whether any of these will need to be removed to improve visibility within the spays of the new track. These are low value trees and if required, these can be removed. Compensatory trees have been allowed for in the landscaping plans.

At the southern end of this track are four trees deemed to be of high landscape and ecological value. These are 443, 444, 605 and 612. These trees should be retained and CEZs established around the Root Protection Zones using specified fencing (see below). Root Protection Zone radii are also provided in Appendix 1 for the avoidance of doubt. These are to be measured from the stem of the tree. It is understood that the line of the track has been configured slightly to allow for this.

5.3 **Permanent access track**

The permanent access track runs form the point where the existing track and the temporary access track join. This is to be a permanent access route once construction is completed.

To the east of this proposed track lie woodlands W5 and W6. These are old estate woods that include Long Established Woodlands of Plantation Origin (LEPO) as entered on the Ancient Woodland Inventory. These lie behind a high estate wall which the limbs overhang in places. While not strictly Ancient Woodland, due consideration should be provided to this ecological resource. The trees behind the wall are mature and it is likely that roots extend into the field where the track is to be constructed. It is proposed therefore that a 6m Construction Exclusion Zone be created as measured from the wall. This line should be fenced with the specification below to established a CEZ.

5.4/

5.4 **BESS Footprint**

This lies in the southern corner of the field adjacent to W4 and W5. As above a CEZ should be established between the woodland edge and the construction area. 6m from the wall in the case of W5 and 8m from the boles of the trees in W4.

Table 1 - Summary of Trees That May be Affected

	Category A	Category B	Category C	Category U
Tree to be removed	0	0	0	0*
Trees to be retained	7	5	7	1
Total	7	5	7	1

*possibly group of trees No. 636 (row of five young alder) can be removed as required to facilitate temporary road access.

6. **PRELIMINARY ARBORICULTURAL METHOD STATEMENT**

This section sets out management and protection details that must be implemented to secure successful tree retention.

It is possible that some of the trees on the access may need to be cut back to facilitate construction traffic access. If this is the case, they may be cut back by 1.0m-1.5m to facilitate access. If this is carried out, the cuts should be carried out cleanly with a sharp tool, not with a flail.

6.1 **Mitigation**

No mitigation is required at this point.

6.2/

6.2 Construction of Protective Fencing

Construction Exclusion Zone have been identified in the Tree Protection Plan. On this occasion high visibility netting is deemed sufficient to demarcate the Construction Exclusion Zones. The netting should be at least 1000mm in height, high visibility, securely fastened and upright.

The use of any alternative method of fencing should only be allowed following prior approval from the site ACoW or the Local Planning Authority.

The fencing will remain in place until completion of the development and then only removed with the consent of the local planning authority to permit completion of the scheme.

Other than works detailed within a method statement or approved in writing by the local planning authority, no works including storage or dumping of materials shall take place within the Construction Exclusion Zones (CEZs) as defined by the protective fencing.

6.3 Construction Exclusion Zones (CEZs)

No works access should be allowed into the CEZs (Construction Exclusion Zones) during the development phase. No storage of any building materials or any other materials should be allowed within the CEZs. Once the exclusion zones have been protected by barriers and/or ground protection, construction work can commence. All weather notices should be erected on the barrier with words such as: "Construction Exclusion Zone — Keep Out".

In addition, the following should be addressed or avoided:-

- Care should be taken when planning site operations to ensure that wide or tall loads or plant with booms, jibs and counterweights can operate without coming into contact with retained trees. Such contact can result in serious damage to them and might make their safe retention impossible. Consequently, any transit or traverse of plant in close proximity to trees should be conducted under the supervision of a banksman to ensure that adequate clearance from trees is maintained at all times. In some circumstances it may be impossible to maintain adequate clearance thus necessitating access facilitation pruning. This is to be agreed prior to any work being carried out.

  Material/

- Material which will contaminate the soil, e.g. concrete mixings, diesel oil and vehicle washings, should not be discharged within 10m of the tree stem.
- Fires should not be lit in a position where their flames can extend to within 5m of foliage, branches of trunk. This will depend on the size of the fire and the wind direction.
- Notice boards, telephone cables or other services should not be attached to any part of the trees.

It is essential that allowance should be made for the slope of the ground so that damaging materials such as concrete washings, mortar or diesel oil cannot run towards trees.

6.4 Special Construction Techniques

No special construction techniques are proposed for this operation.

6.5 Installation of Underground Utilities

None of these affect the surveyed trees other than those mentioned above.

6.6 Ground Protection During Works Within CEZs

Not applicable.

6.7 New Surfacing Within Root Protection Areas

No new surfacing is proposed during this operation.

6.8 Backfilling (if applicable)

Not applicable.

7.0/

7. ARBORICULTURAL SUPERVISION

During the construction phase it is recommended that an appropriately experienced arboricultural consultant should be appointed as Arboricultural Clerk of Works (ACoW) to oversee and record works on site to ensure compliance with the Tree Protection Plan. This would likely constitute an initial visit once the site has been laid out and protective fencing in place, and at least once more during the construction phase.

Any deviation from the agreed prescribed method statement or the occurrence of any unforeseen damage to the trees must be immediately reported to the sites ACoW. All works around the affected area on site must be halted immediately. The ACoW will make a site visit to assess the extent of the damage or deviation from the prescribed method statement and any resulting works required.

Plan prepared by Dr B Lennon FIC For., MRICS, M.A.
Date: 12th December 2024

BL/NH 4100a
12th December 2024

APPENDIX I

SCHEDULE OF TREES

TREE SURVEY RESULTS

SITE: Dunballoch Farm, Beauly
CLIENT: FIELD BEAULY LTD
DATE OF SURVEY: 23/11/2023

No.	Name	Botanical Name	Dia (cm)	TREE HEIGHT (m)	COMMENT	Crown spread				Category	AGE	STEM No.2	DIA STEM No.3	CONDITION	RECOMMENDATION	RPZ Dia (m)
						N	S	E	W							
440	Scots pine	*Pinus sylvestris*	91	13	Next to road. Mature	**3**	**3**	**3**	3	**A**	M			Good	Retain	10.9
441	Oak	*Quercus robur*	68	10	Multi-stem	**5**	**4**	**4**	5	**B**	M	32		Good	Retain	8.2
442	Oak	*Quercus robur*	98	11	Next to road. Mature	**4**	**4**	**4**	4	**A**	M			Good	Retain	11.8
443	Oak	*Quercus robur*	70	10	Multi-stem	7	7	7	7	**A**	M	95		Good	Retain	8.4
444	Oak	*Quercus robur*	84	9	Next to road. Mature	**3**	**5**	**5**	5	**B**	M			Good	Retain	10.1
601	Goat Willow	*Salix caprea*	14	4	Row of goat willow x 5	2	2	2	2	**C**	Y	21		Good	Retain	1.7
602	Oak	*Quercus robur*	120	20	High value specimen	6	6	6	6	**A**	M			Good	Retain	14.4
603	Oak	*Quercus robur*	93	19	good oak	6	6	6	6	**A**	M			Good	Retain	14.4
604	Wild Cherry	*Prunus avium*	25	4	Young. Poor form	2	2	2	4	**C**	Y			Poor	Retain	3.0
605	Oak	*Quercus robur*	72	7	Next to road. Mature	2	4	4	5	**B**	M			Good	Retain	8.6
608	Oak	*Quercus robur*	102	18	High value specimen	5	5	5	5	**A**	M			Good	Retain	12.2
609	Birch	*Betula pendula*	10	4	Row of birch x 5	1	1	1	1	**C**	SM	20		Good	Retain	1.2
610	Wild Cherry	*Prunus avium*	12	3	Young. Poor form	1	1	1	1	**C**	Y			Poor	Retain	1.4
611	Wild Cherry	*Prunus avium*	19	3	Young. Poor form	1	1	1	1	**C**	Y			Poor	Retain	2.3
612	Oak	*Quercus robur*	70	7	Next to road. Mature	5	5	5	4	**B**	M			Good	Retain	8.4
615	Scots pine	*Pinus sylvestris*	98	3	dead	1	1	1	1	**U**	D			DEAD	Retain	11.8
616	Oak	*Quercus robur*	94	14	Pollard	4	2	2	5	**A**	M			Good	Retain	11.3
620	Wild Cherry	*Prunus avium*	16	4	Young. Poor form	1	1	1	1	**C**	Y	18		Poor	Retain	1.9
621	Oak	*Quercus robur*	72	4	Pollard-overshadowed	3	3	3	3	**B**	SM			Poor	Retain	8.6
636	Alder	*Alnus glutinosa*	21	4	Row of alder x 5	2	2	2	2	**C**	Y			Good	Retain. But can be removed to facilitate splay on access road.	
Woodland area/ groups																

No.	NVC/ Woodland type	Status (ASNW/LEPO, etc)	Approx. Area	Av. Ht (m)	COMMENT	Category	AGE	CONDITION	RECOMMENDATION	RPZ radius (m) from edfge
W3	Alder/ Mixed broadleaves	NA			Edge of park	A	M	Good	Retain	6
W4	Mixed broadleaves	NA			Mature riverside trees	A	M	Good	Retain	8
W5	Mixed broadleaves/ Mixed conifers	*Partially LEPO, replanted estate woodlands*			Mature with high estate wall	A	M	Good	Retain	6
W6	Birch/ Mixed broadleaves	*Partially LEPO, replanted estate woodlands*			Next to powerline back to the road. Could be cut back.	A	M	Good	Retain	6
W7	Ash/ alder wood	*NA*			Coppice ash wood. Bankside. One old pollard marked individually	B	SM	Good	Younger as can be cut to coppice. One very high value tree to be avaoided.	6
W8	Oak/Scots pine wood	*Na*			Old plantation	A	M	Good	Retain	6
W9	Mixed broadlaves	*NA*			Old policy woodland. Lots of mature specimen trees	A	M	Good	Retain	6
W10	Oak	*Na*			High value roadside Avenue- 200 year old oaks	A	M	Good	Retain	6

DIA:	Tree diameter in Cm at 1.5m from ground level
TOP HEIGHT:	Height estimated using a Suunto clinometer and rounded to the nearest metre
CROWN SPREAD	Measured (to bark at 1.5m) to the four compass points indicated
CATEGORY:	Retention category see below:
	A - Trees of high quality and value in such condition as to be able to make a substantial contribution for a minimum of 40 years
	B - Trees where retention is desirable - moderate category
	C - Trees of low quality and value currently in adequate condition to remain until new planting could be established and expected to remain for a minimum of 10 years
	U - Trees in such condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural management
	1 - Mainly arboricultural qualities
	2 - Mainly landscape qualities
	3 - Mainly cultural values, including conservation
ASSESSMENT	Tree removal or retention decision following condition survey. Tree removal in red indicates tree to be removed due to both silvicultural qualities and proposed development
AGE:	Age class of each tree: OM- Over mature M- Mature, MA- Middle aged, SM - Semi mature, Y - Young
STEM NO:	Number of stems
RPZ Dia (m)	Root Protection Zone expresses as concentric circle in radius (in metres). Based on x12 of stem diameter.

APPENDIX II

TREE CONSTRAINTS PLAN

N

601
636
609
621
608
620
615
616
604
610
611
602
442
440
441
443
444
612
605

W3
W6
W4
W5

Legend

Layer

- Red Line Boundary
- BESS Footprint
- Service access
- Permanent Access
- Temporary Construction Access
- Attenuation pond

Category

- A
- B
- C

Category

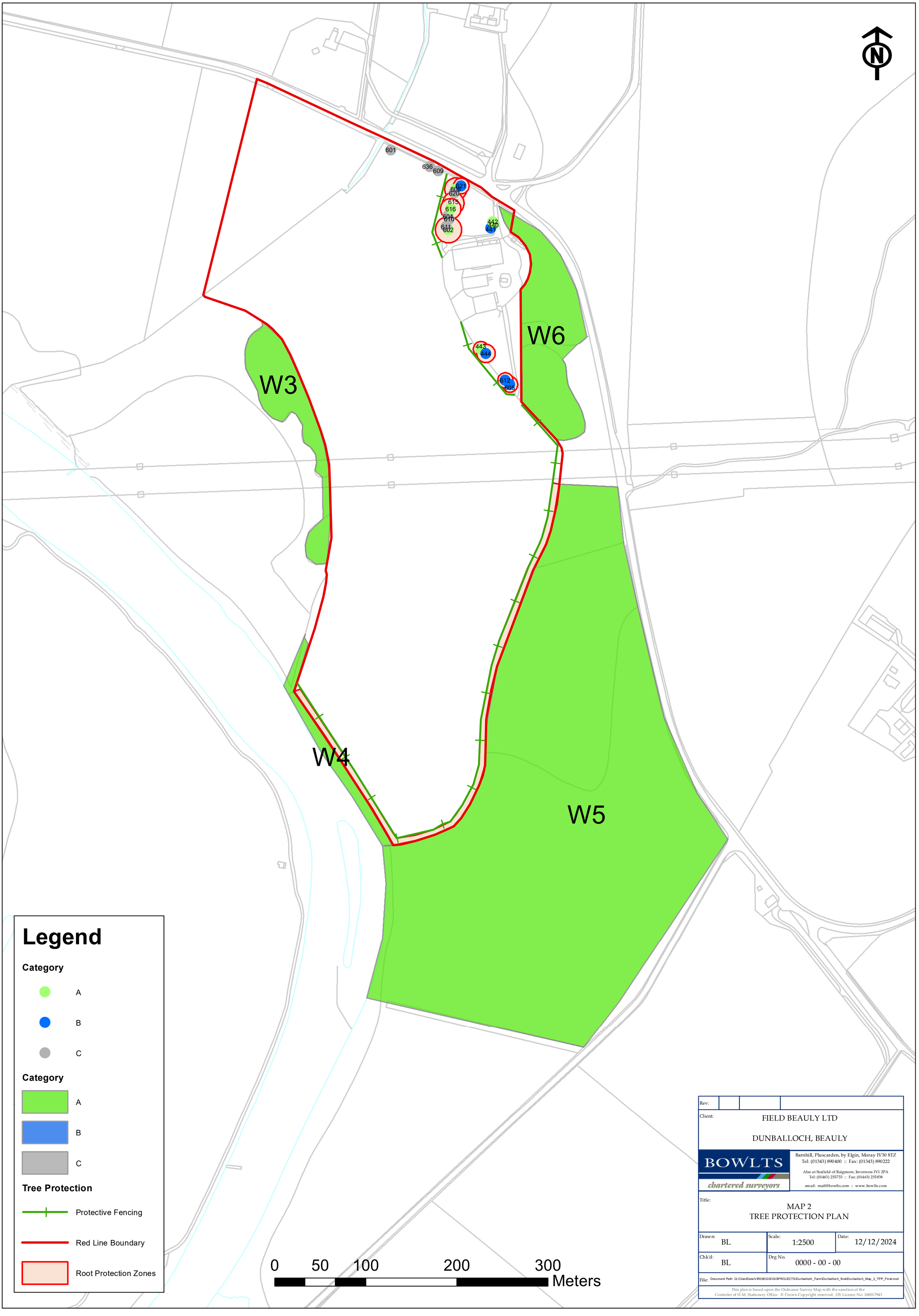
- A
- B
- C

0 50 100 200 300 Meters

Rev:			
Client:	FIELD BEAULY LTD DUNBALLOCH, BEAULY		
BOWLTS chartered surveyors	Barnhill, Pluscarden, by Elgin, Moray IV30 8TZ Tel: (01343) 890400 :: Fax: (01343) 890222 Also at Seafield of Raigmore, Inverness IV1 2PA Tel: (01463) 235753 :: Fax: (01463) 235838 email: mail@bowlts.com :: www.bowlts.com		
Title:	MAP 1 TREE CONSTRAINTS PLAN		
Drawn: BL	Scale: 1:2500	Date: 06/12/2024	
Chk'd: BL	Drg No. 0000 - 00 - 00		
File: Document Path: Q:\ClientData\VIR090\GIS\GISPROJECTS\Dunballoch_Farm\Dunballoch_final\Dunballoch_Map_1_TCP_Final.mxd			

APPENDIX III

TREE PROTECTION PLAN



Rev:

Client: FIELD BEAULY LTD

DUNBALLOCH, BEAULY

BOWLTS chartered surveyors
Barnhill, Pluscarden, by Elgin, Moray IV30 8TZ
Tel: (01343) 890400 :: Fax: (01343) 890222
Also at Seafield of Raigmore, Inverness IV1 2PA
Tel: (01463) 235753 :: Fax: (01463) 235838
email: mail@bowlts.com :: www.bowlts.com

Title: MAP 2
TREE PROTECTION PLAN

Drawn:	Scale:	Date:
BL	1:2500	12/12/2024
Chk'd: BL	Drg No. 0000 - 00 - 00	

File: Document Path: Q:\ClientData\VIR090\GIS\GISPROJECTS\Dunballoch_Farm\Dunballoch_final\Dunballoch_Map_2_TPP_Final.mxd