

ED13835 Berry Burn – Scheme of Works (text for inclusion in report by others)

This working statement has been prepared to accompany the planning application for the proposed Borrow Pits. In preparing this statement we have also addressed Condition 30 of the Berry Burn Wind Farm Extension consent¹.

Borrow pit one (BP1) is located in an area that in part comprised a former borrow pit utilised for stone extraction associated with the construction of the now operational Berry Burn Wind Farm. The proposed extension to the footprint of this restored excavation should be sufficient to provide the entire volume of stone required to construct the Berry Burn Wind Farm Extension. However, should issues with stone quality arise, due to geological variation, a smaller, reserve borrow pit site (BP2A) is proposed to the east. BP2A is adjacent to the proposed location of turbine 6 and, if used, will be excavated prior to construction of the turbine foundation. The indicative borrow pit designs are shown on drawings ED13835-009 (BP1) & ED13835-010 (BP2A).

In accordance with Condition 30 of the Berry Burn Wind Farm Extension consent, borrow pit development shall only commence following written approval of the scheme for working and restoration by the Planning Authority in consultation with SEPA. Responses to parts a-e of condition 30 are as follows:

- (a) a detailed working method statement based on site survey information and ground investigations;

Prior to mobilising to site a detailed topographic survey and pre-condition inspection shall be undertaken to identify and document all existing features. The borrow pits have been designed according to the findings of the Interpretive Ground Investigation Report² and Borrow Pit Assessment³ both undertaken by Natural Power in 2024. The borrow pits will be micro-sited to avoid impacting ecological and hydrological receptors, and sensitive soils. Upon mobilisation by the contractor, the excavation boundaries will be surveyed and fully demarcated with post and wire fencing, lockable gated access and clear signage, to restrict unauthorised access and ensure public safety.

- (b) details of the handling of any overburden (including peat, soil and rock);

In order to expose the rockhead, the superficial peat and sub-soil strata will be stripped individually and segregated for storage in temporary stockpiles in suitably prepared, designated parts of the site. Peat will be stored for as short a period as possible, which will be achieved by detailed planning through the peat translocation plan. If peat is to be stored for periods generally exceeding 6 weeks in duration, measures will be taken to keep it wet, through irrigation as required. When storing peat, the peat profile will be maintained by storing acrotelm turves and catotelm separately. The excavated turves will be placed, rather than tipped loose, to preserve their structural integrity. A maximum of 5 layers of acrotelm turves will be stored, vegetated side up, separated with a suitable geomembrane. Pseudofibrous (semi-fibrous) catotelm peat can be stored in stockpiles up to 2m high, with slopes of 1v:2 or 3h, noting that slacker slopes may be necessary for softer material. Peat stores may need to be banded, e.g.

¹ William Black (Scottish Ministers) to Simon Herriot (Savills), 08 December 2021.

² Natural Power, Berry Burn Wind Farm Extension Interpretive Ground Investigation Report, 06 March 2024.

³ Natural Power, Berry Burn Wind Farm Extension Borrow Pit Assessment, 11 March 2024.

using the clay subsoil, to prevent water from draining away from the storage area and to maintain saturation. Mixing of the bund material with peat shall be avoided.

Due to the nature of the rock mass and extraction history of the existing Berry Burn Wind Farm borrow pit, it is likely that blasting will be required to achieve rock fragmentation and excavation. The stripped rockhead will be prepared for blasting by a specialist drill-and-blast contractor according to the borrow pit design. Edge protection and bunding shall be constructed from excavated overburden materials to ensure safety when adjacent to faces and slopes. If required, blasting will be carefully designed to fragment the rock mass sufficiently to work effectively, whilst minimising environmental impacts, such as ground vibration, overpressure, and flyrock, which are particularly pertinent due to the existing turbines close to BP1 . The blast radius area shall be cleared to restrict access and ensure safety, prior to, during, and following each blast.

Blasting shall be undertaken only during agreed hours (between 10.00 to 16.00 Monday to Friday, and 10.00 to 12.00 on Saturdays, with no blasting taking place on a Sunday or on a Public Holiday), and ground vibration shall not exceed a peak particle velocity of 6mm/second at agreed monitoring locations to be agreed and approved in writing, in advance, by the planning authority as stipulated in condition 31 of the Berry Burn Wind Farm Extension consent.

Fragmented rock from the blast (or as-dug) pile will be fed into the mobile crusher plant to produce stockpiles of aggregate on the borrow pit floor. The crushed rock will be graded to meet the specific material earthworks specification for the intended construction uses, e.g., structural fill or capping for tracks.

As the excavator works the blast (or as-dug) pile, the gradually exposed high wall will be inspected and mechanically scaled to reduce the risk of loose falling blocks, with rock trap bunds installed along the toe to contain any spalling material. If necessary, the design of subsequent blasts will be adjusted to account for geological conditions, and to optimise fragmentation and safe working of the borrow pit.

- (c) drainage measures, including measures to prevent surrounding areas of peatland, water dependant sensitive habitats and Ground Water Dependent Terrestrial Ecosystems (GWDTE) from drying out;

To minimise water ingress into the excavation area, water management features such as perimeter cut-off ditches will be excavated. Sediment management measures will be implemented within the surface water drainage to prevent silty run-off being discharged from the site; these may include strawbales, silt fencing and rock filter dams. Drainage measures shall not prevent surrounding areas of peatland, water dependant sensitive habitats and Ground Water Dependent Terrestrial Ecosystems (GWDTE) from drying out. Please refer to the Construction Environmental Management Plan (CEMP) for further information.

- (d) a programme of implementation of the works described in the scheme;

The borrow pits will be in use for the duration of the entire construction period of the Berry Burn Wind Farm Extension and will be restored at the end of that construction period. There will be no working of the borrow pits during the operational life of the wind farm.

- (e) details of the reinstatement, restoration and aftercare of the borrow pit(s) to be undertaken at the end of the construction period, including topographic surveys of pre-construction profiles and details of topographical surveys to be undertaken of the restored borrow pit profiles.

Once the final designed and blasted profile has been achieved, as confirmed by topographical survey, the stockpiled superficial deposits will be redistributed, in the sequence they were excavated, to create a restoration profile which will replicate undulating, natural-looking contours as closely as possible. All stockpiles, bunds and drainage features will be removed or reinstated and the borrow pit floor will be fully covered with overburden soils. Soil slopes will partially buttress the residual rock faces; however, the height of the exposed final faces will depend on the actual excavated volume of overburden materials available. Finally, all extraneous features relating to the construction will be removed and the site either seeded or allowed to revegetate naturally. Removal of the post and wire fencing will be reviewed on completion of the restoration works, following an assessment of the borrow pits restoration profiles and exposed rock faces. The completed restored borrow pit profile shall be inspected by a suitably qualified and experienced geotechnical engineer/engineering geologist to assess the stability of the residual landform, followed by a final topographical survey on completion of construction. Periodic inspection of the restoration landform may be required during the aftercare period to monitor stability, drainage and vegetation growth.

(Note – written by Chris Johnson and checked Jane Clarkson on 21/11/2024.)