FYRISH BATTERY ENERGY STORAGE SYSTEM
TREE MANAGEMENT REPORT
7th FEBRUARY 2025

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Appendices

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TREE SURVEY & MANAGEMENT REPORT
7th FEBRUARY 2025

1. INTRODUCTION

The Proposed Development comprises a grid-connected Battery Energy Storage System (BESS) with a capacity of 200MW. The project will import and export energy to and from the transmission network via the nearby Fyrish substation. The project will include battery storage containers, transformers, substation, access tracks, grid connection powerlines, fencing and other associated infrastructure.

The majority of the option area is located within an agricultural field system amounting to approximately 18.5 hectares. Grazing seems to have lapsed on the site a number of years ago and the natural regeneration of birch and alder is widespread across much of the area. Most of this is estimated as being approximately ten to 15 years of age.

Bowlts Chartered Surveyors have been instructed to inspect the significant trees that could be affected by the 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 survey was undertaken on 17th April 2024 by Dr Ben Lennon of Bowlts Chartered Surveyors on behalf of Field.

The 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. It follows an early preliminary report which was provided to the client in order for them to make informed decisions regarding impact on trees and woodland and how these impacts might be avoided or mitigated.

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. SITE DESCRIPTION

2.1 Location

The survey site is located west of the town of Alness in the Highland region of Scotland.

Centroid Grid ref: NH 62991 68949
Postcode: IV17 0XH
What 3 Words: /// catchers.brambles.logged

2.2 Description

The Proposed Development comprises a grid-connected BESS with a capacity of 200 MW. The project will import and export energy to and from the transmission network via the nearby Fyrish substation. The project will include battery storage containers, transformers, substation, access tracks, grid connection powerlines, fencing and other associated infrastructure.

The majority of the option area is located within an agricultural field system amounting to approximately 18.4 hectares. Grazing seems to have lapsed on the site a number of years ago and the natural regeneration of birch and alder is widespread across much of the area. Most of this is estimated as being approximately ten to 15 years of age. In the south-west corner there are the remains of an old large mill pond. This is surrounded by a high bank with naturally occurring birch trees. The mill pond probably fell into disuse in the early twentieth century and has since silted up. There is a large old willow which has grown up on the edge of the old bed.

2.3 Site Constraints

The development area is not constrained by any statutory designations. The aforementioned old pond is not shown on the Canmore dataset, nor does it feature on the Heritage Environment Record of Highland Council. Nonetheless, it remains of potential heritage value and should be avoided during the development.

While not part of the survey undertaken, several badger setts were observed in the banks around the pond and around FG2 and FG3.

3. SURVEY METHODOLOGY

The site survey was undertaken on 17th April 2024 using information supplied by the client.

In order to assess the impact of the Proposed Development, information was collected against the criteria below.

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 I.

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

5. ARBORICULTURAL IMPACT ASSESSMENT

In total, 24 individual trees were identified, surveyed and evaluated. In addition, 12 groups of trees and woodlands were surveyed. These include all of the woodlands inside the Red Line Boundary and several lying on the margins which had the capacity to impact on, or be impacted by, the development (See Map 1).

There were a number of areas across the site that had begun to regenerate naturally with birch and alder following a lapse of grazing management. These areas were asserting themselves as woodland. These do not appear to have been planted, and there is no sign of cultivation, nor do they form part of any Scottish Forestry Grant scheme. Therefore, natural regeneration seems likely. While technically below the threshold for the tree survey, it was felt that the planning authority would view these areas as woodland rather than open. In this instance it would be reasonable to assume that any impact on this site would need to be compensated by further compensation elsewhere.

The proposed footprint of the development is now known and is shown on Map 2. Given the impact on the newly emerging woodland it is proposed that this new woodland be removed to facilitate construction of the BESS. Being newly forming pioneer woodland on a lapsed agricultural site this is of relatively low ecological value at present.

It is proposed that an equivalent area of similar or better quality be found elsewhere in compensation. It is understood that this is proposed within the landscape plan and Biodiversity Enhancement Plan. All the removed groups are classed as category C.

Several individual trees have been identified for removal. These are two small and poor quality specimens at the proposed access point and a single aging elder shrub in the middle of the site. While this a large and old specimen, it is technically a fairly short lived shrub and is likely to collapse over the next few years. The deadwood of this species is quick to decay and has little long term value.

Table 1 - Summary of Trees That May be Affected by the Development

	Category A	Category B	Category C	Category U
Trees retained	11	6	3	1
Trees removed	0	1	2	0
Total surveyed	11	7	5	1
Woodlands/groups	4	4	4	0
Area removed (Ha)	0	0	3.6	0
Area retained (Ha)	6.1	0.4	0.1	0
Total area (Ha)	6.1	0.4	3.7	0

6. PRELIMINARY ARBORICULTURAL METHOD STATEMENT

Based on the site evaluation and the above assessment of trees and woodland it is considered that this project can be accommodated on this site without long term detriment to the tree and woodland environment. Given the young age of the woodland to be removed, it is considered that this can be compensated by planting elsewhere, either on or off-site. The area of woodland to be removed amounts to 3.6 Ha of native woodland with three individual trees/shrubs. For the purposes of this report is assumed that the whole of certain woodland groups will be removed, although it is recognised that this may not be the case and that a few trees around the fringes of each block may be retained as not all of the land will be required.

It is understood that this amount of native woodland is to be compensated for in the Landscape Plan and Biodiversity Enhancement Plan.

For the trees that have been identified to remain, certain measures should be taken to protect some of these. In some cases these will be self-protected due to the presence of tracks and fences that are beyond the construction zone.

In one case, in the southern corner of the main field, a 250m section of protective fencing is recommended to protect both individual trees and groups and separate them from the construction zone (see Map 3).

6.1 Mitigation

Any proposed mitigation for the loss of trees and woodland is given in the Landscape Plan and Biodiversity Enhancement Plan.

6.2 Construction Exclusion Zones (CEZ)

In most cases trees and woods within the surveyed area are self-protected and lie well outwith the construction footprint,

However, Map 3 (Tree Protection Plan) shows the location of one area of fencing required for the southern corner of the main site. This fencing is based on the Root Protection Area required to prevent unnecessary damage to the trees that are to remain.

Map 3 shows the delineation of the required Construction Exclusion Zone and the location of the fence to determine its boundaries.

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 Banks-man 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 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.

6.3 Construction of Protective Fencing

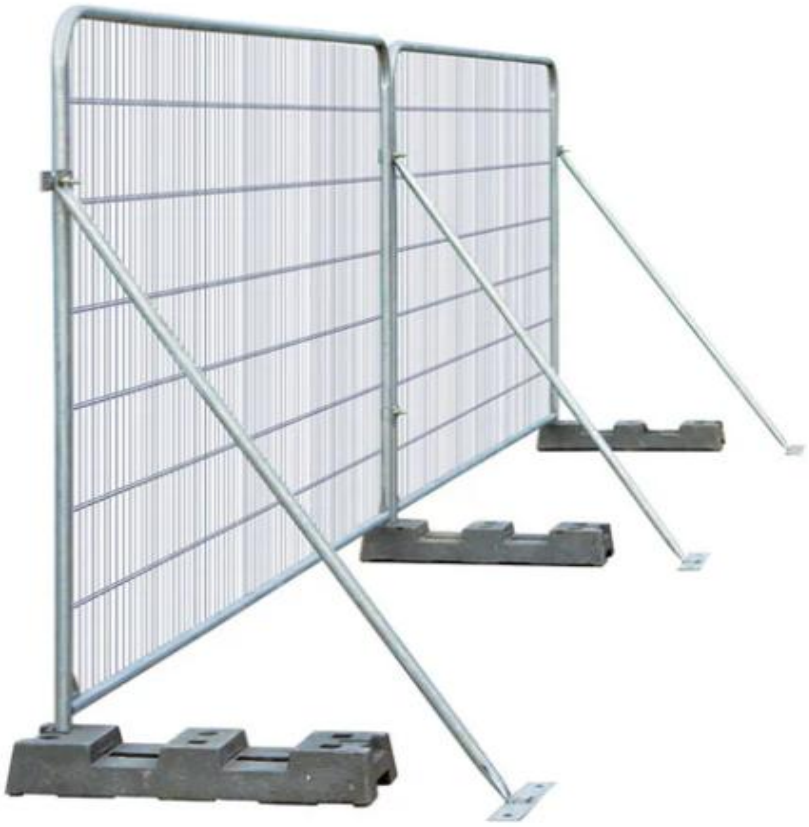
Barriers should consist of a scaffold framework in accordance with BS 5837:2012. Trees in relation to construction - Recommendations; comprising a vertical and horizontal framework, well braced to resist impacts, with vertical tubes spaced at a maximum interval of 3m. Onto this, weld-mesh panels should be securely fixed with wire or scaffold clamps. Weld-mesh panels on rubber or concrete feet are not resistant to impact and should not be used unless they are effectively pinned down and braced (see illustration below).

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

NOTE: The above is preferred because it is readily available, resistant to impact, can be re-used and enables inspection of the protected area.

Protective fencing should enclose tree canopies in all areas where ground-works are not required (other than where canopies extend over parking and access routes). 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.



7. ARBORICULTURAL SUPERVISION

During the construction phase it is recommended that an appropriately qualified arboricultural consultant should be appointed 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 site's Arboricultural Consultant. All works around the affected area on site must be halted immediately. The Arboricultural Consultant 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.
7th February 2025

BL/NH 4100i
7th February 2025

APPENDIX I

SCHEDULE OF TREES

TREE SURVEY RESULTS

SITE: Fyrish, Alness
CLIENT: Field Energy
DATE OF SURVEY: 23/11/2023

No.	Name	Botanical Name	Dia (cm)	TREE HEIGHT (m)	COMMENT	Crown spread				Category	AGE	STEM No.2/3	AV.DBH	CONDITION	RECOMMENDATION	RPZ Dia (m)
						N	S	E	W							
405	Larch	*Larix spp*	42	8		3	3	3	3	C	M		42	Good	Retain	5.04
411	Birch	*Betula pendula*	44	8		5	5	5	5	A	M		44	Good	Retain	5.28
426	Birch	*Betula pendula*	42	5		3	1	3	4	A	M		42	Good	Retain	5.04
431	Elder	*Sambucus nigra*	20	3		4	4	4	4	B	M		20	Good	Remove	
801 x2	Birch	*Betula pendula*	27	10		4	4	4	4	A	M	18	32	Good	Retain	3.24
8060	Birch	*Betula pendula*	27	5		2	3	2	1	A	M	25	37	Good	Retain	3.24
903	Birch	*Betula pendula*	38	8		3	3	3	3	B	M		38	Good	Retain	4.56
909	Sitka spruce	*Picea sitchensis*	55	8		4	4	4	4	U	M		55	Good	Retain	6.6
911	Birch	*Betula pendula*	35	6		4	4	4	4	B	M		35	Good	Retain	4.2
913	Ash	*Fraxinus excelsior*	57	9		6	6	6	6	A	OM		57	Good	Retain	6.84
914	Willow	*Salix caprea*	89	6		1	6	8	6	A	OM		89	Good	Retain	10.68
916	Sitka spruce	*Picea sitchensis*	65	7		4	4	4	4	C	M	42	77	Good	Retain	7.8
918	Larch	*Larix spp*	45	10		5	5	5	5	B	M	34/15	58	Good	Retain	5.4
919	Birch	*Betula pendula*	32	9		3	3	3	3	B	M		32	Good	Retain	3.84
922	Larch	*Larix spp*	28	7		2	2	2	2	C	M		28	Good	Retain	3.36
924	Birch	*Betula pendula*	34	9		4	4	4	4	B	M	32/25	54	Good	Retain	4.08
925	Larch	*Larix spp*	64	10		5	5	5	5	B	M		64	Good	Retain	7.68
926	Birch	*Betula pendula*	63	8		4	2	3	5	A	M		63	Good	Retain	7.56
929	ESF	*Abies alba*	120	15		4	4	4	4	A	M		120	Good	Retain	14.4
932	Birch	*Betula pendula*	42	9		3	**3**	**3**	3	B	M		42	Good	Retain	5.04
934	Birch	*Betula pendula*	41	9		3	**1**	**2**	1	A	M		41	Good	Retain	4.92
935	Oak	*Quercus robur*	75	14		4	**4**	**4**	4	A	M		75	Good	Retain	9
936	Ash	*Fraxinus excelsior*	10	3		2	**2**	**2**	2	C	Y		10	Poor	Remove	
937	Ash	*Fraxinus excelsior*	15	5		2	**2**	**2**	2	C	M		15	Poor	Remove	
													0	Good		

Woodland area/groups

No.	NVC/ Woodland type	Status (ASNW/LEPO, etc)	Approx. Area	Av. Ht (m)	COMMENT	Category	AGE	CONDITION	RECOMMENDATION	RPZ radius (m)
FG1	Birch riparian	NA	0.1	8	Riparian strip x7 mature birch	A	70	Good	Retain	8
FG2	Upland birch	NA	0.1	9	22x mature birch on old bank	A	70	Good	Retain	8
FG3	Upland birch	NA	0.1	9	17 mature birch along bank	A	70	Good	Retain	8
FG4	Upland birch	NA	0.0	8	Semi mature birch in clump of gorse.	B	50	Good	Retain	8
FG5	Upland birch	NA	1.8	3	Young birch regneration.	C	10	Good	Remove as required.	2

FG6	Wet woodland	NA	0.3	3	Young alder regeneration	C	10	Good			Remove as required.	2
FG7	Wet woodland	NA	0.3	8	Mature alder carr	B	30	Good			Retain	5
FG8	Wet woodland	NA	0.1	5	Semi mature birch in clump .	B	30	Good			Retain	3
FG9	Upland birch	NA	0.1	7	Mature birch clump.	B	30	Good			Retain	3
FG10	Upland birch	NA	0.7	3	Young birch regneration.	C	10	Good			Remove as required.	2
FG11	Upland birch	NA	0.3	3	Young birch regneration.	C	10	Good			Remove as required.	2
FG12	Mixed Policy Wd	LEPO	40+	15	Mature LEPO Woodland	A	150	Good			Retain and avoid	5

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

MAP 1
TREE CONSTRAINTS PLAN

FG12

FG11

FG5

FG6

FG10

FG9

FG8

FG7

FG4

FG3

FG2

FG1

Legend

Red Line Boundary

Tree Category

- A
- B
- C

Wood/ Grooup Category

- A
- B
- C

0 125 250 500 750 1,000 Meters

Rev:			
Client:	FIELD		
	FYRISH BATTERY ENERGY STORAGE SCHEME		
BOWLTS chartered surveyors	Barnhill, Pluscarden, by Elgin, Moray IV30 8TZ Tel: (01343) 890400 :: Fax: (01343) 890222 email: mail@bowlts.com :: www.bowlts.com		
Title:	MAP 2 TREE PROTECTION PLAN		
Drawn: BL	Scale: 1:5000 @A2	Date: 07/02/2025	
Chk'd: BL	Drg No. 0000 - 00 - 00		
File:			

Document Path: Q:\ClientData\VIR090\GIS\GISPROJECTS\Fyrish\Fyrish_Submission\Fyrish_Map_1_TCP.mxd

APPENDIX III

MAP 2
SCHEME IMPACT

FG12

FG11

FG10

FG5

FG6

FG8

FG9

FG7

FG4

FG3

FG2

FG1

Legend

- Red Line Boundary
- Footprint of development and landscaping

Tree Category

- A
- B
- C

Wood/ Grooup Category

- A
- B
- C
- Access Route- Existing
- Export Cable
- New access

0 125 250 500 750 1,000 Meters

Rev:			
Client:	FIELD		
	FYRISH BATTERY ENERGY STORAGE SCHEME		
BOWLTS chartered surveyors	Barnhill, Pluscarden, by Elgin, Moray IV30 8TZ Tel: (01343) 890400 :: Fax: (01343) 890222 email: mail@bowlts.com :: www.bowlts.com		
Title:	MAP 2 SCHEME IMPACT		
Drawn: BL	Scale: 1:5000 @A2	Date: 07/02/2025	
Chk'd: BL	Drg No. 0000 - 00 - 00		
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Document Path: Q:\ClientData\VIR090\GIS\GISPROJECTS\Fyrish\Fyrish_Submission\Fyrish_Map_2_Scheme_impact.mxd

APPENDIX IV

MAP 3
TREE PROTECTION PLAN

FG12

FG11

FG5

FG6

FG10

FG3

FG4

FG2

FG1

Legend

- Red Line Boundary
- Fence

PRESC

- Remove
- Retain
- Construction Exclusion Zone

Presc

- Remove
- Retain

125 250 500 750 1,000 Meters

Document Path: Q:\ClientData\VIR090\GIS\GISPROJECTS\Fyrish\Fyrish_Submission\Fyrish_Map_3 TPP.mxd

Rev:

Client: FIELD

FYRISH BATTERY ENERGY STORAGE SCHEME

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Title: MAP 3
TREE PROTECTION PLAN

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BL	1:5000 @A2	07/02/2025
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