



Cyfoeth Naturiol Cymru Natural Resources Wales

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Ein cyf/Our ref: EPR/AP3990LR

Eich cyf/Your ref:

Dyddiad/Date: 2 October 2013

Dear Dr Mitchener

Interim Comments on Landfill Gas Risk Assessment and Gas Management Plan

Following receipt of the Crymlyn Tip, Coed Darcy, Llandarcy – Landfill Gas Risk Assessment and Gas Management Plan (LfGRA), in accordance with Improvement Programme 1 of Table S1.3 Improvement programme requirements, please find our comments below. These comments are based on the information that has been provided in the LfGRA and the Environmental Settings and Installation Design Report (ESID).

It is acknowledged that the operator (St Modwen Developments Limited) have been restricted due to poor historic background gas data. In recent years the operator has made efforts to improve the data by the installation and monitoring of new gas wells. We agree with the comments that further monitoring is required on site. Due to the complexity of the site the increased monitoring needs to be undertaken so that a more detailed risk assessment can be developed. This risk assessment should also include attempts to quantify the dispersion of landfill gas outside of the permitted area. The further monitoring and revised risk assessment will facilitate the preparation of a gas management plan.

We would welcome attempts to quantify the fugitive release of methane from the surface of the landfilled area. This should ideally be done prior to and post the capping works proposed as part of the Capping of Crymlyn Tip – Construction Quality Assurance Plan. It is also noted that the submission has largely concentrated on the traditional bulk gases and there is limited examination of the potential emissions from other trace gases. This is particularly relevant due to the waste types that were accepted historically. Subsequently, further work should be

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undertaken to identify whether there are other trace gases present in the landfill gas that require assessment e.g. VOC's.

As part of the qualitative risk assessment, certain scenarios have been scored incorrectly: for example the "likelihood" of "loss of containment" should be "probable" as there is currently no containment at the facility. The risk assessment should therefore be re-examined once the additional investigative works are completed.

Have attempts been made to identify whether there are landfill gas indicator compounds present in the landfill gas that are not present in other sources. It is accepted that this could be problematic due to off-site contamination, but we would welcome discussions on this, as this will be helpful when the operator eventually aims to apply for full surrender.

Please could you provide further information on the method used to collect the gas flow readings.

Taking the above points into consideration, at this point we cannot accept and provide written approval for the Landfill Gas Risk Assessment submission. Subsequently, we require further monitoring before the risk assessment is then re-examined. Once this work is undertaken the operator should be in the position to then develop the landfill gas management plan in line with Landfill Directive requirements.

Further to this, it is recommended that attempts are made to start formalising the monitoring schedule as part of a Closure and Aftercare Management Plan required under IP2 of Table S1.3 Improvement programme requirements. The landfill gas monitoring proposals in section 3.2 seem appropriate, but we would request that the additional monitoring outlined above is included.

Once a monitoring schedule has been agreed as part of the Closure and Aftercare Management Plan, it can be amended or reduced in due course as more information is gathered and a better understanding of the site is achieved. The monitoring review can be undertaken annually and recommendations made by the operator as part of submissions made under condition 4.2.3.

We also wish to highlight our concern that the eventual housing development could potentially be sited directly adjacent to the landfill and therefore an appropriate understanding of the risks will be critical before this happens.

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Whilst the above comments relate to the risks from the landfill, it should be noted that there are also other sources of gas as outlined in the report. The developer must consider these when the development progresses to this area.

If you have any questions or wish to discuss any of the points raised above, then please do not hesitate to contact me via the details below.

Yours sincerely



Gareth M Davies

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