

Our ref: PCS/164984  
Your ref: 19/01284/FUL

If telephoning ask for:  
Aden McCorkell

16 April 2019

Peter Wheelan  
The Highland Council  
Town House  
Inverness  
IV1 1JJ

By email only to: [epc@highland.gov.uk](mailto:epc@highland.gov.uk)

Dear Mr Wheelan

**The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017**

**Planning application: 19/01284/FUL**

**Lochluichart Wind Farm Extension II - erection of 9 turbines (maximum tip height 133m), temporary construction compound, borrow pits, crane pads, access tracks, underground cables between turbines, sub-station, battery storage, maintenance and control buildings with welfare facilities**

**Land between Lochluichart and Loch Glascarnoch, Garve**

Thank you for your consultation email which SEPA received on 12 April 2019.

We previously provided the below advice to the applicant on 2 April 2019. Unfortunately we must **object** due to lack of information. We will review this objection if the issues detailed below are adequately addressed.

As previously suggested to the applicant, we would be very much receptive to meeting on site to view and discuss any of the issues raised in this response. Please note the advice outlined below.

**Advice for the planning authority**



Chairman  
Bob Downes

Chief Executive  
Terry A'Hearn

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## Key to responses

Red/Green – Applicant  
Blue - SEPA

### 1. Environmental enhancement

1.1 We note that there will be permanent habitat loss, as well as additional disturbance during construction. We would expect there to be some compensation proposed for impacts to the site, and added environmental improvements or enhancements where appropriate. We note that a Habitat Management Plan which includes enhancement for blanket bog habitats has been suggested, and we would be supportive of this. We therefore request clarification on whether a Habitat Management Plan will be produced, and what compensatory action is proposed.

A Habitat Management Plan will be produced, it will include habitat re-instatement and deliver compensatory habitats and enhancements. This will include site-specific measures from the following list, which will be included as appropriate, post consent:

#### Habitat Reinstatement

Full details of habitat restoration/reinstatement will be provided within the CEMP. Measures will follow 'Construction Code of Practice for the Sustainable Use of Soils on Construction Sites 2009' and 'Good Practice during Wind Farm Construction – Joint Publication 2015'. Habitat restoration will be overseen by the ECoW and include the following fundamental principles.

- Following the construction phase, all temporary site offices, containers, machinery and equipment shall be removed and temporary construction compound(s), track verges and any temporary working or stockpiling areas shall be fully reinstated, unless otherwise agreed with the LPA.
- Soils and turves will be stripped and stored in line with current good practice guidance, and maintained in a viable condition ready for reinstatement. – Turves are most critical to retain in good condition for reinstatement and this should be highlighted.
- So far as reasonably practical, all disturbed areas which require reinstatement will be reinstated with the same vegetation types as exist at present, thereby ensuring minimal disruption to the surrounding habitats.
- Storage of materials will not be permitted outside of approved and prepared storage areas or within 50m of watercourses.
- Stripped soil will be reinstated as close to where it was removed as possible. This will help to maintain a local seed base and local/geological/hydrological characteristics.
- Subsoil, topsoil and turves will be replaced in same order as removed.
- During periods of dry weather, exposed peat shall be kept moist.
- Unless otherwise agreed, turves will be re-instated following the works and oriented vegetation side up.
- Reinstatement will be carried out as soon as possible following stripping to ensure integrity of material is maintained.
- Where turves are not available, areas will be left to vegetate naturally. - We would like to see this amended to state that where there is insufficient turves, the turves will be evenly distributed in a checkerboard like pattern over the bare peat to ensure maximum coverage and aid in swift reinstatement. We do not want to see bare peat left to dry out, oxidise and erode. Applicant is happy with this suggestion.
- Excess soil or contaminated soil will be disposed of offsite at a licenced facility.
- Reinstatement of construction area will be undertaken to a high standard, using existing soil and vegetation material where possible, in accordance with current best practice.
- If re-vegetation is not successful and has not occurred within an agreed period of time, further consultation with SNH and SEPA will agree a course of action which could include re-seeding using a native mix or translocation from other habitats onsite.

- No mineral soil or clay-based soil will be used for habitat reinstatement along the sides of tracks, to prevent silt run off into surrounding habitats.
- Temporary laydown areas will avoid areas of blanket bog and guided by the ECoW.
- Soil within areas of temporary use will also be protected once the top turf layer has been removed by the use of geotextile base to facilitate the removal of any engineer fill required.

The information above outlines best practice construction/reinstatement but a Habitat Management Plan usually details compensatory plans (e.g. peatland restoration opportunities on site or adjacent or other habitat improvements/creation) that is separate from the construction reinstatement and purely for the benefit of the habitat/area to compensate for impacts to the site. We therefore ask for clarification on what this will entail. Applicant will provide this detailed information, subject to planning permission being granted as the process towards planning conditions are being discharged.

## 2. Site layout

- 2.1 The area marked in the Site Plan (Figure 1) as Substation/Control Building is quite large. It appears that this general area will include both the temporary site compound as well as the permanent control building, but this is not clear. Although individual indicative plans for each have been produced, it is not clear whether this whole area will be required. We want to see that steps have been taken to reduce the footprint of impact to the minimum size possible. To this end, we also note that the Site Plan produced as part of Appendix 2.C (Preliminary Borrow Pit Investigations), shows satellite imagery of the location of Borrow Pit 1, which appears to be attached to a site compound. It is not clear whether this is still existing and could be re-used, or whether this is what is also being proposed. We therefore must **object** until a revised site plan(s) is submitted which shows the specific location and dimensions of both the temporary site compound and the permanent substation/control building.

Revised Site layout figure enclosed. The Substation/Control Building has been reduced in scale to 170m x 80m.

We welcome this refinement of the plans to minimise impacts, but with a reduction in the amount of access track now proposed, are two borrow pits necessary? Once we receive clarification on the other issues addressed in this response, we will ask for a phased condition to be applied, seeking a requirement to use the existing borrow pit first, with only permission to use the second granted subject to a demonstrated need. This would substantially reduce the impacts to the site.

The applicant is happy with a phased condition to be applied.

- 2.2 As stated in our scoping response on 11 May 2017, we would not be supportive of a layout which makes use of unnecessary spurs or loops. It appears that the applicant may want to connect the new tracks to an existing wind turbine to the south (track south of turbine 6). However, we do not want to see a duplication of access tracks in such close proximity to each other leading to the same turbines (turbines 6 and 7). We therefore **object** and ask that alternatives be considered which reduce the amount of access track leading to turbine 6 and 7, and investigate whether these might be connected or redesigned to reduce impacts on the environment.

The applicant is committed to constructing only one track (and happy for this to be conditioned), further site investigations post consent will inform this; there will not be a 'loop' but one connecting track. This still isn't clear, as Figure 3.1 Site Layout, still shows two tracks paralleling each other. The planning application needs to demonstrate it has minimised its impacts through the design of its site layout. We would therefore like to the

see the layout changed to investigate viable alternatives, and reduce the length of tracks in this location through design – i.e. we only want to see one track from T7 through T6 through to the existing turbine to the south. I've demonstrated in the below image the two paralleling tracks, and a potential option to reduce the amount/duplication of access track, but would be happy to discuss/consider alternatives that would accomplish a similar result. Now updated, spur track removed (see updated Figure 3.1) following discussion with Aden.



- 2.3 We also note that satellite imagery of the existing windfarm to the south clearly shows that numerous informal tracks have been created between turbines on different 'branches' of tracks, so that site contractors could take short cuts. We do not want to see this repeated and would expect this to be addressed as part of the Construction Environmental Management Plan, which would be conditioned with any grant of consent.

Infinergy are happy for this to be conditioned.

- 2.4 We also note that there will be battery storage on site. We must **object** until further information is provided in the form of an amended site plan, which shows that the battery storage area is bunded with appropriate drainage.

Updated figures/drawings to be provided, to take into account concerns (awaiting completion). We welcome figure 3.5 Rev 2 dated August 2019, and are happy with the proposed system for bunding and pumping surface water with an oil detection alarm fitted. My only question would be whether an oil detection alarm with work with batteries, as I am assuming it is not oil, but battery acid that would need to be considered?

Battery Storage facilities which have been installed at wind farms currently have been based on lithium ion technology, acid is not involved in this energy storage option. Battery storage technology continues to develop apace, the applicant will appraise the best option available based such criteria as performance, value & environmental impact as part of a procurement exercise. Consultees will be involved in assessing the environmental impact of any finalised option.

### 3. Borrow pits

- 3.1 We welcome that Preliminary Borrow Pit Investigation reports have been submitted for Borrow Pit 1 and Borrow Pit 2; however we note that Section 5 of Appendix 13.A (CEMP)

states that existing borrow workings used for operational forestry may be used for development, while new borrow pits may be opened.

- 3.2 We note that the report on Borrow Pit 1 recommends the re-commissioning of the reinstated borrow pit associated with the main development located near the site entrance (as shown and proposed in Figure 1). Borrow Pit 2 has been selected opposite the proposed site compound/substation area. We therefore must **object** until further justification is provided on why two locations for borrow pits are needed, and further clarification on whether existing forestry borrow pits could be utilised.

It is hoped that there will be enough winnable material from Borrow Pit 1 (located within a forestry plantation), used for the construction of the Lochluichart schemes. Additional site investigations conducted (trial pits) indicate this, and it is the preference of the applicant to use only 1 borrow pit. If this is not the case an alternative area has been assessed. This is preferable to importing from an off-site quarry, and reduced the burden on the A835, a popular tourist route.

There are no existing 'forestry borrow-pits on site', with exception of Borrow Pit 1 as indicated which has been restored.

Please see our response to section 2.1 regarding borrow pits.

- 3.3 As stated above in reference to the substation area, the areas indicated in orange on the site plans are much larger than those identified in the Preliminary Borrow Pit Investigations. While some general information has been presented in Appendix 13.A (Outline Water Construction Environmental Management Plan), at this stage we would expect site specific site plans showing proposed boundaries and technical drawings. As stated in our scoping advice dated 11 May 2017 (PCS/152588), we require the following site specific information to be submitted to support this application:

The applicant considers all these requests (a – j below) to be valid and will be provided, and is happy for these matters to be dealt with by planning condition, subject to a consent being achieved.

Please see our response to section 2.1 regarding borrow pits. Provided ground investigations have determined a viable aggregate source is present and the proposed locations are outwith the 10m buffer to the watercourse, then we are happy to accept the detail below as a condition.

The Applicant is happy with this.

- a) A map showing the location, size, depths and dimensions of each borrow pit.
- b) A map showing in relation to each proposed excavation, stocks of rock, overburden, soils and temporary and permanent infrastructure including tracks, buildings, oil storage, pipes and drainage, overlain with all lochs and watercourses to a distance of 250 metres from working areas.
- c) A site-specific buffer drawn around each loch or watercourse proportionate to the depth of excavations and at least 10 m from access tracks. If this minimum buffer cannot be achieved each breach must be numbered on a plan with an associated photograph of the location, dimensions of the loch or watercourse, drawings of what is proposed in terms of engineering works.

- d) A ground investigation report giving existing seasonally highest water table including sections showing the maximum area, depth and profile of working in relation to the water table.
- e) A site map showing cut-off drains, silt management devices and settlement lagoons to manage surface water and dewatering discharge. Cut-off drains must be installed to maximise diversion of water from entering quarry works.
- f) A site map showing proposed water abstractions with details of the volumes and timings of abstractions.
- g) A site map showing the location of pollution prevention measures such as spill kits, oil interceptors, drainage associated with welfare facilities, recycling and bin storage and vehicle washing areas. The drawing notes should include a commitment to check these daily.
- h) A site map showing where soils and overburden will be stored including details of the heights and dimensions of each store, how long the material will be stored for and how soils will be kept fit for restoration purposes. Where the development will result in the disturbance of peat or other carbon rich soils then the submission must also include a detailed map of peat depths (this must be to full depth and follow the survey requirement of the Scottish Government's [Developments on peatland: Site surveys and best practice](#)) with all the built elements and excavation areas overlain so it can clearly be seen how the development minimises disturbance of peat and the consequential release of CO<sub>2</sub>.
- i) Sections and plans detailing how restoration will be progressed including the phasing, profiles, depths and types of material to be used.
- j) Details of how the rock will be processed in order to produce a grade of rock that will not cause siltation problems during its end use on tracks, trenches and other hardstanding.

#### 4. Impacts to peat

- 4.1 We note that peat depths generally range from 0-4m across the site, with the majority of development on peat below 1m. We note that an Outline Peat Management Plan has been presented in Appendix 13.C. We welcome Figure 4 of the Outline Peat Management Plan which demonstrates where floating tracks will be utilised, which we ask be specifically secured by **condition**, unless otherwise agreed with the Planning Authority in consultation with SEPA.

Relevant updates to the oPMP have been made and are detailed below.

With the submission of Figure 3a, it appears that turbine 4 is situated on 1.5-2.5 m depth of peat, but could be located immediately to the east into shallower peat depths of 0-0.5. We therefore ask that this turbine be relocated into the shallower area of peat. We would not accept this to be addressed by a micro-siting condition, as it should be demonstrated through planning that the design has minimised impacts on peat in line with SPP.

Turbine T4 micro-sited 24m as requested above, basis of objection now removed.

- 4.2 We also welcome the table of volumes of excavated peat, demonstrating how all excavated peat will be reused on site in the restoration of turbines, access tracks, construction compound and borrow pits. Table 3.2 states that “dressing off and landscaping of 9 turbine bases on verge and earthwork banks, both assume up to 1.00m thick reinstatement” and that borrow pits reinstated to reflect the thicknesses of peat prior to borrow pit workings “i.e up to 0.5m at borrow pits 1 and 2”. Reinstating verges and dressing off and landscaping to 1m high seems excessive compared to what is proposed for the borrow pit reinstatement.

Arcus have re-visited the peat re-use estimations and through consultation with the developer, have made amendments to the reinstatement areas, allowing the peat reinstatement thicknesses to be up to 0.5m across all infrastructure. A figure (Figure 5) has been added, illustrating the indicative peat reinstatement areas at each of the infrastructure proposed. A Figure has also been added (Figure 6 a, b and c) showing possible peat storage areas.

Following Table 3.2, it states that verges will use peat depths of 0.5m wide and up to 0.6m deep. We must **object** until further information is provided on where 1m high landscaping will be acceptable and benefits the adjacent habitats. Peat that is landscaped above the water table will dry out, erode and oxidise. It may be that the estimated re-use volumes for verges has been estimated too high and if this is the case, then other plans for re-use may need to be explored.

Peat reinstatement and re-use has been explored resulting in peat reinstatement thickness no greater than 0.50m. Additional figures have supplemented the existing oPMP figures and the discrepancies in Table 3.2 and text following the Table 3.2 has been addressed. See Figures 3a, 5 and 6 in Appendix 1 of the oPMP. The applicant may elect to place up to 1.0m of peat in reinstated borrow pit. This is fine, provided evidence is supplied that the peat up to 1m deep will be stable and topped with vegetated turves. We would expect borrow pit restoration profiles to be submitted by condition with the rest of the information submitted with Section 3.3.

The Applicant is happy with this.

- 4.3 A site plan must be presented which demonstrates where excavated peat will be stored. We do not want to see peat excavations stored on undisturbed ground. Section 3.2.4 states that “suitable areas should be sited in locations with lower ecological value, low stability risk and at a suitable distance from water courses”. We agree with this statement, but must **object** until these locations are shown on a site plan. Temporary peat storage are include in an additional Figure ‘Figure 6 – Indicative Temporary Peat Storage Areas’. We welcome that these have been included the amended outline peat management plan. We would ask that the temporary storage of peat and peaty soils, as shown on Figure 5 included “as far as is practicable” placing removed turves over top of the stored peat to protect it from drying out as well as “as far as is practicable” providing the turves a surrogate site so that the vegetation is maintained during ‘storage’.

The applicant is happy with this, if the wording ‘as far as practicable’ is inserted (as above).

## 5. Impacts on Ground Water Dependent Terrestrial Ecosystems (GWDTE)

- 5.1 We welcome that a National Vegetation Classification survey is presented in Figure 11.2. We note that highly dependent GWDTE have been avoided. We note that the main impacts are likely to be on M15 wet heath, which is considered to have moderate groundwater

dependency. We note that Section 13.170 of Chapter 13 – Hydrology, states that “approximately 338.2 ha of M15 exists within the Core Study Area. Approximately 5.82 ha of M15 will be directly lost as a result of infrastructure at the Development being located within this community. Therefore, approximately 1.7 % of this community will be directly lost as a result of the Development. As such, direct hydrological effects will equate to a ‘minimal detectable effect on a GWDTE (between to 0.1 % - 5 % of study area) or no discernible effect on its integrity as a feature or its functionality in accordance with Table 13.3. Therefore the magnitude of the loss M15 will result in a negligible effect. Approximately 338.2 ha of M15 exists within the Core Study Area.” We are therefore satisfied with the mitigation proposed for reducing indirect impacts to the M15 wet heath and other wetland habitats, however, we ask that the CEMP is **amended** to include a dedicated section on this mitigation, which we will then **condition** with any grant of consent.

The applicant is happy for this to be conditioned.

## 6. Pollution prevention

- 6.1 We welcome that the management of sediment and surface waters has been addressed within the Outline Water Construction Environmental Management Plan (CEMP); however, the information is not site specific. We now expect developments to produce site specific maps showing cut off ditches to prevent clean surface water entering the construction site, and proposed locations of SuDS features (lagoons, cut off drains, discharges to vegetated 6buffers, check dams etc), demonstrating where they will be directed, and how polluted water will be treated and where clean water will be re-directed. This site plan must also clearly show how polluted surface water is kept away from the water environment.

The applicant considers this appropriate as a pre-commencement condition being the responsibility of a construction contractor as part of the Construction Environmental Management Plan, subject to a consent being achieved. Fine in this site specific circumstance.

- 6.2 We note that Plate 2: Typical Silt Traps contained within the CEMP appears to demonstrate a failed silt trap, and it is not clear what value it is adding to the protection of the water environment. Geotextile material silt fences or straw bales should not be used to filter water, but should be used to keep sediment on the construction site and away from watercourses. Any plans which solely rely on geotextile material or straw bales to filter polluted water should therefore be redesigned. We therefore must **object** until a comprehensive site plan(s) is produced to demonstrate the function and location of all planned SuDS features during construction, which clearly demonstrate that suitable mitigation will be applied throughout the entirety of the site. This will also aid site contractors in identifying exactly what needs to be designed into order to prevent pollution of the water environment.

The applicant considers this appropriate as a pre-commencement condition being the responsibility of a construction contractor as part of the Construction Environmental Management Plan, subject to a consent being achieved. Fine in this site specific circumstance.

## 7. Forest removal and forest waste

- 7.1 We welcome that Figure 16.2 and 16.3 have been submitted with the application. We note that Section 3.4.31 states that “the remainder of the infrastructure (associated with the windfarm) is located in areas classified as failed or open ground”. It should be noted that failed forestry may indicate that the ground conditions are wet and deep peat more likely to

be present, which would be less desirable from an environmental perspective.

- 7.2 Section 3.4.32 states that all merchantable timber will be harvested and extracted, but states that mulching of unmerchantable timber may take place. We must **object** until further information is provided on whether any mulching is proposed, the quantities proposed and the state and condition of the failed crop. As access is being created by the windfarm, it is not clear why any material would need to be left on site or mulched. Recent investigations into mulching on failed forestry sites have concluded that they do not aid in peatland restoration, and innovative ways to remove the timber from site have been recently applied with success.

See document enclosed '20190724 Loch II Forestry response to SEPA ltr'.

Fine - would these felled areas therefore provide an opportunity for peatland restoration, with the based of the trees cut down to or below ground level and water table raised through drain blocking?

Since the removal of four turbines from the Original Scheme, turbine T4 is the only turbine forming the Revised Development which appears to sit within a 'Forestry Area'. On further inspection, using satellite images and OS mapping, it is confirmed that turbine T4 is not within forestry.

## **Regulatory advice for the applicant**

### **8. Regulatory requirements**

- 8.1 Authorisation is required under The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR) to carry out engineering works in or in the vicinity of inland surface waters (other than groundwater) or wetlands. Inland water means all standing or flowing water on the surface of the land (e.g. rivers, lochs, canals, reservoirs).
- 8.2 Management of surplus peat or soils may require an exemption under The Waste Management Licensing (Scotland) Regulations 2011. Proposed crushing or screening will require a permit under The Pollution Prevention and Control (Scotland) Regulations 2012.
- 8.3 Details of regulatory requirements and good practice advice for the applicant can be found on the [Regulations section](#) of our website. If you are unable to find the advice you need for a specific regulatory matter, please contact a member of the regulatory services team in your local SEPA office at: Graesser House, Fodderty Way, Dingwall Business Park, Dingwall IV15 9XB Tel: 01349 862021.

If you have any queries relating to this letter, please contact me by telephone on 01349 860353 or e-mail at [planning.dingwall@sepa.org.uk](mailto:planning.dingwall@sepa.org.uk).

Yours sincerely

Aden McCorkell  
Senior Planning Officer  
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*This advice is given without prejudice to any decision made on elements of the proposal regulated by us, as such a decision may take into account factors not considered at this time. We prefer all the technical information required for any SEPA consents to be submitted at the same time as the planning or similar application. However, we consider it to be at the applicant's commercial risk if any significant changes required during the regulatory stage necessitate a further planning application or similar application and/or neighbour notification or advertising. We have relied on the accuracy and completeness of the information supplied to us in providing the above advice and can take no responsibility for incorrect data or interpretation, or omissions, in such information. If we have not referred to a particular issue in our response, it should not be assumed that there is no impact associated with that issue. For planning applications, if you did not specifically request advice on flood risk, then advice will not have been provided on this issue. Further information on our consultation arrangements generally can be found on our [website planning pages](#).*