



**Scottish
Water**

Trusted to serve Scotland

30 January 2015

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SCOTTISH WATER

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Dear Sir,

14/0004/PREAPP. Glenouther Renewable Energy Park, Clunch Road, Fenwick, East Ayrshire

Thank you for consulting with Scottish Water regarding the above.

Water Quality

The proposed area falls within the catchment for a Scottish Water abstraction from Corsehouse reservoir (see attached catchment map). Scottish Water abstractions are designated as Drinking Water Protected Area (DWPA), under Article 7 of the Water Framework Directive. Corsehouse reservoir supplies Corsehouse Water Treatment Works (WTW). It is essential that water quality and water quantity in the area are protected.

According to the site maps there appear to be three turbines inside/marginal to the catchment (T1, T2 and T5). Please see attached catchment plan. There are uncertainties related to a catchment boundary derived from a 1:50000 OS Map and ground-truthing would be necessary to determine the detailed location and confirm whether they impact the catchment. The uncertainty is exacerbated by the presence of artificial drains in the area and these should be taken into account.

We would request that turbines, infrastructure and other associated activities are located out with the catchment to prevent any effects to drinking water quality. If this can be demonstrated to be impracticable, Annex 1, details a list of precautions to be taken into account.

Assets

The developer should confirm the location of SW assets by obtaining detailed plans from our Asset Plan Providers. Please see Annex 1 which includes the contact details for the Asset Plan Providers and a list of precautions to be taken when working within the vicinity of Scottish Water assets.

All detailed design proposals relating to the protection of Scottish Water's assets should be submitted to the Scottish Water Service Relocation Team (service.relocation@scottishwater.co.uk) for review and written acceptance. Works should not take place on site without prior written acceptance by Scottish Water.

I trust that the above is acceptable. If you have any questions relating to the above, please do not hesitate to contact me at the above address.

Yours sincerely,

Amanda Hutcheson
Regulation Advisor – Sustainable Land Management Team

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ANNEX 1

Precautions to Protect Drinking Water and Scottish Water Assets during Wind Farm Activities

1. Regulatory requirements

Scottish Water is required to ensure that any activity within a drinking water catchment does not impact on the ability of Scottish Water to meet its regulatory requirements.

The regulations relating to the quality of drinking water supplied by Scottish Water are the Water Supply (Water Quality) (Scotland) Regulations 2001. Quality Standards are derived from the European Drinking Water Directive 98/83/EC.

Water Treatment Works are designed to treat water quality envelopes and are based on site specific raw water quality parameters. If raw water deteriorates outside of this envelope it can affect the ability of the works to supply drinking water to customers at the required standards.

Under Article 7 of the Water Framework Directive, waters used for the abstraction of drinking water are designated as Drinking Water Protected Areas (DWPA). The objective is to ensure that any activity does not result in deterioration of waters within the DWPA. Examples of deterioration include:

- If a source requires to be abandoned and an alternative used to provide the supply
- Water abstracted has to be blended with water abstracted from another source
- Additional purification treatment has to be applied
- The operating demand on the existing purification treatment system has to be significantly increased.

If an activity falls within a DWPA, it is essential that water quality and quantity are protected.

2. Scottish Water Assets

If an activity is located within close proximity to water or waste water assets, it is essential that these assets are protected from damage. You can order copies of our water or waste water network drawings from the undernoted Asset Plan Providers, who have several years of experience supplying asset plans to the utility and developer industries and are ready to take your enquiry. This is distinct from your rights to seek access to and inspect apparatus plans at Scottish Waters area offices, for which no charge is applied.

Site Investigation Services (UK) Ltd

Tel: 0333 123 1223

Email: sw@sisplan.co.uk

National One-Call

Tel: 0844 800 9957

Email: swplans@national-one-call.co.uk

www.national-one-call.co.uk/swplans

If assets are located in the area please contact or write to the **Scottish Water Service Relocation team** via service.relocation@scottishwater.co.uk at your earliest convenience regarding mitigation measures.

3. General requirements to protect drinking water quality and assets

The following details a list of general precautions and protection measures to be considered to ensure that Scottish Water drinking water catchments and assets are not adversely affected. Specific precautions are given subsequent sections.

- 3.1. You should at all times allow Scottish Water access to assets belonging to Scottish Water and must avoid the obstruction or hindrance to them.
- 3.2. You will give full facilities to Scottish Water and our representatives to determine, by inspection or otherwise whether our assets and/or pipelines are protected and whether any special requirements of Scottish Water are being observed.
- 3.3. Scottish Water will not accept liability for any costs incurred by you and your developer in fulfilling any of these requirements.
- 3.4. The proposed timing of the works should be submitted to Scottish Water in advance. Scottish Water to be notified prior to any activities commencing on site and upon completion of these activities.
- 3.5. If a connection to the water or waste water network is required, you must make a separate application to the Customer Connections section for permission to connect. It is important to note that the granting of planning consent does not guarantee a connection to Scottish Water assets.
- 3.6. In the event of an incident that could impact on Scottish Water, we should be notified without delay, using the Scottish Water Customer Helpline Number 0800 0 778 778 and the local contact if known.

4. Protecting Drinking Water Quality

4.1. General Precautions for protecting drinking water

- 4.1.1. A Method Statement, Risk Assessment, Pollution Prevention and Contingency Plan must be submitted to Scottish Water at least 3 months prior to the works commencing. This should be agreed prior to any operations taking place. Any other associated documents such as Environmental Management Plan, Drainage

Plan, Peat Management Plan, etc. should also be submitted and agreed with Scottish Water at least 3 months prior to the development.

- 4.1.2. Where possible, locate infrastructure and activities outside of the drinking water catchment. If this can be demonstrated to be impracticable, all infrastructure and activities, for example, turbine locations, crane hard standing areas, cable trenches, access tracks, borrow pits, plant stockpiled materials, cement batching, wheel washing, compound areas, should be located a minimum of 50m from any watercourse, but preferably 100m.
- 4.1.3. Any impact to the hydrology of the area should be assessed throughout all stages of the site's development and operation. This should include natural drainage patterns, base flows / volume, retention / run off rates and potential changes to water quantity. Drainage should not be directed into adjacent catchments but retained within the existing catchment.
- 4.1.4. Any potential pollution risk which could affect water quality should be considered. This includes sediment run-off, soil or peat erosion, management of chemicals and oils, etc. This should be considered for operations at all stages of development including pre and post construction.
- 4.1.5. Mitigation measures to ensure minimum pollution to watercourses should be highlighted and adopted. They should be regularly checked, maintained and improved if pollution occurs.
- 4.1.6. Food grade oils to be considered to be used within turbines in close proximity to watercourses. The use of food grade oils within other plant and vehicles to also be considered depending on the risk to the drinking water catchment.
- 4.1.7. Any new road infrastructure should take into account local watercourses that are feeding into the watercourses/reservoirs that Scottish Water abstract from. Any crossing of these watercourses should be kept to a minimum. Pollution prevention measures should be put in place at each crossing point and silt traps, or equivalent, should be constructed at regular intervals to minimise the risk from pollution.
- 4.1.8. Once constructed, site roads should be regularly maintained to ensure minimal erosion and hence pollution, from the road surface. Site roads should be constructed from inert, non-metalliferous material, with low erodibility and low sulphide content.
- 4.1.9. No refuelling or storage of fuel or hazardous materials to take place within the catchment area. If this can be demonstrated to be impracticable, then the appropriate SEPA Pollution Prevention Guidelines 2, 7, 8, 21 and 22 should be followed, with 50m buffers from all surface watercourses, groundwater borehole abstraction points and springs. Oil storage should be in accordance with The Water Environment (Oil Storage) Regulations (Scotland) 2006. There should be dedicated areas created. Spill kits to be located within all vehicles, plant and high risk areas.
- 4.1.10. Waste storage, concrete preparation and all washout areas, should be in dedicated areas and designed to be contained and to prevent escape of materials / runoff to the environment.
- 4.1.11. Welfare/waste water facilities should preferably be located off catchment. If not practicable, then portable toilets to be used and waste disposed offsite or at least

secondary treatment and soakaways to be used and sampled. The proposed method should be detailed and Scottish Water notified.

- 4.1.12. Any proposed abstractions for activities such as, welfare facilities, cement batching plants, should be detailed and Scottish Water notified.
- 4.1.13. Site pollution prevention plans and contingency plans should include the Scottish Water Customer Helpline Number 0800 0 778 778 and the local contact details.
- 4.1.14. Induction training should be given to all personnel on site and include Scottish Water site sensitivities in relation to drinking water catchments and assets, also spill response.

4.2. Protecting drinking water in areas of shallow and deep peat

- 4.2.1. When deep or shallow peat is present within the proposed area of activity there should be an assessment on the potential release of colour and dissolved organic carbon quality as a result of changes to hydrology and/or physical disturbance. This should cover the construction and post construction phase.
- 4.2.2. Areas of deep peat should be avoided
- 4.2.3. Scottish Water would request that the natural hydrology within deep and shallow peats is maintained and/or restored. This should be taken into account when designing the turbine foundations, crane hardstanding areas, access tracks and cable trenches, etc., to permit this.
- 4.2.4. Scottish Water would request that the majority of access tracks in the drinking water catchment are constructed as floating tracks.
- 4.2.5. Exposed soils and peat can release sediment, colour and dissolved organic carbon. When these areas are connected to a watercourse, the use of geotextiles, turf replacement and/or reseeded, should be undertaken as soon as possible.
- 4.2.6. Restoration of any degraded peat should be considered for areas within the drinking water catchment. This should form part of any Habitat Management Plans for the site.

4.3. Protecting drinking water due to forestry activity

- 4.3.1. Any forestry activity likely to affect the drinking water catchment should be incorporated into the risk assessment.
- 4.3.2. Details should be provided on the harvesting / clearance process. We would request that the least disturbance method/s are selected where possible.
- 4.3.3. Where there are any historic drains and ditches within the wind farm area that discharge directly to a watercourse in the drinking water catchment, we would request that they are blocked in line with current Forest and Water Guidelines. Ideally in advance of any work being undertaken, to assist with providing protection for watercourses during activities.

4.4. Monitoring requirements to protect drinking water quality

- 4.4.1. During construction, daily visual assessments of the watercourses, flow conditions, prevailing weather and any pertinent observations, will be required and recorded. Pre and post construction, this should be undertaken when water quality samples are taken.
- 4.4.2. A sampling programme shall be established and agreed with Scottish Water. This should assess the baseline water quality for a minimum of one year prior to any activities commencing on site, including ground investigations and any felling activities. During construction and then post construction for a minimum of one year, then reviewed as to whether this should continue for an agree period.. The parameters, frequency and locations will also need to be agreed. This monitoring will establish if any decline in water quality can be attributed to the development. Trigger levels may also require to be established to determine when to report any potential issues to Scottish Water.
- 4.4.3. Site inspection / monitoring records should be taken and made available if requested. A monthly progress report should be produced and submitted to Scottish Water.
- 4.4.4. The Ecological Clerk of Works should have relevant knowledge and experience to provide advice and monitor compliance with protection measures for the protection of water quality in relation to abstractions for water supply.
- 4.4.5. Depending on the vulnerability of the public water supply, Scottish Water may request for a dedicated Environmental Manager to be appointed and present on site to assess and monitor any damaging effects caused by the development.

4.5. Guidance documents

Please ensure the appropriate Guidance Documents are followed:

- SNH/SEPA/Scottish Renewables/Forestry Commission Scotland, October 2010. Good practice during wind farm construction.
- Forestry Civil Engineering and SNH. Floating Roads on Peat (2010)
- SNH. Constructed tracks in the Scottish Uplands (2005)
- Current edition of the Forestry Commission (FC) Forests and Water Guidelines and the Diffuse Pollution Regulations for forestry.
- General Binding Rules under the Controlled Activities Regulations and follow the guidance provided by the Scottish Environment Protection Agency (SEPA) on pollution prevention, visit www.sepa.org.uk/guidance/ppg/index.htm

5. Protecting Scottish Water Assets

- 5.1 Scottish Water assets and structures such as underground valves and pipes should be located and marked prior to any site activity.

- 5.2 The offset distance has to be agreed in advance by Scottish Water. All structures and ground disturbance must be a minimum distance of 10 metres from the nearest raw water main or water main. All structures must be a minimum distance of either, 3 metres or depth plus 1 metre, whichever is greater, from the nearest sewer. Scottish Water reserves the right to ask for increased offset distance to suit specific circumstances.
- 5.3 No stationary plant, equipment, scaffolding, construction or excavated material, etc. should be placed over or close to any Scottish Water assets.
- 5.4 Special care must be taken to avoid covering or filling Scottish Water assets. Arrangements for altering the level of any chambers must be made in agreement with Scottish Water and constructed in accordance with our specifications. You will have to cover the costs of this work.
- 5.5 Excavation or pumping should not be carried out in the proximity of a water or waste water main without due notice having been given to Scottish Water. You will then be asked to comply with our requirements for the particular situation. Special care should be taken to prevent the removal of ground support systems. If these are exposed during excavation work, they must be supported and re-covered according to our requirements.
- 5.6 In the event of any of our assets being damaged, full details must be passed immediately to our local Operations team. No-one can interfere with or operate any Scottish Water apparatus.
- 5.7 You must provide us with adequate notice and full information regarding all proposals for piling or other construction methods that may create vibrations in Scottish Water pipelines or ancillary apparatus. It is imperative that your methods of construction adhere to the accepted Scottish Water standards in order to minimise vibrations and their effect on the pipelines which could create damage or leakage.
- 5.8 When construction plant is crossing over Scottish Water's existing apparatus, you should ensure the effective use of temporary protection to spread the weight on the water pipes and sewers to within safe working limits. Scottish Water requires that any proposals be subject to written acceptance by Scottish Water.
- 5.9 You or anyone working for you should not interrupt the flow of water or waste water within Scottish Water's mains or sewers.
- 5.10 You should at all times allow Scottish Water access to its assets. You must avoid the obstruction or hindrance to the prompt and efficient use and manipulation of valves, hydrants, meters or other apparatus, water mains. There should be no interference with the free discharge of scours from water mains.