Scottish Environment Protection Agency

Our ref: PCS/120588
Your ref: Scoping request

If telephoning ask for:
Fraser Blackwood

22 June 2012

Jack McGowan
Stirling Council
Environmental Services
Planning & Environmental Strategy
Viewforth
Stirling
FK8 2ET

By email only to: mcgowanja@stirling.gov.uk

Dear Mr McGowan

The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011
Scoping request
Proposed Exploration and Pilot Test Development for Coal Bed Methane
Letham

Thank you for your consultation letter of 31 May 2012. We consider that the following key issues should be addressed in the EIA process:

- Pollution prevention and environmental management
- Boreholes and water abstraction
- Effluent discharge
- Restoration
- Existing groundwater abstractions

Please note that all of the issues below should be addressed in the Environmental Statement (ES), but there may be opportunities for several of these to be scoped out of detailed consideration. The justification for this approach in relation to specific issues should be set out within the ES.

1. Pollution prevention and environmental management

1.1 The proposed works may have significant environmental impacts upon groundwater, surface water and waste management. One of our key interests in relation to major developments is pollution prevention measures during the periods of construction, operation, maintenance, demolition and restoration. The construction phase includes construction of access roads and any other site infrastructure.

1.2 We advise that the applicant should, through the EIA process, systematically identify all aspects of site work that might impact upon the environment, potential pollution risks associated with the proposals and identify the principles of preventative measures and mitigation. This will establish a robust environmental management process for the development. A draft Schedule of Mitigation should be produced as part of this process. This should cover all the environmental sensitivities, pollution prevention and mitigation

measures identified to avoid or minimise environmental effects. Details of the specific issues that we expect to be addressed are available on the Pollution Prevention and Environmental Management section of our website.

1.3 A Construction Environmental Management Document is a key management tool to implement the Schedule of Mitigation. We recommend that the principles of this document are set out in the ES outlining how the draft Schedule of Mitigation will be implemented. This document should form the basis of more detailed site specific Construction Environmental Management Plans which, along with detailed method statements, may be required by planning condition or, in certain cases, through environmental regulation. This approach provides a useful link between the principles of development which need to be outlined at the early stages of the project and the method statements which are usually produced following award of contract (just before development commences).

1.4 Best practice advice developed by The Highland Council (in conjunction with industry and other key agencies) on the Construction Environmental Management Process is available in the guidance note *Construction Environmental Management Process for Large Scale Projects*.

2. Boreholes and water abstraction

2.1 The construction of boreholes and subsequent abstraction will require authorisation from us under the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR). One of the major concerns with this type of development is the potential for cross contamination between different aquifer units, either by leakage through or movement behind the borehole casing. The proposed boreholes should therefore be constructed such that water of a different chemical composition does not enter another body of groundwater. Further information on the construction of the proposed boreholes should be provided in the ES along with a risk assessment of possible impacts on the water environment including groundwater and surface water.

2.2 Monitoring will also be required to demonstrate that no impacts are occurring to water features as a result of the proposed development and the proposal to develop a monitoring plan in consultation with SEPA is welcomed. We would also advise that groundwater monitoring boreholes may be required to be installed as part of this monitoring plan. Parameters assessed should include methane and conductivity.

2.3 Whilst we regulate water abstractions under CAR, the following information is required at the planning stage to advise on the acceptability of the abstraction at this location:

- Source e.g. ground water or surface water;
- Location e.g. grid reference and description of site;
- Volume e.g. quantity of water to be extracted;
- Timing of abstraction e.g. will there be a continuous abstraction;
- Nature of abstraction e.g. sump or impoundment;
- Proposed operating regime e.g. details of abstraction limits and hands off flow;
- Survey of existing water environment including any existing water features;
- Impacts of the proposed abstraction upon the surrounding water environment.

2.4 If other development projects are present or proposed within the same water catchment, then we advise that the applicant considers whether the cumulative impact upon the water environment needs to be assessed. The ES should also contain a justification for the approach taken.

2.5 The ES should also clearly state whether it is proposed to undertake any fracturing (either now or in the future) of the coal seams to enable the extraction of the coal bed methane. It should be noted that the injection of any fracture fluids would also require a CAR authorisation.

3. Effluent discharge

3.1 The proposed relocation of the effluent discharge pipe will be likely to require a technical variation of the existing CAR licence. The precise location of this outfall should be discussed with SEPA prior to the submission of the ES. The location is particularly important if the discharge volumes are to be increased in the future as the surrounding mudflats are a designated RAMSAR site.

4. Restoration

4.1 It is good practice for proposals such as this to be subject to conditions requiring the submission of a restoration and aftercare scheme. The restoration principles should be set out in the ES. The ES should outline the proposals for phased working and progressive restoration. Consideration should be given to the effect that any restoration will have on the water environment including groundwater quality and quantity and should include an assessment of the effect that any backfilling below the water table will have on groundwater flow. Please note that our regulatory controls do not require a financial bond from developers in terms of final restoration. We therefore recommend that the planning authority secures its own arrangements (e.g. financial bonds) to ensure the long term management of the site.

4.2 The proposals for well abandonment are welcomed, we confirm that upon completion of site activities, boreholes that are no longer required should be correctly decommissioned in accordance with current guidance, good industry practice or conditions set by other organisations. (Good practice for decommissioning redundant boreholes and wells, SEPA, 2010).

5. Existing groundwater abstractions

5.1 Roads, foundations and other construction works associated with large scale developments can disrupt groundwater flow and impact on groundwater abstractions. To address this risk a list of groundwater abstractions both within and outwith the site boundary, within a radius of i)100 m from roads, tracks and trenches and ii) 250 m from borrow pits and foundations) should be provided.

5.2 If groundwater abstractions are identified within the 100 m radius of roads, tracks and trenches or 250 m radius from foundations, then either the applicant should ensure that the route or location of engineering operations avoid this buffer area or further information and investigations will be required to show that impacts on abstractions are acceptable. Further details can be found in Appendix 2 of our Planning guidance on windfarm developments

(which is also applicable to other types of developments).

6. Flood risk

6.1 The site should be assessed for flood risk from all sources in line with Scottish Planning Policy (Paragraphs 196-211). Further information and advice can be sought from your local authority technical or engineering services department, Scottish Water and from our website. Our Indicative River & Coastal Flood Map (Scotland) is also available to view online. If a flood risk is identified then a Flood Risk Assessment should be carried out following the guidance set out in the Annex to the SEPA Planning Authority flood risk protocol. Our Technical flood risk guidance for stakeholders outlines the information we require to be submitted as part of a Flood Risk Assessment, and methodologies that may be appropriate for hydrological and hydraulic modelling. Further guidance on assessing flood risk and planning advice can be found at our website.

7. Engineering activities in the water environment

7.1 In order to meet the objectives of the Water Framework Directive of preventing any deterioration and improving the water environment, developments should be designed to avoid engineering activities in the water environment wherever possible. The water environment includes burns, rivers, lochs, wetlands, groundwater and reservoirs. We require it to be demonstrated that every effort has been made to leave the water environment in its natural state. Engineering activities such as culverts, bridges, watercourse diversions, bank modifications or dams should be avoided unless there is no practicable alternative. Paragraph 211 of Scottish Planning Policy deters unnecessary culverting. Where a watercourse crossing cannot be avoided, bridging solutions or bottomless or arched culverts which do not affect the bed and banks of the watercourse should be used.

7.2 If the engineering works proposed are likely to result in increased flood risk to people or property then a Flood Risk Assessment should be submitted in support of the planning application and we should be consulted as detailed below.

7.3 A site survey of existing water features and a map of the location of all proposed engineering activities in the water environment should be included in the ES. A systematic table detailing the justification for the activity and how any adverse impact will be mitigated should also be included. The table should be accompanied by a photograph of each affected water body along with its dimensions. Justification for the location of any proposed activity is a key issue for us to assess at the planning stage.

7.4 Where developments cover a large area, there will usually be opportunities to incorporate improvements in the water environment required by the Water Framework Directive within and/or immediately adjacent to the site either as part of mitigation measures for proposed works or as compensation for environmental impact. We encourage applicants to seek such opportunities to avoid or offset environmental impacts. Improvements which might be considered could include the removal of redundant weirs, the creation of buffer strips and provision of fencing along watercourses. Fencing off watercourses and creating buffer strips both helps reduce the risk of diffuse water pollution and affords protection to the riparian habitat.

7.5 Further guidance on the design and implementation of crossings can be found in our Construction of River Crossings Good Practice Guide. Other best practice guidance is also available within the water engineering section of our website.

8. Disruption to wetlands including peatlands

8.1 If there are wetlands or peatland systems present, the ES should demonstrate how the layout and design of the proposal avoids impact on such areas. A Phase 1 habitat survey should be carried out for the whole site and the guidance A Functional Wetland Typology for Scotland should be used to help identify all wetland areas. National Vegetation Classification should be completed for any wetlands identified. Results of these findings should be submitted, including a map with all the proposed infrastructure overlain on the vegetation maps to clearly show which areas will be impacted and avoided.

8.2 Groundwater dependent terrestrial ecosystems, which are types of wetland, are specifically protected under the Water Framework Directive. The results of the National Vegetation Classification survey and Appendix 2 (which is also applicable to other types of developments) of our Planning guidance on windfarm developments should be used to identify if wetlands are groundwater dependent terrestrial ecosystems.

8.3 The route of roads, tracks or trenches within 100 m of groundwater dependent terrestrial ecosystems (identified in Appendix 2) should be reconsidered. Similarly, the locations of borrow pits or foundations within 250 m of such ecosystems should be reconsidered. If infrastructure cannot be relocated outwith the buffer zones of these ecosystems then the likely impact on them will require further assessment. This assessment should be carried out if these ecosystems occur within or outwith the site boundary so that the full impacts on the proposals are assessed. The results of this assessment and necessary mitigation measures should be included in the ES.

8.4 For areas where avoidance is impossible, details of how impacts upon wetlands including peatlands are minimised and mitigated should be provided within the ES. In particular impacts that should be considered include those from drainage, pollution and waste management. This should include preventative/mitigation measures to avoid significant drying or oxidation of peat through, for example, the construction of access tracks, dewatering, excavations, drainage channels, cable trenches, or the storage and re-use of excavated peat. It should be noted that there are important waste management implications of measures to deal with surplus peat as set out within our Regulatory Position Statement - Developments on Peat.

9. Regulatory requirements

9.1 Details of regulatory requirements and good practice advice for the applicant can be found on our website at www.sepa.org.uk/planning.aspx. 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:

Stirling Office, Bremner House, Castle Business Park, Stirlingshire, FK9 4TF.
Tel - 01786 452595

If you have any queries relating to this letter, please contact me by telephone on 0131-273-7332 or e-mail at planning.se@sepa.org.uk.

Yours sincerely

Fraser Blackwood
Senior Planning Officer
Planning Service

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