



Tom na Clach Wind Farm Extension



February 2022

Tom na Clach Wind Farm Extension

Appendix 3.A: Decommissioning Statement

Infinergy on behalf of Nan Clach Extension Limited

Contents

1 Introduction 1

2 Site And Project Description 2

3 Decommissioning and Restoration 3

 Turbines 3

 Turbine Bases and Crane Pads 4

 Access Tracks 4

 Watercourse Crossings 5

 Cable Trenches & Network 5

 Substation and Compounds 5

4 Schedule and Review of DS..... 5

Appendices

Appendix A – Proposed Development Layout

Tables

Table 2.1: Wind Turbine BNG Co-ordinates 2

1 Introduction

- 1.1 This Decommissioning Statement ('DS') for Tom na Clach Wind Farm Extension (hereafter known as 'the Proposed Development') has been produced by the Applicant, Nan Clach Extension Limited, to comply with the request from SEPA in their response (20/04/21) to submission of the Scoping Report for the Proposed Development:

"..To avoid delay and potential objection, the information outlined below and in the attached appendix must be submitted in support of the application..

1) Decommissioning Statement."

- 1.2 The purpose of this plan is to provide further detail on how the DS will be implemented in order to satisfy this request.
- 1.3 Due to predicted advances in technology and changes in working methods and good practice guidelines over the next 40 years, this plan does not stipulate precise methods or specific guidance to be followed during the decommissioning and restoration process.
- 1.4 This plan is a live document that may be altered in agreement with The Highland Council, NatureScot, Scottish Environment Protection Agency (SEPA) and other regulatory bodies where necessary during the operational lifetime of the development.

2 Site and Project Description

- 2.1 The Proposed Development is centred on E287153 N83447. The site comprises upland moorland located adjacent to 'Tom nan Clach' hilltop in the immediate west, and immediately adjacent to Tom nan Clach Wind Farm (the 'Operational Scheme'). The site is largely located within Cawdor Estate. The existing 11.5 km access track for the Operational Scheme, which will be utilised for the Proposed Development, partly falls within Lethen Estate on the eastern side of the Proposed Development. The site boundary lies approximately 7 km north-east of Tomatin and west of the B9007. The site boundary encloses an area of approximately 3.98km².
- 2.2 The final layout of the Proposed Development is illustrated in **Appendix A** and the locations of the turbines are listed in Table 2.0 below. The Proposed Development will comprise 7 wind turbines with a maximum tip height of 149.9m. Based on a on a Vestas V136 4.5 MW turbine, a maximum tower height of 82m, a maximum rotor diameter of 136m, and a combined maximum generation capacity of 31.5MW.

Table 2.0: Wind Turbine BNG Co-ordinates

Turbine No.	X(East)	Y(North)	Hub Height	Tip Height
1	287046	835418	82m	149.9m
2	287546	835407	82m	149.9m
3	287203	834826	82m	149.9m
4	286951	834149	82m	149.9m
5	286341	833716	82m	149.9m
6	287624	834318	82m	149.9m
7	287070	833723	82m	149.9m

- 2.3 The wind turbine foundations will be a concrete base, with steel reinforcement. Each standard concrete foundation will have a diameter of approximately 15m and a depth of approximately 2m.
- 2.4 To enable the erection of the turbines, a crane hardstanding area and turning circle at each turbine location will be required to accommodate assembly cranes and construction vehicles. This will comprise of an area measuring 2000m² during the construction phase.
- 2.5 Vehicular access to the site is from the B9007, utilising the purpose-built Operational Scheme access track. On leaving the B9007 and utilising the existing access track, approximately 4km of new permanent access tracks will be created within the site. The access tracks within the site boundary will be approximately

5m wide, with some additional localised bend widening to a maximum of approximately 13m.

- 2.6 A variety of track designs will be adopted:
- Upgrade of internal track;
 - Floating track;
 - Excavated track; and
 - Rockfill track.
- 2.7 There is a crossing of a main or named watercourse on the access tracks (excluding those already considered under the access track for the Operational Scheme). This is summarised below:
- Watercourse Crossing – Allt Carn an t-Sean-liathanaich;
- 2.8 The electrical power produced by the individual turbines will be fed to an onsite substation via underground cables. The cables will be laid in trenches, typically approximately 1.0m deep and 600mm wide, adjacent to the access tracks, on the downslope side. The substation/compound/battery energy storage system area will measure a maximum of 30m by 66m, including the substation buildings and a hardstanding area for vehicle parking.
- 2.9 One temporary construction compound measuring approximately 150m by 100m will be required during the construction and decommissioning periods.
- 2.10 To enable the construction of the Proposed Development, one borrow pit is proposed on site and will be the one used for the Operational Scheme which will be reopened (E 289581, N 835750). This is likely to be restored upon completion of construction.
- 2.11 The above Proposed Development layout and infrastructure will be discussed in the following section with regards to decommissioning and restoration.

3 Decommissioning and Restoration

- 3.1 Any material left on site which does not have a use, for example the turbine bases and cables, will be considered as waste. Therefore, any proposed decommissioning works will need to comply with the relevant waste management legislation applicable at the time of the works.

Turbines

- 3.2 Decommissioning of the turbines will be a reverse of the installation process, likely to involve:
- Stripping out of turbine internals and removal of transformer; and
 - Dismantling of the turbines.
- 3.3 The removal of turbines will involve similar vehicular movements as for during the construction phase and similar traffic management plans will be in place for the decommissioning phase. Given that road widenings are unlikely to be necessary (i.e. the site access junction joins with the B9007, which is a minor

road and along which turbines and their components have already been transported for the Operational Scheme), this is not required for decommissioning. As for the construction period, appropriate pollution prevention measures will be adhered to, to ensure that the increase in traffic does not impair on water quality or surface runoff. In addition, any mitigation required due to ecological sensitivities will be adhered to.

- 3.4 Due to the infrastructure, traffic management of this decommissioning vehicle movement is likely to focus upon site traffic being directed south along the B9007 from the access junction as per the construction phase.

Turbine Bases and Crane Pads

- 3.5 Turbine bases and associated hardstanding (crane pads etc) represent the largest areas for reinstatement. These will likely require significant volumes of soils/peat to aid restoration.
- 3.6 In order to minimise this, it is likely that only the top 1m of hardstanding will be removed and disposed away from the site. However, if required by future waste management legislation, all material will be removed. The exposed layer will be restored with soils/peat.
- 3.7 Reinstatement/Restoration of these areas will to aim to achieve ground and habitat as near to, and sympathetic to, natural conditions on the site. To this end, surface cover material (soils and peat) will be required. Reinstatement will, as far as possible, mirror the surrounding ground depths and profiles at each turbine location.
- 3.8 Previously excavated soils and peat are the preferable materials to use for restoration, and additional material from restored on-site borrow pits could also be used.
- 3.9 An assessment of the available soils and soil forming resources on the site with which to form restoration layers will be carried out prior to any decommissioning activity. This assessment will consider the quality and composition of soils that may be available, whether suitable substrates (which can support the target ecosystem) will be need to be imported and if propagules for restoring vegetation are required.
- 3.10 Consideration of aspects such as ecological sensitivities and risks to environmental receptors (such as landscape and visual, hydrology) will be assessed prior to decommissioning and updates to the DS made following review.

Access Tracks

- 3.11 The requirement for the removal of all access tracks will be discussed with the landowner, with the possibility that some tracks will be retained.
- 3.12 In order to allow access for the required vehicular traffic during the decommissioning process, it is anticipated that the access tracks will require

widening to 5m, as per the construction phase. Once the infrastructure has been taken off site, the reinstatement and re-profiling of the tracks can commence.

- 3.13 Reinstatement and re-profiling will consider all environmental risk prior to decommissioning, with a particular emphasis on ensuring no deterioration to the current hydrological regime. This is likely to involve taking cognisance of the post-construction vegetation and habitat monitoring data, especially in areas adjacent to blanket bog restoration zones.

Watercourse Crossings

- 3.14 It is anticipated that watercourse crossings will be left in-situ for amenity or to provide landowner access. The maintenance and upkeep of these structures will be passed over to the landowner and agreements reached on the actions required in order to prevent instances of flooding as a result over blockages of crossings etc.
- 3.15 Should watercourse crossings require to be removed, strict mitigation measures as required for construction will be adhered to ensuring hydrological continuity is maintained. Throughout the operational phase of the wind farm, cognisance of future improved mitigation measures and developments in *best-practice* will be reviewed and implemented into the live DS.

Cable Trenches & Network

- 3.16 The underground cabling network will be cut off at ground level and left in place. Given that trenches will be restored after construction, and that no fluids or toxic materials are contained within the cables, no further decommissioning works would be required. However, if required by future waste management legislation, all material will be removed.

Substation and Compounds

- 3.17 All above ground infrastructure will be removed from their locations and disposed of away from the site. All areas of hardstanding will be restored using similar methods used for restoring the turbine bases and crane pads.

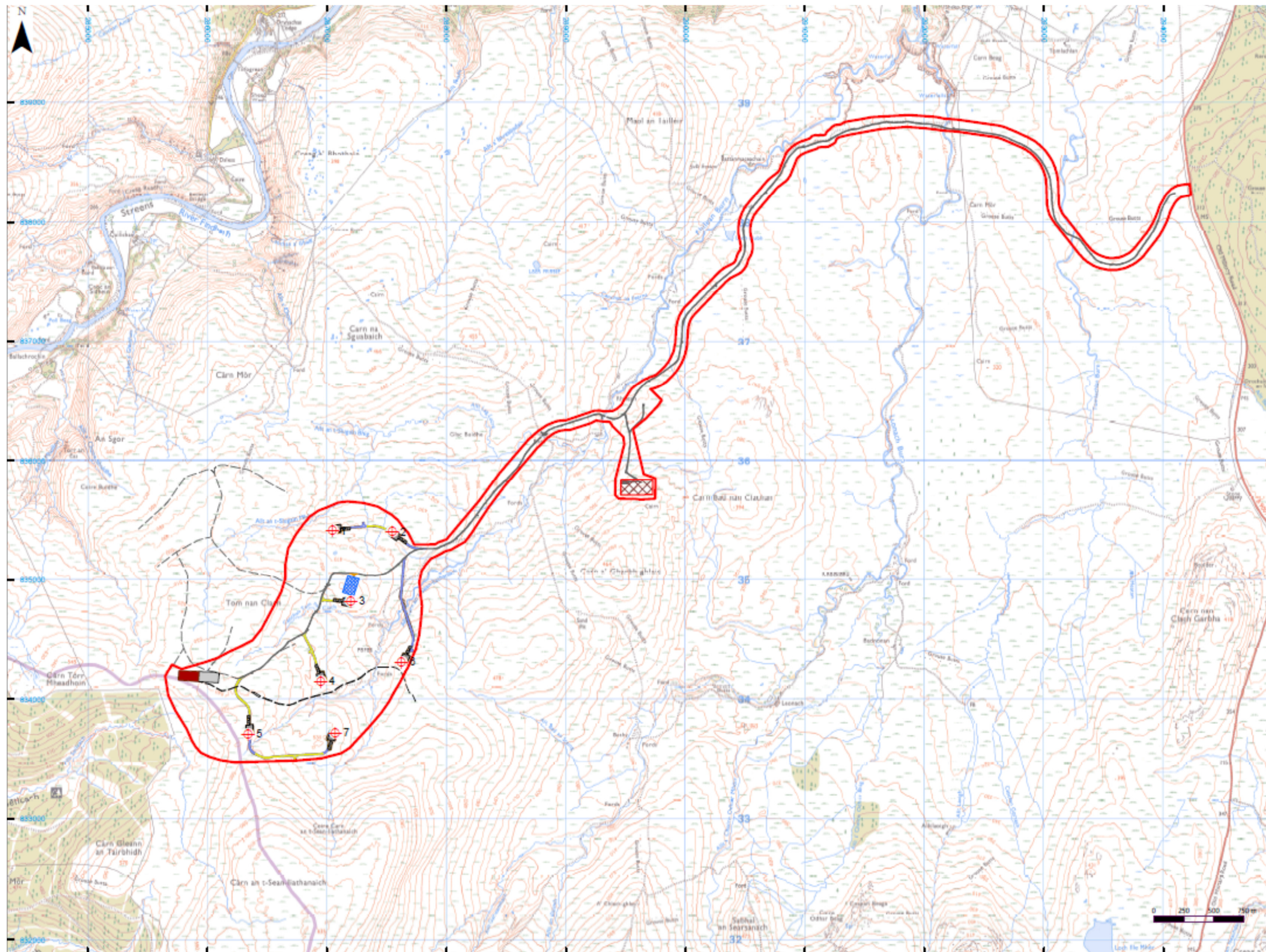
4 Schedule and Review of DS

- 4.1 Decommissioning will not commence for 40 years following the start of installation of the first turbines.
- 4.2 The most important steps in the decommissioning process involve forward planning and selection of the best decommissioning options which are likely to evolve over the operational period with improvements in technology, changes in working methods, good practice guidelines, and political and social opinion on the most effective strategies for renewable energy sites. Therefore, decommissioning options will be reviewed and assessed over the lifetime of the project.
- 4.3 It is anticipated that formal review processes, along with regulatory bodies, are undertaken at the following times:

- years following commencement of generation;
- 10 years following commencement of generation; and
- 15 years following commencement of generation.

4.4 A final review should be undertaken 2 years prior to the end of operation to finalise the detail of decommissioning provisions, ensuring the timing of works do not impacts on ecological sensitivities, ensure that impacts have been appropriately assessed and to consult with relevant regulatory bodies on the need for further assessment/provisions.

APPENDIX A PROPOSED DEVELOPMENT LAYOUT



- Legend:**
- Site boundary
 - + Turbine location
 - Indicative Borrow Pit
 - Proposed Substation
 - Track to Construction Compound V2
 - TNCK Crane Pads
 - Construction Compound V2
 - Existing Access
 - Existing Substation
 - Existing 33kV Cable Route
 - Existing Internal Tracks
 - TNCK Access Tracks Floating
 - New Access
 - TNCK Earthworks New

Title:
Site Layout

Project:
Tom na Clach Wind Farm Extension

Source:
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Client:
Infinergy

Drawn by: panng	Checked: hughg
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Date: February 2022	Figure: 3.0
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Scale: 1:30,000	Revision No: P01.5
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