Environmental Impact Assessment Report

Teindland Wind Farm

Volume 3

TA A4.1: Forestry

Document prepared by Envams Ltd for: Teindland Wind Farm Ltd.

April 2025

Contents

4 FORESTRY

4.1 INTRODUCTION AND BACKGROUND

The Teindland Windfarm proposal outlines the development of up a wind energy project within Teindland Forest, situated near Rothes in Moray. This Development will be made up of up to 12 wind turbines, eight with a maximum tip height of up to 230 m, and four with a maximum tip height of 200 m. The turbines will require corresponding keyhole clearances of up to 212 metres and 142 metres in diameter, respectively, to maintain safe rotor swept paths. The windfarm will predominantly use the existing network of forest roads for access, with some upgrades and the addition of new road sections as necessary for turbine delivery and ongoing maintenance.

This appendix is supported by the following figures provided at the end of this document:

- Map 1: Final Design Layout Stand Stability;
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- Map 13: FLS Baseline Thinning Plan

4.2 FOREST CONTEXT AND LAND USE DESIGNATION

Teindland Forest is under the stewardship of Forestry and Land Scotland (FLS), managed on behalf of the Scottish Government. The forest is one of the older holdings in the national forest estate, comprising mostly second and third rotation productive conifer plantations.

The Ancient Woodland Inventory (AWI) designates the majority of Teindland as Long-Established of Plantation Origin (LEPO), indicating woodland cover has persisted since at least the 1750s, though not all of it qualifies as Ancient Semi-Natural Woodland (ASNW). The only notable exception within the proposed development area is found in the Wood of Orton, where remnant Scots pine trees display some ancient woodland indicators such as deadwood. However, the broader area lacks characteristics such as veteran trees, natural regeneration of native species, or an undisturbed soil profile due to prior ploughing and plantation activity.

4.3 FELLING REQUIREMENTS AND WOODLAND REMOVAL

Tree felling will be required to facilitate multiple components of the development. This includes the creation of turbine bases and keyholes, the construction and widening of roads, and the establishment of compounds for construction, grid connection, and battery storage. Felling activity is categorised as either permanent, where replanting will not take place, or temporary, where replanting or natural regeneration is expected.

Permanent woodland removal will cover an area of 40.18 hectares. This figure comprises 16.4 hectares of mature conifer woodland, estimated to be around 60 years old, and 23.8 hectares of younger stands aged between 6 and 50 years. Temporary woodland removal will affect an additional 33.23 hectares. Of this, 13.42 hectares will be felled to ensure safe

clearance around road construction within unstable tree stands. These clearances require a 30-metre buffer from the road centreline in areas where the risk of treefall is high.

A further 19.81 hectares of felling is needed in the vicinity of turbines T3 and T10 due to the likelihood of catastrophic windblow. These areas were originally scheduled for felling between 2033 and 2042, but will now be brought forward to mitigate safety risks and economic loss. These temporarily cleared areas will subsequently be replanted or encouraged to regenerate according to standard forestry practice.

4.4 POLICY COMPLIANCE AND COMPENSATORY PLANTING

In accordance with the Scottish Government's Policy on Control of Woodland Removal, permanent loss of woodland must be justified by appropriate development and must be offset by compensatory planting, unless an exemption applies. The development of renewable energy projects is one of the justifications permitted under the policy, provided compensatory planting (CP) is delivered.

CP must equal the area of woodland lost and should be established on appropriate sites within Scotland. These replacement sites must offer at least the same level of woodland-related public benefit as the areas being removed. Teindland does not qualify as ASNW, although LEPO areas with ancient woodland characteristics should be treated similarly. No areas within the proposed turbine zones currently display sufficient ancient woodland indicators to preclude development.

As a result, compensatory planting is required for the entire 40.18 hectares of permanent woodland loss. No compensatory planting is needed for the 33.23 hectares of temporary removal, as these areas will be reforested through natural regeneration or replanting efforts consistent with normal forest management.

4.5 FOREST STABILITY AND CONSTRUCTION SAFETY

The topography and composition of the forest necessitate careful planning to prevent risk to workers and the wider woodland during construction. Tall trees in Teindland can exceed 30 metres in height, and in unstable areas, there is a high risk of trees falling into access zones. To maintain safety, clearances of 30 metres from access roads and compounds are prescribed in these areas.

Additionally, felling to prevent windblow is particularly necessary in the zone between turbines T3 and T10. FLS had previously scheduled this area for harvesting in future rotations, but the development will require advancement of this timeline. The net area to be felled here for stability purposes is 19.81 hectares. A total of 27.97 hectares of felling will take place in this area when accounting for keyholes, new road infrastructure, and buffer zones.

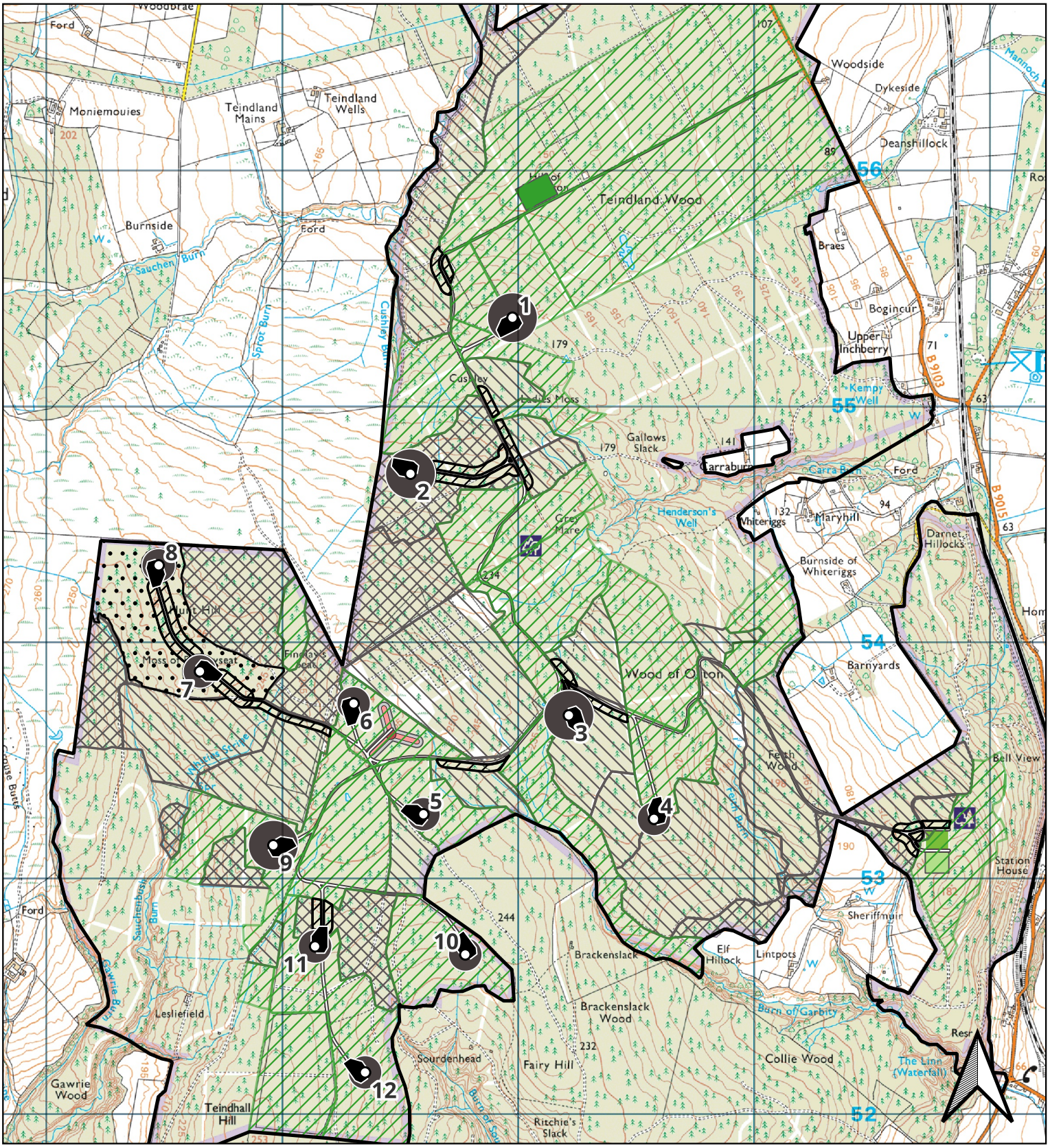
4.6 TREE REMOVAL SUMMARY

The report includes detailed breakdowns of the felling required at each turbine location, compound, and road segment. Table 1, below, summarises the area, stability classification, species mix, and age of trees for each component.

The cumulative impact across all infrastructure components and turbine locations reflects the complex interplay between forestry management, safety considerations, and renewable energy development. The project is compliant with forestry policy, provided the outlined compensatory planting obligations are fulfilled.

Table 1: Tree Removal Table

Turbine &Hardstanding /Compound	Total ha	Unstable (ha)	Moderately stable (ha)	Stable (ha)	Spp	Spp Mix	Age (yrs)	Permanent or temporary
Construction compound	1.5			1.5	SP(LP)	WH/SS	25	Temporary
Turbine 1 +Keyhole	1.71	0.123		1.587	MC	SP/SS	10	Permanent
Turbine 2	3.53		2.452	1.078	SP(HL)		60	Permanent
Turbine 3 +Keyhole	1.71	1.71			SS (SP)		25	Permanent
Turbine 4 +Keyhole	1.71	0.454		1.256	SP(HL)		50-60	Permanent
Turbine 5	3.53			3.53	SP(HL)	SS/WH	15	Permanent
Turbine 7 +Keyhole	1.71			1.71	MC	SP/SS	6	Permanent
Turbine 8	3.53	3.53			SP(WH)	HL	50	Permanent
Turbine 9 +Keyhole	1.71			1.71	SP		8	Permanent
Turbine 10 +Keyhole	1.71	1.71			SS (SP)		25	Permanent
Turbine 11 +Keyhole	1.71		0.986	0.724	SP (HL)	OG	60	Permanent
Turbine 12 +Keyhole	1.71			1.71	SP(SS)		25	Permanent
Turbine 13	3.53			3.53	SP(HL)	SS/NS	10	Permanent
Bess Compound	1	1			MC		60	Permanent
Substation Compound	1	1			MC		60	Permanent
Total Clearance including Tracks/Turbines/Compounds	**40.18**	**11.497**	**4.893**	**23.79**				



Teindland Windfarm

Map 1.

Final Design Layout
Stand Stability
30-60m Clearance
Stablity Clearance

Legend

Boundary

Clearance Type
- 30-60m
- Stability

Stand Stability
- Unstable
- Moderately Stable
- Stable

Indicative Track

Final Design Layout
- Keyholes
- Laydown

- BESS Comp
- Construction Comp
- Substation Comp

- MetMastGuyWires
- Met Mast Buffer

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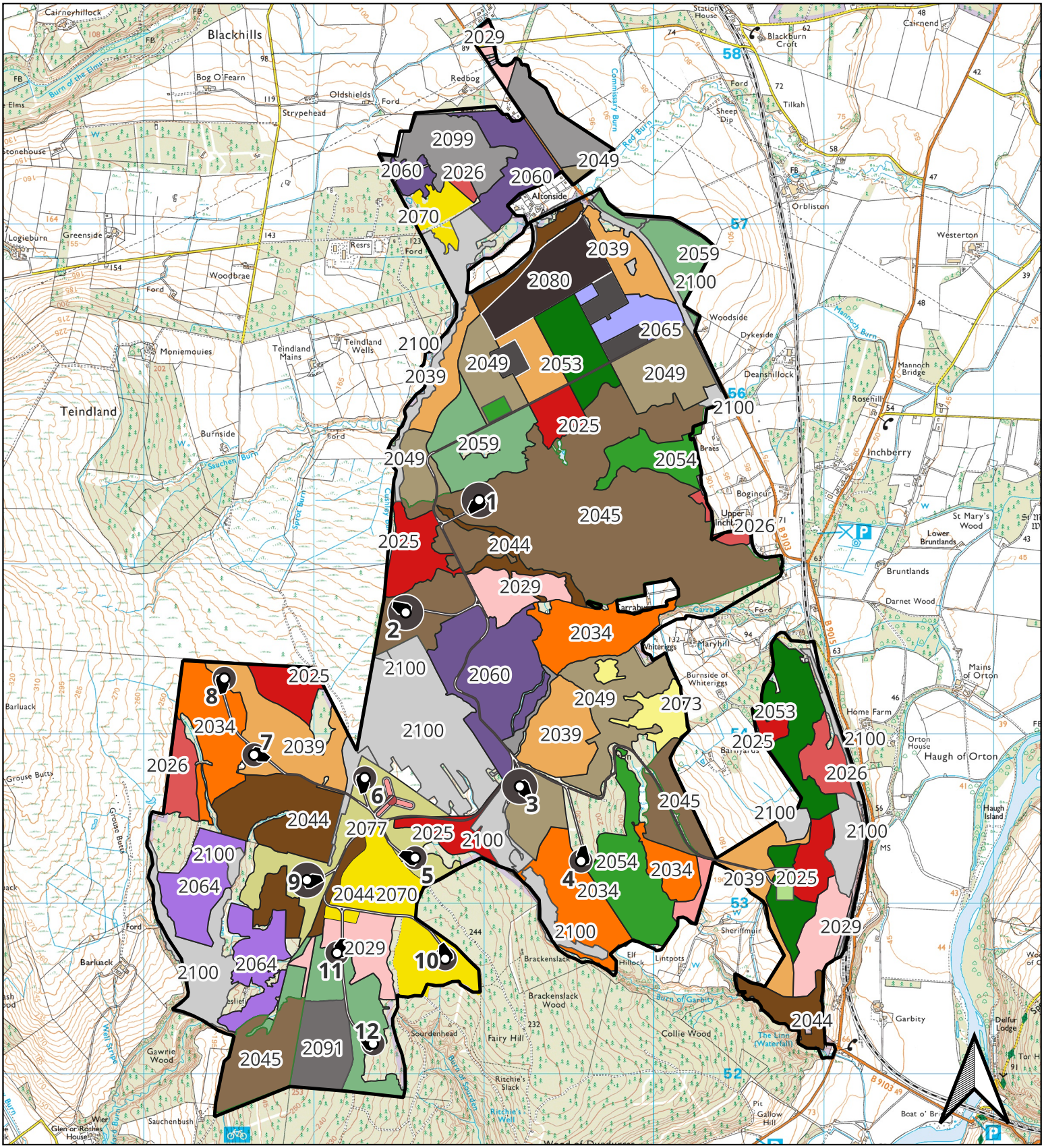

Teindland Windfarm

Map 2.

FLS Baseline Felling Plan

Legend

Boundary

FDL

Indicative track

Felling Years

- 2025
- 2026
- 2027
- 2029
- 2034
- 2039
- 2044
- 2045
- 2049
- 2053
- 2054
- 2059
- 2060
- 2064
- 2065
- 2070
- 2073
- 2077
- 2080
- 2090
- 2091
- 2099
- 2100

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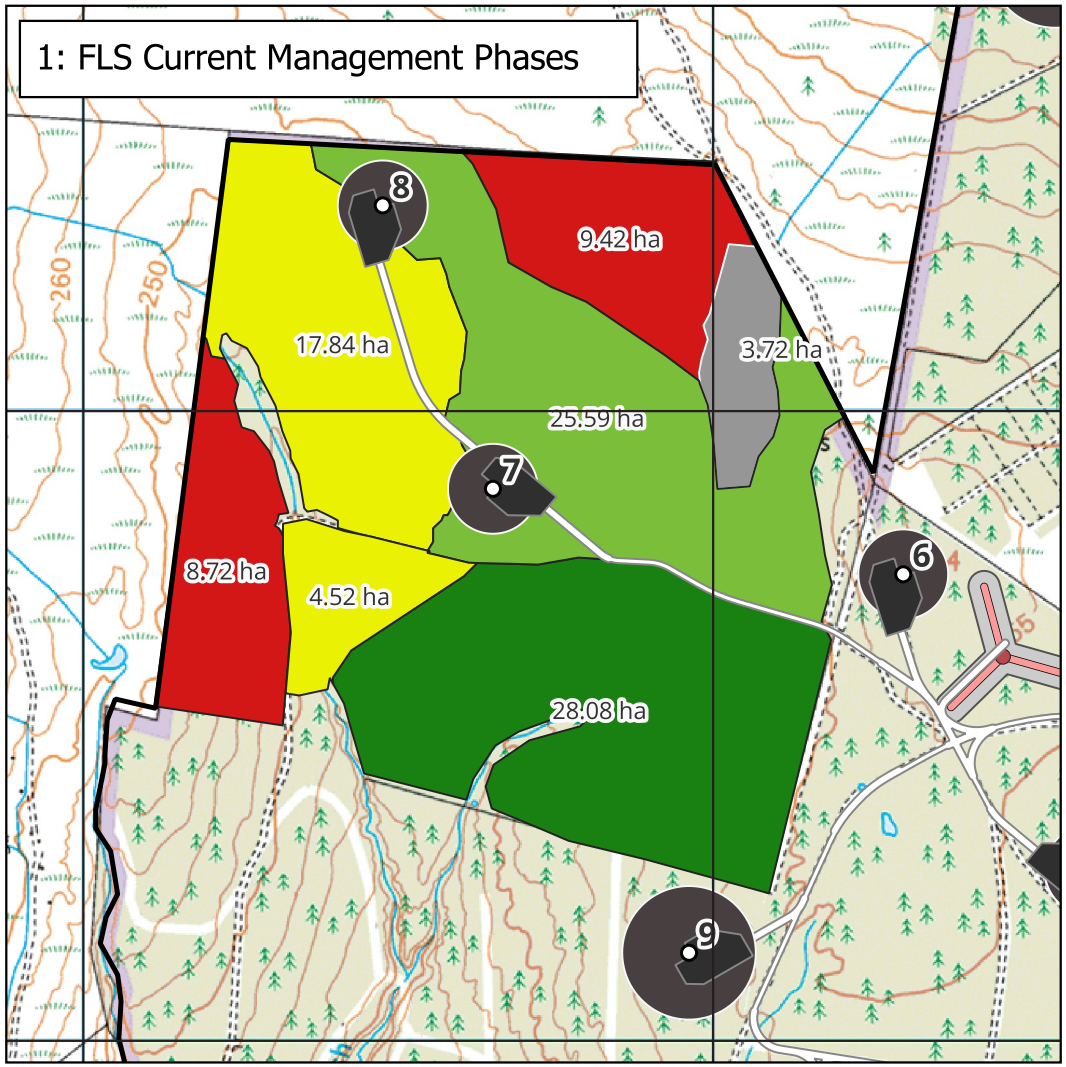

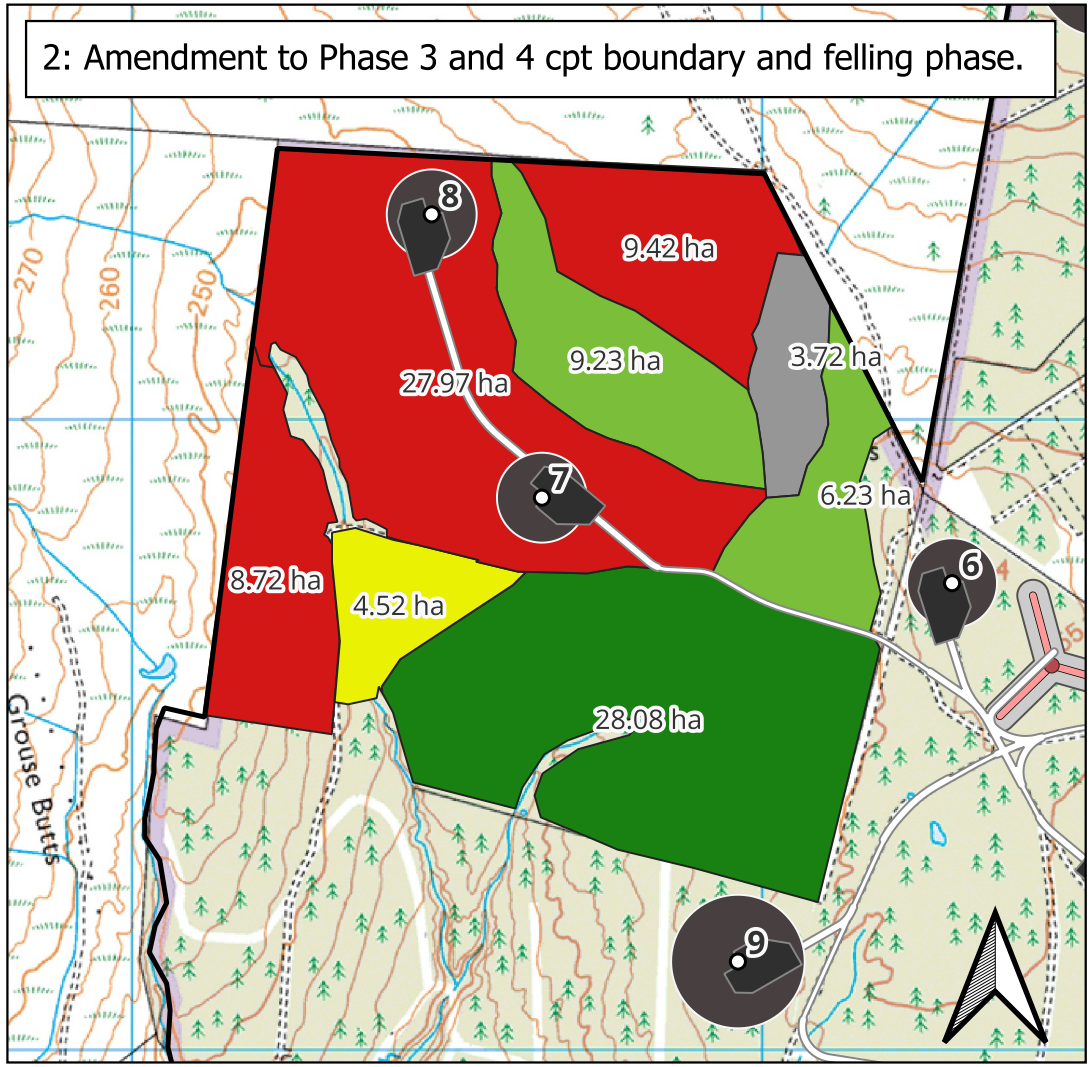

Teindland Windfarm

Map 3.

1 - Current FLS Felling Boundary
2 - Proposed Felling Boundary Amendment

Legend

- Boundary
- Final Design Layout
- Keyholes
- Laydown
- MetMastLocation
- MetMastGuyWires
- Indicative Track

Phase Compartments

- Phase 1 2023-2027
- Phase 3 2033-2037
- Phase 4 2038-2042
- Phase 5 2043-2047
- Open ground

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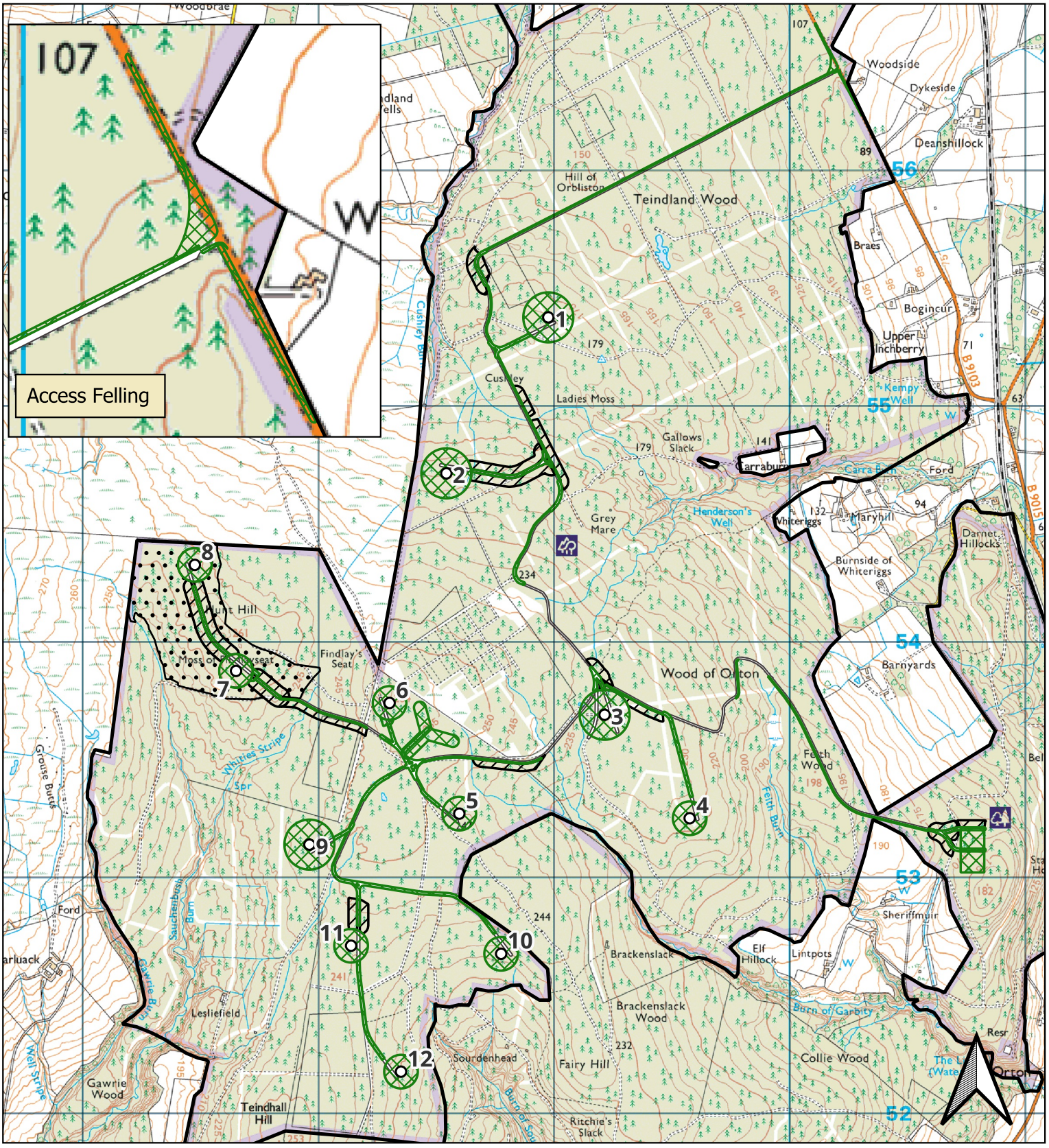

Teindland Windfarm

Map 4.

Permanent and Temporary Tree Clearance

Legend

- Boundary
- Final Design Layout
- Indicative Track

Clearance Type

- Permanent Clearance
- Temporary Clearance (30-60m)
- Temporary Clearance (Stability)

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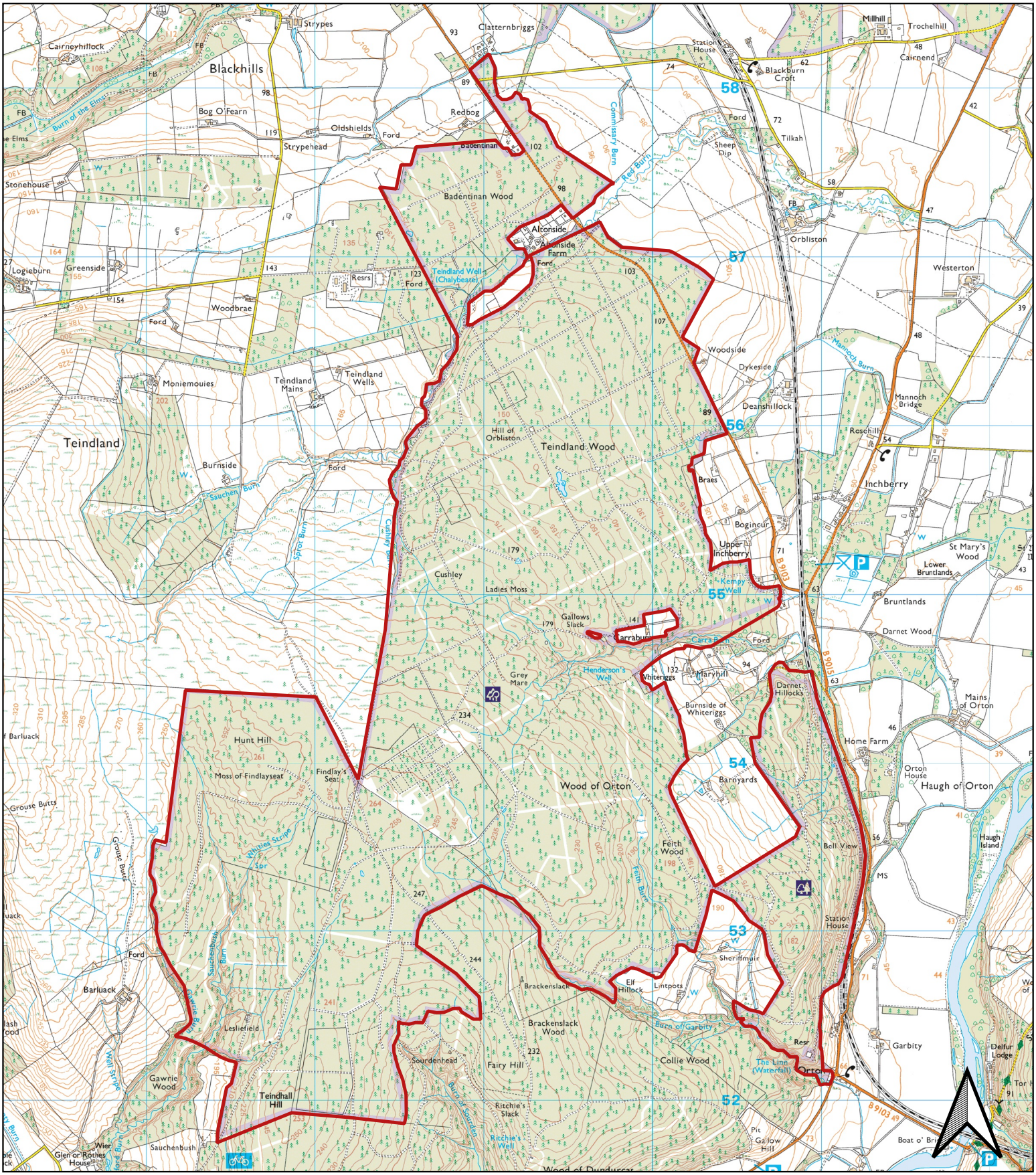

Teindland Windfarm

Map 5.

Forestry Study Area

Legend

Teindland Boundary

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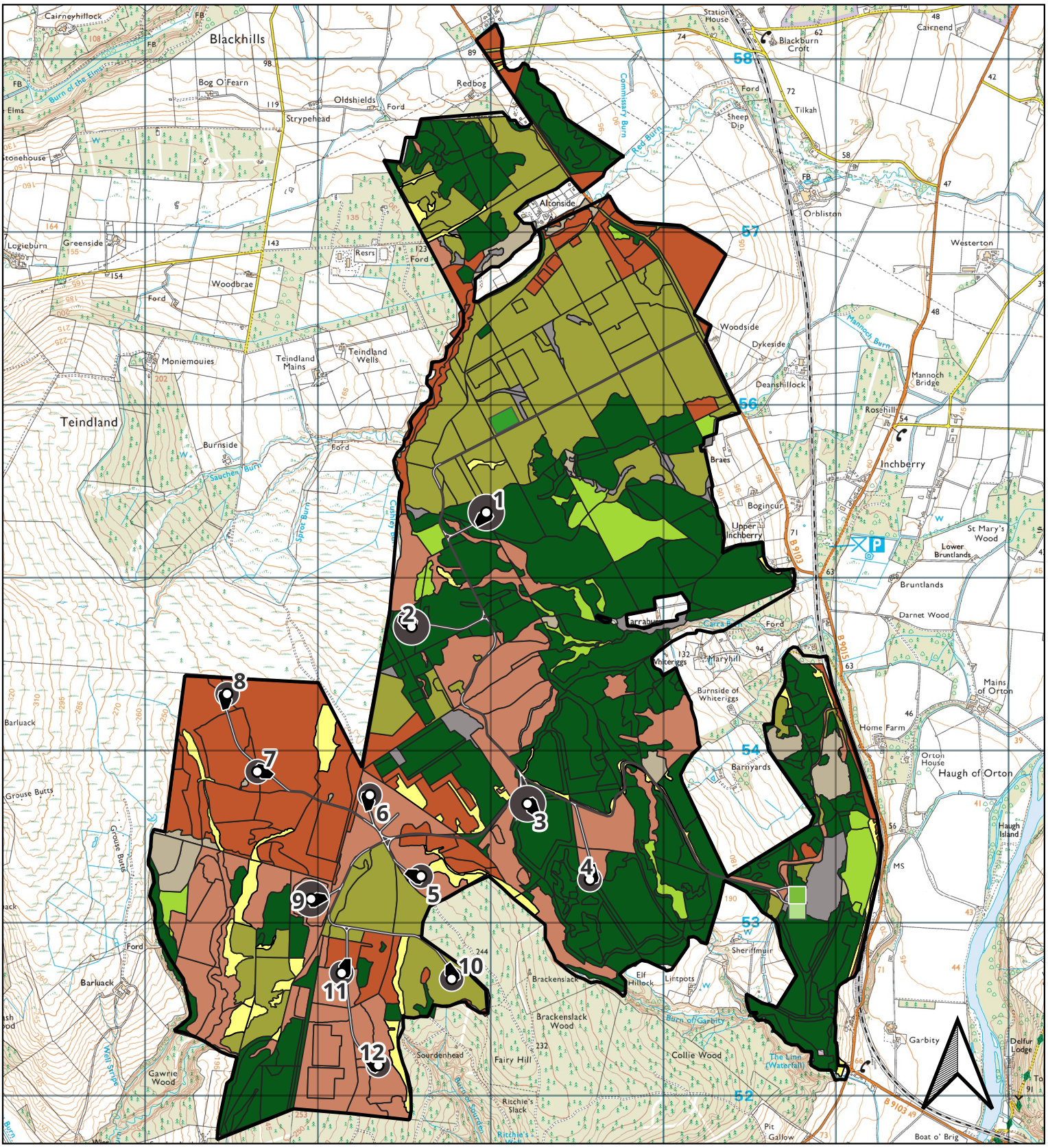

Teindland Windfarm

Map 6.

FLS Age Class

Legend

- Boundary

Age Class

- Establishment 2015-2019
- Thicket 2009-2014
- Pole Stage 1985-2004
- Mature High Forest 1965-1984
- Old High Forest 1871 - 1964
- Unplanted
- Open ground
- Unclassified

- Indicative Track

- FDL
- Keyholes
- Laydown

- BESS Comp
- Construct Comp
- Substation Comp

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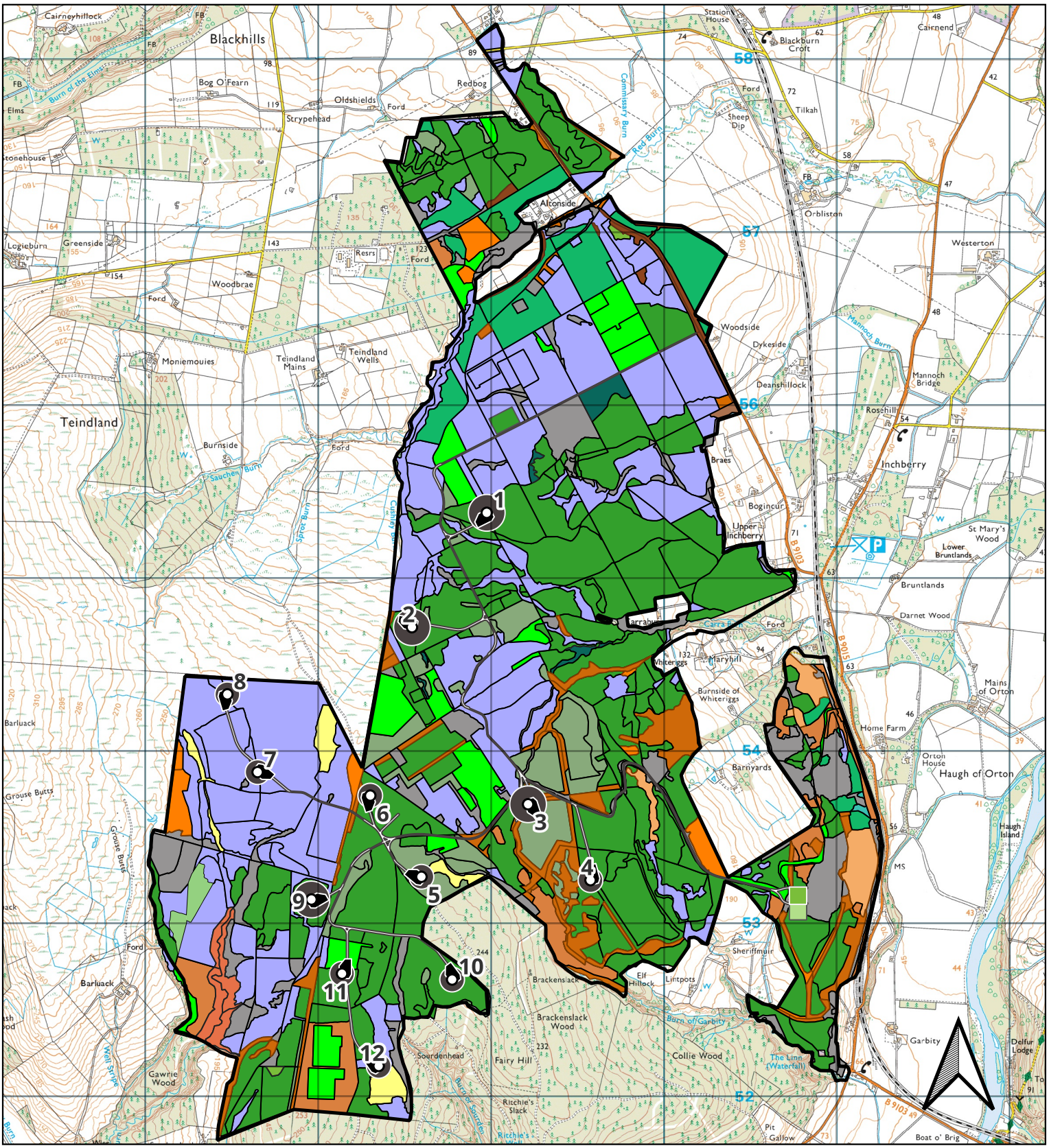

Teindland Windfarm

Map 7.

FLS Current Species Composition

Legend

Boundary

Current Species

- Sitka spruce
- Lodgepole
- Scots pine
- Noble Fir
- Douglas fir
- Mixed conifers
- Oak
- Birch
- Mixed BL
- Beech
- Alder
- West Hemlock
- H. Larch
- J. Larch
- E. Larch
- L. Cypress
- Not Classified
- Open ground
- Other Cedar

- Track
- FDL
- Keyholes
- Laydown
- BESS Comp
- Construct Comp
- Substation Comp

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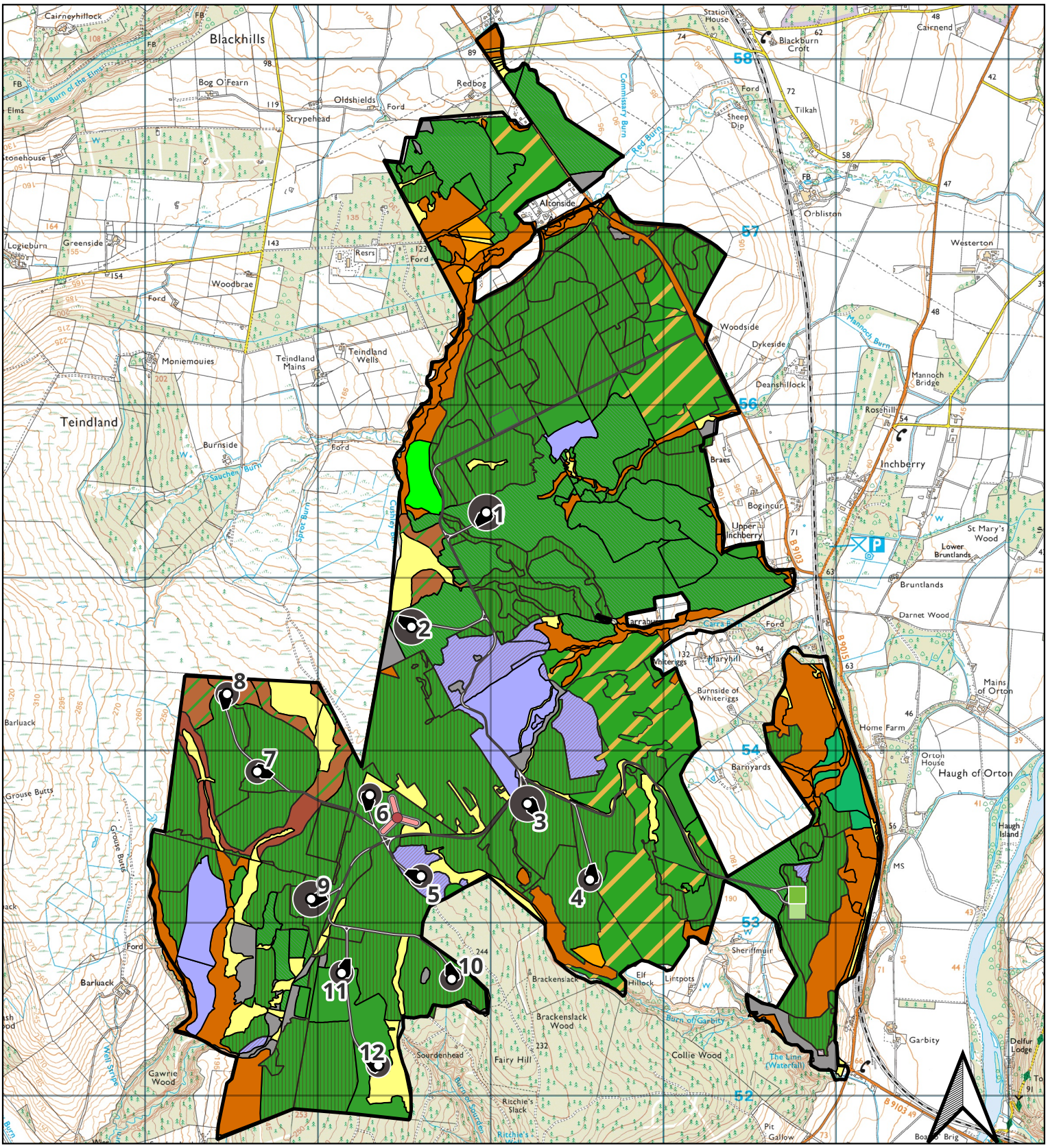

Teindland Windfarm

Map 8.

FLS Future Species Composition

Legend

Boundary

Future Species
- SS
- SS/Sbi
- SP
- SP/LA
- SP/SS
- SP/BL
- SP/BI
- DF

- LA
- MC
- MB
- OG
- MB/SP
- NBL

- FDL
- Laydown
- Keyholes

- Construct. Comp
- BESS Comp
- Substation Comp

- Met Mast
- Guy Wires

- Indicative Track

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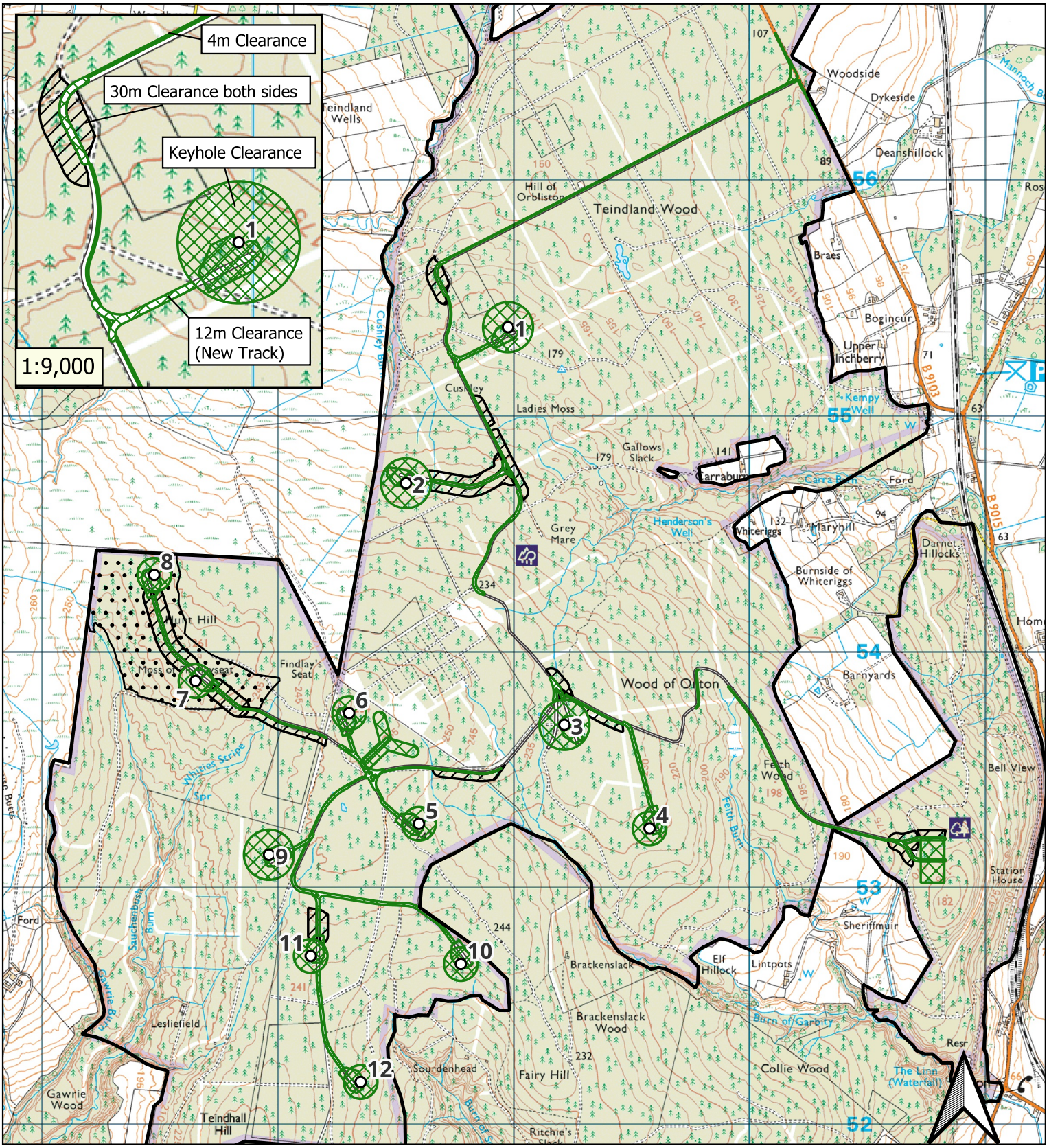

Teindland Windfarm

Map 9.

Windfarm Felling Plan

Legend

- Boundary
- Final Design Layout
- Indicative Track

Clearance Type

- Permanent Clearance
- Temporary Clearance (30-60m)
- Temporary Clearance (Stability)

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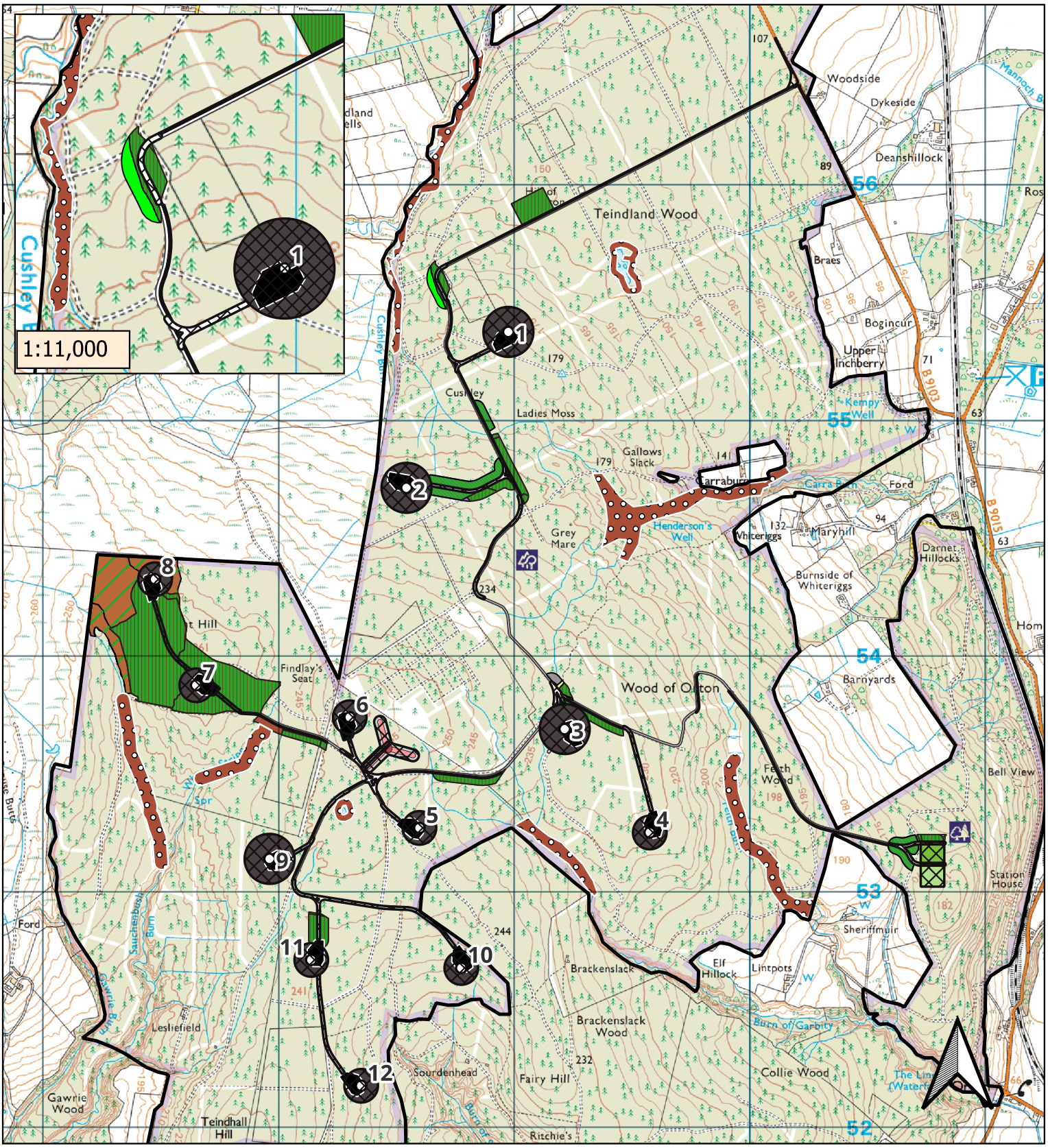

Teindland Windfarm

Map 10.

Windfarm Future Species

Legend

- Boundary
- Perm Clearance
- Riparian zones

Windfarm Future Spp

- SS
- SS/Sbi
- SP
- SP/LA
- SP/SS
- SP/BL
- SP/Bi
- MC
- MB
- OG
- MB/SP
- NBL
- FDL
- Laydown
- Keyholes
- Construct. Comp
- BESS. Comp
- Substation Comp
- Met Mast
- GuyWires
- Indicative Track

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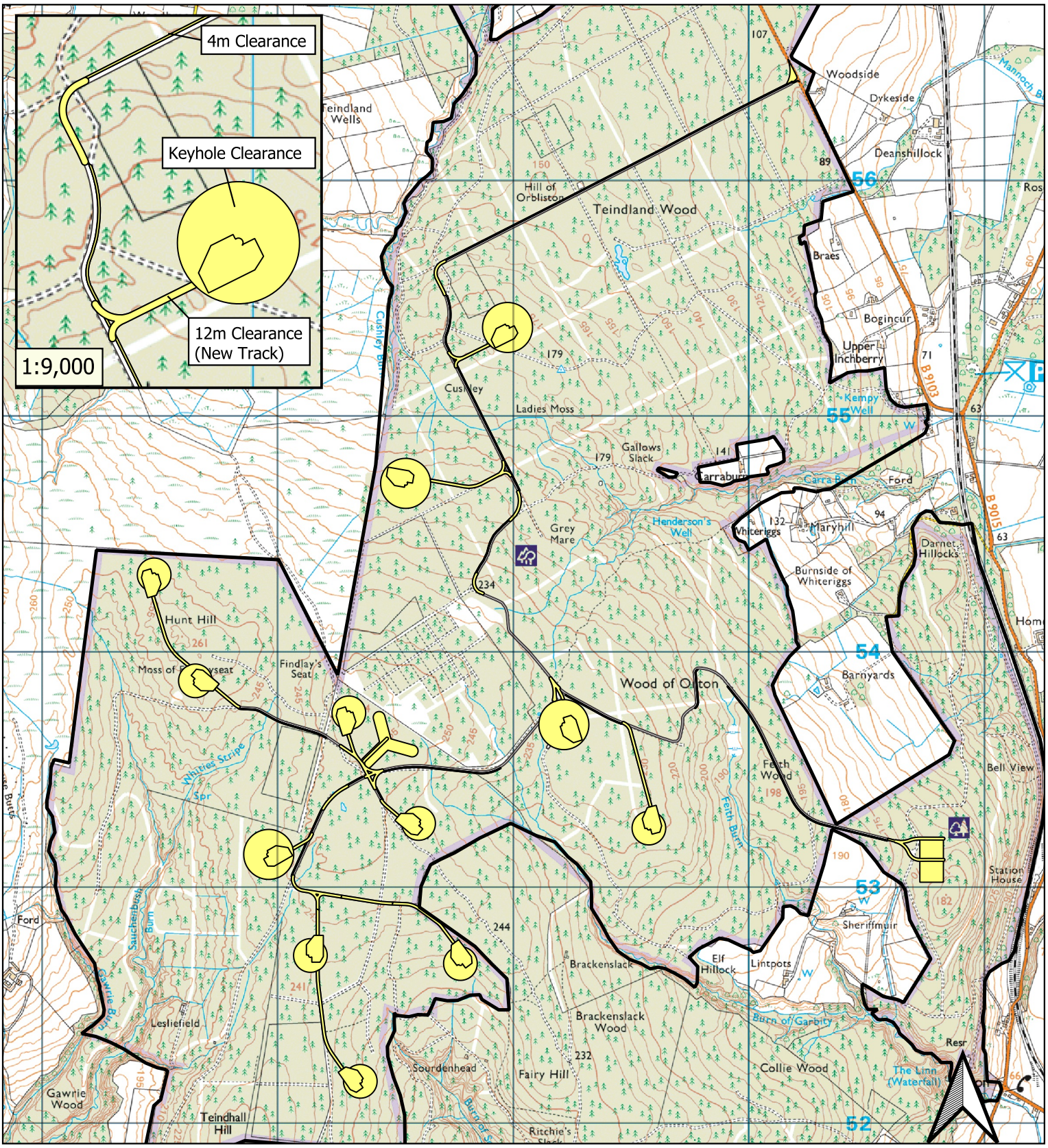

Teindland Windfarm

Map 11.

Non-Planted Areas

Legend

- Boundary
- Indicative Track

Non-Planted Areas

- Permanent Open Ground

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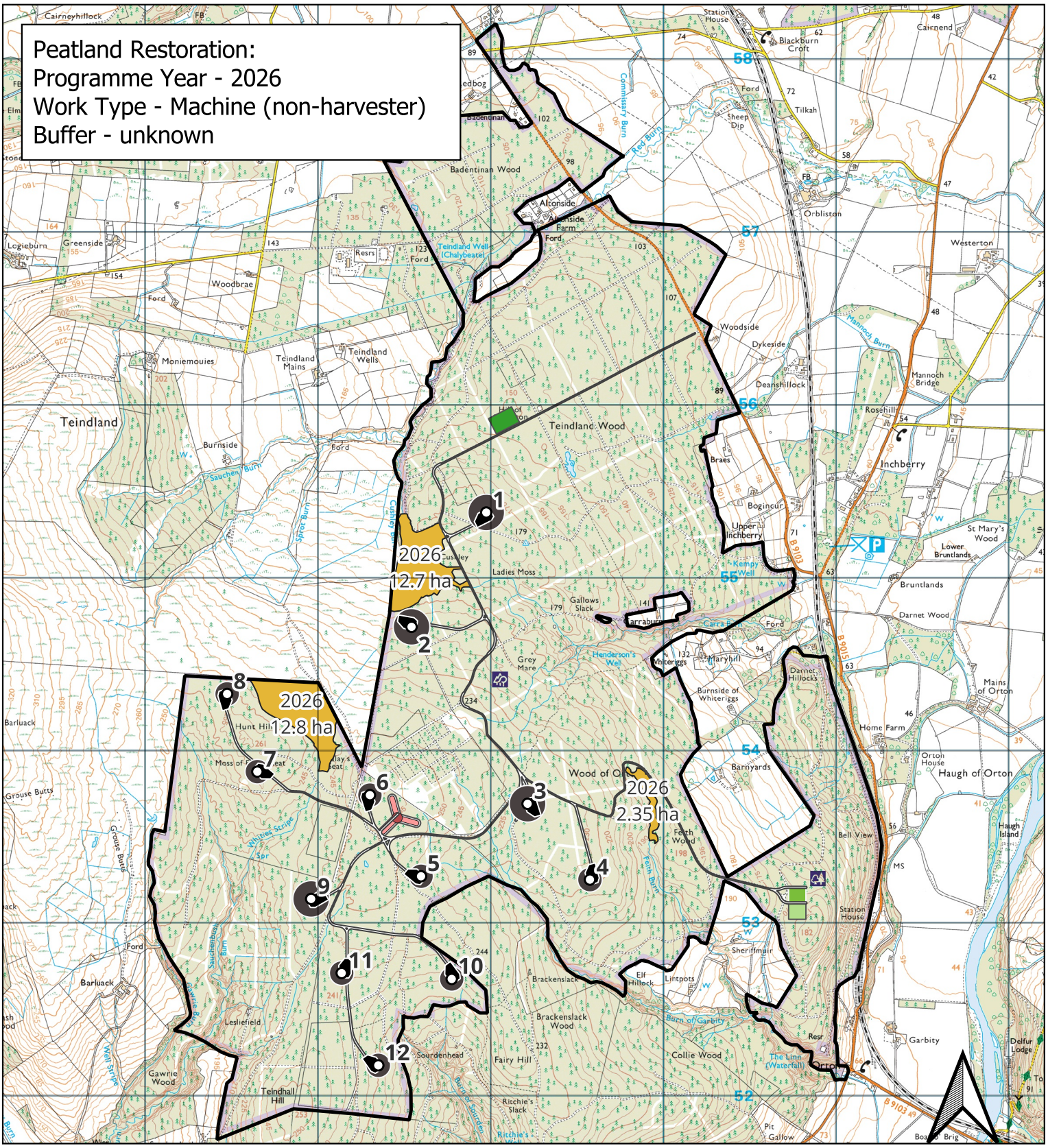

Teindland Windfarm

Map 12.

FLS Peatland Restoration

Legend

- Boundary
- Peatland Restoration
- Indicative Track
- FDL
- Keyholes
- Laydown
- Met Mast
- GuyWires
- BESS Comp
- Construct Comp
- Substation Comp

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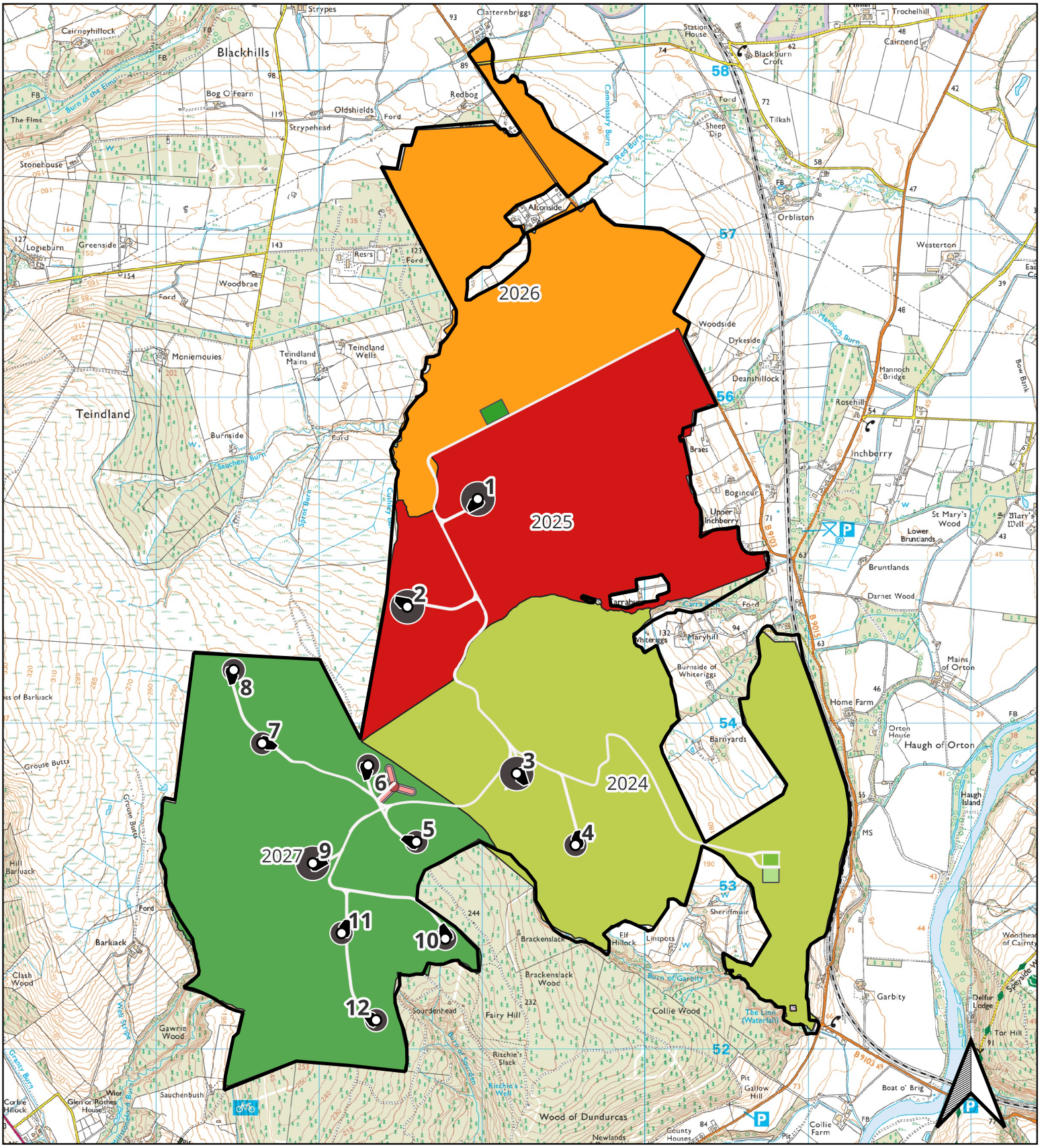

Teindland Windfarm

Map 13.

FLS Baseline Thinning Plan

Legend

- Boundary
- Indicative Track

FLS Thinning Years
- 2025
- 2026
- 2027
- 2024

- FDL
- LaydownAreas
- MetMastLocation
- Met Mast Buffer
- MetMastGuyWires
- BESS Compound
- Construction Comp
- Substation Comp

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