



Our ref: PCS/140373
Your ref: 14/02969/PP

If telephoning ask for:
Lorna Maclean

22 June 2015

Argyll and Bute Council
Development and Infrastructure
Dalriada House
Lochnell Street
Lochgilphead
PA31 8ST

By email only to: centralvalidationteam@argyll-bute.gov.uk

Dear Sir/Madam,

The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011

Planning application: 14/02969/PP

Re-powering of Tangy windfarm comprising 16 turbines (125 metres high to blade tip), erection of control building, sub-station, 3 anemometer masts, formation of access tracks and ancillary development, including dismantling of Tangy I and Tangy II windfarms.

Kilkenzie, Campbeltown, Argyll & Bute

In response to our letter of 19 March 2015 we received further information from SSE on 19 May 2015.

We maintain our **objection** to this planning application on the grounds of lack of information regarding decommissioning, and private water supplies. We will review this objection if the issues detailed in Sections 1 and 3 below are adequately addressed.

We ask that a planning **condition** requiring mitigation to maintain hydrological connectivity to or between areas of GWDTE is applied. If this is not applied, then please consider this representation as an **objection**.

We also object to this planning application unless either the **modification** in Section 5 can be accommodated or a condition requiring mitigation is applied. Please also note the advice provided below.

Advice for the planning authority

1. Decommissioning



Chairman
David Sigsworth

Chief Executive
Terry A'Hearn

Angus Smith Building
6 Parklands Avenue, Eurocentral,
Holytown, North Lanarkshire ML1 4WQ
tel 01698 839000 fax 01698 738155
www.sepa.org.uk

General comments

- 1.1 We welcome the proposals to maximise the reuse of the existing usable infrastructure and are supportive of the proposals to reuse tracks. The decommissioning plans still however lack detail. We require further information on the preferred options for decommissioning the various elements of wind farm infrastructure, the environmental impacts associated with these and mitigation measures. Key considerations are the long term effects on ground and surface water and the waste implications. The potential environmental impacts will differ from site to site therefore a site specific assessment should be undertaken. Much of the background site data required for a site specific assessment will have already been provided for the Environmental Statement for the planning application for the original wind farm, and ongoing site monitoring.

Track and borrow pit reuse

- 1.2 a) It is noted that figure 5.1 Site layout shows the existing track to be reused however it would be useful to illustrate where the 2.1 km of existing track will be recycled on site. One could infer that the material from this track will be used in the construction of the “new cut track” and “new floating track”. It would be helpful to have this in writing with an estimate of volumes. 0.1km of track appears to be missing from the equation ($5.7 - 3.5 = 2.2$) but this may simply be a calculation error.
- 1.3 It is stated that borrow pit A is to be reused, could it be confirmed if borrow pit A has been restored, and it will be reopened for this project, and/or is it proposed to be restored on completion of Tangy III?

Peat Management

- 1.4 b & c) We welcome the design philosophy applied of maximising practicable use of existing infrastructure and minimising disturbance of deep peat. We are satisfied with the proposals for floating tracks. It is noted that a quantitative estimate of the peat volumes to be excavated and reused are included in table 7 of the ES. As stated in our response of 19 March 2015 SEPA accepts the Peat Management Plan (PMP) as a draft provided that a condition is attached to any planning consent requiring more accurate peat volumes to be provided post felling.

Turbine bases

- 1.5 d & e) It is understood that it is proposed to break down the top of the existing turbine foundations and hardstanding areas down to a depth of 1m and reuse the material on site. It is stated that it would be impractical to remove the entire foundation as it is reinforced concrete and the steel would not be reusable. Could you clarify whether the top 1m of the base is reinforced concrete.

We require a more detailed assessment of the potential decommissioning options, full/partial removal of turbine bases and their potential environmental impacts. This would include information on the volume of material to be broken out and reuse options, volume of infill material required and where it would come from. We also require further details on whether or not the reinforced concrete will be processed on site to remove the steel. A hydrological assessment of the options should also be provided.

Electric cabling

- 1.6 f) As stated in our letter of March 2015 all the electrical cabling should be removed. A detailed methodology for removing the cables should be submitted pre-consent.

2. Forestry and Habitat Management

- 2.1 We are satisfied with the overall approach to managing forest waste. All open habitats should follow the joint agency guidance (as referenced by SSE).

3. Private Water Supplies

- 3.1 The applicant has previously assessed the presence of private water supplies (PWS) in the vicinity of the development. However, there are four properties with groundwater-fed PWS registered with Argyll & Bute Council for which source locations for the PWS have not been identified. SSE acknowledges this and in their letter dated 19 May 2015 have stated that they “are committed to carrying out further investigations to fully establish the source locations to further refine the site specific mitigation requirements”. The source locations for these PWS should be identified. For each PWS at risk of impact from proposed infrastructure, a quantitative hydrogeological assessment should be carried out to demonstrate that the risks to the PWS are not significant. For guidance, see the Land Use Planning System Guidance Notes 4 (Appendix 2) and 31.
- 3.2 In our letter of March 2015 we expressed concern that borrow pit A is within 250 m of identified PWS G and H. However, the planned “working area” of this borrow pit is more than 250 m away from the identified PWS, with only part of the “search area” within 250 m of the PWS. We are therefore satisfied that Borrow pit A is outwith the buffer zone.
- 3.3 In our letter of March 2015 we also expressed concern that borrow pit C is within 250 m of identified PWS B. The applicant has provided a map showing indicative groundwater flow directions in the vicinity of the borrow pit and PWS (fig. 12.6). This map is not a sufficient assessment of the risk posed by the borrow pit to the PWS. The methodology used, particularly at the implied scale and resolution, is not considered appropriate to derive groundwater flow direction. It is recommended that borrow pit excavations take place outwith the 250m buffer. Alternatively, a quantitative hydrogeological assessment should be carried out to demonstrate that the risk to the PWS is not significant. The assessment should be carried out in accordance with the Land Use Planning System Guidance Notes 4 (Appendix 2) and 31. Furthermore, the applicant states that pumping may be employed within the borrow pit. The applicant should assess the potential requirement for pumping for compliance with GBR 2 or GBR 15 as outlined in the Water Environment Controlled Activities (Scotland) Regulations 2011 (as amended)(CAR). Abstraction of groundwater in quantities greater than 10m³/day may require a CAR permit depending on the scope and duration of the works.

4. Ground Water Dependent Terrestrial Ecosystems (GWDTEs)

- 4.1 In our letter of March 2015 we requested mitigation such as impermeable plugs to be used along the edge of the tracks and drains and in cable trenches to prevent them becoming a preferential pathway for groundwater. Our intention is not to require blocking of open drainage channels which are integral to track design and function. We recommend this mitigation in relation to cable trenches to prevent unnecessary drainage via this disturbed channel. For further information on clay bunds see appendix 1.

- 4.2 The mitigation to slow runoff, and promote cross-drainage is welcome and should be included as part of the condition to protect GWDTEs.

5. Peat Depth

- 5.1 Table 1 within the Peat Management Plan (PMP) states that the average peat depth of turbines and hard standings at T9 is 2.8m with an excavated volume of 4266m³ peat. We maintain our **objection** to the placement of this turbine in deep peat and request either that it is deleted from the infrastructure plans or that it is demonstrated through the geotechnical investigation and design phase that an appropriate method of construction is proposed to reduce peat excavation and carbon impacts at this turbine.
- 5.2 With regard to the other turbines listed in sections 7.1 and 7.2 of our response of March 2015 we are satisfied with the avoidance proposals put forward in section 7 of SSE's letter of 19 May 2015.

Regulatory advice for the applicant

6. Regulatory requirements

- 6.1 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 operations team in your local SEPA office at:

Kilbrandon House
Manse Brae
Lochgilphead
Argyll
PA31 8QX

Tel. 01546 602876

If you have any queries relating to this letter, please contact me by telephone on 01698 839 000 or e-mail at planning.sw@sepa.org.uk.

Yours faithfully

Lorna Maclean
Acting Planning Unit Manager (SW)
Planning Service

ECopy to: karen.anderson@sserenewables.com

Disclaimer

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 the planning stage. We prefer all the

technical information required for any SEPA consents to be submitted at the same time as the planning 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 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. 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 in [How and when to consult SEPA](#), and on flood risk specifically in the [SEPA-Planning Authority Protocol](#).

Appendix 1

Cut-off bunds frequency for cable trenches in windfarm developments

Similar to road cut-off drains the placement of clay plugs (bunds) at suitable distance within a cable trench would limit the groundwater flow within the trench footprint avoiding becoming a preferential pathway.

It is widely recognised that the use of clay plugs in trenches is an effective way to mitigate groundwater preferential pathway however, there is little information available on the spacing or frequency of these clay plugs or bunds within the trench. To give an indicative guide on bunds spacing the following assumptions have been taken:

- The cable trench section is approximately 2.25 m² (1.5 x 1.5 m, approximate maximum area from review of submitted windfarms applications)
- The cable trench is in-filled with medium sand
- Gradient range from $i_{min} = 0.01$ to $i_{max} = 0.2$ (it is recognised that most of the trenches are dug beside tracks and therefore have similar gradient range).

The number of cut-off or bunds to be installed should be proportionate to the gradient of the trench section and take into account the elevation differential to avoid excessive head on the clay plugs. The following table gives an indicative spacing based on the above and limiting the maximum head to approximately 4 m.

Trench gradient (%)	Bunds interval should not exceed (m)
20	20
15	30
10	40
8	50
6	70
4	100
<3	200 to none

The above figures are indicative only and the consultants are invited to forward alternative spacing corroborated by suitable justifications.