mouchel

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Your Ref W0281-01

5th September 2013

Dear Mr Owens

Limerick Gasworks Remediation- Waste Licence Application

Thank you for your letter dated the 12th of July 2013 entitled 'Notice in accordance with article 14(2) (b) (ii) of the Waste Management (Licensing) Regulations'. We have responded to the various items in your letter below.

In reviewing our responses, please be advised that a Remediation Contractor has not yet been appointed. While the PQQ stage of the tendering process has been completed, tender documents will not be issued until a Waste Licence has been obtained. Tenders are only valid for 90 days, and hence may become invalid before the Waste Licence application process is complete. Prior to their appointment, the preferred contractor must demonstrate that they can comply with all conditions of the Waste Licence.

ARTICLE 12 COMPLIANCE REQUIREMENTS

1. Appropriate Assessment

We have enclosed an attachment to our Appropriate Assessment Screening addressing the likelihood of significant effects on the proposed River Shannon and Fergus SPA (Site code 004077). It is noted that the SPA covers a similar area of the River Shannon to SAC 002165 and is same distance from the site of the proposed temporary remedial works. The Appropriate Assessment Screening concludes that the activity will not have a significant effect on the SPA, and hence it is not considered necessary to make any changes to the EIS.

An Appropriate Assessment screening report has been submitted as part of the planning process and has been accepted by Limerick City Council. We have attached a copy of the Grant of Planning Permission (ref. P12/87) for your information.

2. Waste Hierarchy

There has been a strong emphasis on minimising removal of material from site in the remediation strategy adopted. In determining the preferred remediation strategy, a detailed options appraisal (ref. 1021927/R/03) was carried out in which one of the main selection criteria was sustainability. There is an emphasis on recycling of any material removed from site and an assessment of the carbon footprint of the main remedial options was undertaken. The vast majority of material will be treated and re-used, and the small quantities requiring removal from site will be recycled where possible.

The design specification for the Phase 1 Pump and Treat works requires the contractors to provide details of appropriate recycling and disposal facilities. BGN are keen to reward sustainability within the tender process. The scoring mechanism to be used for selecting the contractor will allocate higher marks for recycling material being removed from site rather than disposal; as an example DNAPL may be used as a fuel in cement kilns.

Clause A753 (page 53) of the Phase 2 Design Specification (ref. 1021927/R/26) requires the contractor to follow current best practice with regard to waste management and waste minimisation for all waste produced at the site, specifically requiring them to follow a waste hierarchy and to identify recovery options for any material being removed from site.

A Process Flowchart for the Phase 2 works (Drawing no. 1021927/WL/006) is attached to the Waste Licence application which identifies the anticipated material processes.

3. Emissions to Atmosphere

The Design Specification provides a process flowchart for the Phase 1 Pump and Treat works, which identifies an emission point for vapours through an activated carbon filter. This flowchart is for guidance purposes only. Works specifications will be obtained from contractors as part of the tendering process, which will be required to include full details of any proposed emissions to atmosphere, together with any control and monitoring procedures for their proposed methodology.

The contractor will need to confirm that they can comply with all conditions of the Waste Licence prior to appointment. Once the Contractor is selected, full details will be

provided to the EPA of any proposed emission points, together with details of the nature of the emission, control measures and monitoring regime. Any emissions proposed by contractors will be required to comply with the EPA Air Emissions Monitoring Guidance Note #2 (AG2).

4. Discharge to Groundwater

The anticipated Pump and Treat process will comprise abstraction of groundwater/ DNAPL (generally from confined underground tanks), treatment (as shown on the indicative process flow chart attached to the Waste Licence Application ref 1021927/WL/005) and reintroduction of recycled water into the same vicinity as abstraction. The recycled water is required to comply with the discharge criteria detailed in Appendix E of the Specification. It is noted that the reintroduced water will be significantly cleaner than before abstraction. It will be the responsibility of the Contractor to prepare an accident and emergency response plan; the specific contents of which will depend of their selected methodology.

The precise locations and sequence of abstractions will only be known once the tendering process is completed. Specific details of locations, nature of discharge and concentrations of constituents will be forwarded to the EPA, once available.

5. Discharge to Sewer

It is not anticipated that significant quantities of treated water will require discharge to sewer in Phase 1 as the process re-cycles the treated water. During Phase 2 works, it is likely that groundwater will require pumping from excavations; such waters would be passed through a treatment plant prior to discharge to sewer.

Drawing number 1021927/WL/004 - 'Services Plan' identifies all sewers in close proximity to the site. As stated in the Waste Licence Application attachment F.4, it is anticipated that any treated water will be discharged into the foul sewer on Dock Road. It will be the responsibility of the contractor to identify an appropriate discharge point to suit his proposed methodology and site set up in respect to discharge volumes and water quality, providing compliance with the agreed discharge criteria and volumes agreed with Limerick City Council (see attachment F.4 of the Waste Licence Application for details of the allowable chemical concentration limits). The discharge limit set by Limerick City Council is 50m^3/day.

The Contractor will need to confirm that he can comply with all conditions of the Waste Licence and Planning Permission prior to appointment. The Planning Permission requires agreement of the sampling point with the Water Services Authority and includes a 24 hour flow proportional composite sampler, with samples to be collected

and analysed daily, along with online pH, DO and conductivity monitoring of treated effluent (a copy of the Grant of Planning Permission is attached for your information).

Once a suitably qualified and experienced Contractor for the works has been selected, full details will be provided of any discharge points, together with anticipated discharge volumes and water quality data for agreement.

6. Storm Water run off

Clause A775 on page 63 of the Phase 2 Design Specification identifies surface water management required to be undertaken by the Contractor. In particular, measures will include minimisation of generation of leachate and preventing its discharge while excavating, constructing stockpiles and backfilling.

The site has been surveyed with regard to drainage and sewers. We confirm there are no unused sewers or ducts at the site which provide conduits to the River Shannon. A drainage survey has been undertaken on the site which confirmed connections into the Limerick Main Drain along Dock Road. Any sewers, ducts etc encountered during the works will be grouted up and the location surveyed and the details included in the validation report.

7. Pulverised Fuel Ash

It will be a requirement for the Contractor to identify the constituents of the proposed binder he intends to use in the stabilisation process. Details of the binder will need to be submitted with the Contractor's tender. It is a requirement of the contract that the contractor complies with current waste legislation and must produce a site waste management plan for the works (Section A753 of the Phase 1 and Phase 2 Design Specifications). An addition will be made to this section of the Design Specification stating that no waste materials are imported to site, including any binder constituents, prior to tender documents being issued to tenderers.

8. Compliance with BAT/ BREF

The BREF's listed on the EPA website are in relation to manufacturing processes and do not relate to the varied approaches that can be applied in the remediation of contaminated land. The IPPC Bureau was reviewed to establish if an appropriate BREF was available. The majority of the BREF's are in relation to manufacturing or process industries so are not applicable. The Waste Treatment Industries BREF (August 2006) was reviewed as it appeared to be the closest to the proposed works. The BREF generally relates to waste treatment facilities that receive, treat/ process and re-use/ dispose of the product. This does not describe the Limerick remediation as the

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works are to remediate material already present on site. Within the concluding remarks section on page 541 the BREF states that-

'on-site remediation is not included in the document as was seen to be outside the scope of IPPC'

However, it is noted that many of the processes followed to date have been in accordance with the processes mentioned in the BREF. The remediation options appraisal presented in the Mouchel QRA report (ref. 1021927/R/03) has been undertaken considering many of the techniques detailed to consider in the determination of BAT (including; achieved environmental benefits, applicability, local conditions and track record). The BREF details three phases to determine appropriate waste treatment;

1) *Adequately characterise waste* - this has been undertaken through appropriate and comprehensive site investigations, soil and groundwater characterisation and monitoring at the site.
2) *Ensure waste is suitable for treatment activity* - The detailed options appraisal undertaken has selected treatment methods appropriate for the material identified on site.
3) *Ensure operational control of treatment process including inputs, reaction monitoring and end-point objectives* - Operational control will be the responsibility of the contractor, who will be required to provide detailed proposals and method statements prior to works commencing, works will also be monitored by client representatives to ensure adherence to methods. End points will be established during the tender process as detailed in the design specifications.

During the tendering process, contractors will be required to prove adherence to the principles and requirements of BAT and specifically general items within the BREF for waste treatment industries in relation to their proposed specific site operations and plant, such as; efficiency of waste treatments, storage and handling of waste, air emissions and provision of an EMP.

9. Compliance with Directives

The Waste Framework Directive outlines obligations in terms of waste management on member states and requires that waste management activities follow the waste hierarchy as defined in the Directive. In addition, tight controls are required on the re-use, recycling and disposal of waste should the production of the waste be unavoidable. The purpose of the proposed temporary works is the remediation of the contaminated material at the site. The selected two phase methodology has been chosen to minimise the quantity of material requiring removal from site, and any

material which is removed from site will be taken to an appropriately licensed facility in Ireland or Europe for re-use, recycling or disposal as a last option. All transportation of material will be undertaken in strict accordance with regulations including those in relation to transfrontier shipping if required. The temporary remediation activities/processes will be undertaken in accordance with waste management regulations.

The Water Framework Directive objectives are to prevent further deterioration of and to protect, enhance and restore the status of all bodies of water with the aim of achieving at least good status by 2015. The Water Policy Regulations (S.I. No. 722 of 2003), Surface Waters Regulations (S.I. No. 272 of 2009) and Groundwater Regulations (S.I. No. 9 of 2010) govern the shape of the WFD characterisation, monitoring and status assessment programmes in terms of assigning responsibilities for the monitoring of different water categories, determining the quality elements and undertaking the characterisation and classification assessments. The proposed remediation works are being undertaken to remediate the historic contaminated material at the site. The works will enhance the quality of the groundwater at the site and reduce the potential for the site to impact on surface or groundwater. The groundwater risk assessment undertaken as part of the remedial options appraisal (ref. 1021927/R/03) concluded that the site does not pose a significant risk to surface or groundwater. Notwithstanding this conclusion the remedial works being undertaken will enhance the water quality at the site. The proposed works do not involve any direct discharges to surface or groundwater.

The proposed works are covered under the Waste Regulations and are not activities requiring a permit under IPPC. Therefore the IPPC Directive does not apply to the works.

The Environmental Liability Directive has driven regulation that has established a framework of environmental liability based on the 'polluter-pays' principle, to prevent and remedy environmental damage. The purpose of the proposed works is to remediate the historical contamination at the site. All processes to undertake the works will be designed and managed so as not to create environmental damage as defined in the directive, namely:

- Water damage that has significant adverse effects on water status under the Water Framework Directive.
- Land damage that creates a significant risk to human health as a result of the direct or indirect introduction, in, on or under land, of substances, preparations, organisms or micro-organisms. or
- Damage to protected species and natural habitats.

10. Liability, Closure and Financial Provision

We have attached an example contents page for the proposed verification report which would form the basis of a CRAMP report. The verification report would include all 'as-built' details of the remediation works and would include chemical test results for groundwater monitored prior to, during and post remediation works. The report would support an application for surrender of the waste licence after completion of the remediation works. Financial support data has been provided by Bord Gais as part of the Waste Licence application (Attachment L.2). This provides details of Bord Gáis Éireann's financial circumstances within their Annual Report. A copy of their 2010 Annual Report was attached which includes details of the previous two years accounts and balance sheets (the most recent accounts at the time of the application). Also included was a letter from Bord Gáis Éireann confirming that they can adequately fund the works and that financial provision has been made accordingly. In addition, we have enclosed an updated financial provision letter and the 2012 Annual Report and Financial Statements from Bord Gáis Éireann.

As the proposed works are temporary (12-18 months duration) in nature all plant and equipment will be decommissioned and removed from site once the remediation works are completed. The site will be left in a tidy state with the final site surface capped with clean granular material. These works will be completed by the Contractor as part of the remediation contract.

With regard to the ELRA report, a preliminary report has been provided (ref. 1021927/R/29) which will be revised and issued to the EPA once the preferred contractor's methodology is known.

11. Remediation Contractor

We can confirm that a Remediation Contractor has not yet been appointed. The PQQ stage of the tendering process has been completed, but tender documents will not be issued until a Waste Licence has been obtained. Tenders are only valid for 90 days, and hence may become invalid before a Waste Licence is obtained. Prior to their appointment, the proposed contractor must demonstrate that they can comply with all conditions of the Waste Licence.

In view of the above, detailed Works Specifications for the proposed remediation works have not yet been received from Contractors. These will be available once the Waste Licence has been obtained and the procurement process completed. All Works Specifications and other documentation will be provided to the EPA prior to the commencement of remedial works.

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12. Other

We can confirm that crushing works are anticipated as part of the Phase 2 Solidification and Stabilisation works, as identified on the indicative process flowchart attached to the Waste Licence Application (ref. 1021927/WL/006). Contractors will be required to provide details of any specific crushing plant proposed for use, including mitigation and monitoring for nuisance such as noise, dust etc in accordance with the A800 clauses in the Phase 2 specification (ref. 1021927/R/26).

ARTICLE 13 COMPLIANCE REQUIREMENTS

It is noted, as previously stated, that these works relate to a temporary remediation contract and do not relate to the construction of a fixed long term facility. An EIS has not been formally requested and is not necessarily required to comply with legislation; the report has been provided to encompass as much environmental impact information as is possible for a temporary remediation scheme.

1. Further to our submission of the Waste Licence in May 2012 we have prepared a Human Environment Assessment Report (ref 1021927/R/28) which was required in support of the Planning Application for the works; a copy of which is attached. We have also attached a copy of a letter issued to Limerick City Council in response to planning queries together with the planning permission. The Human Health Environment Assessment report details potential impacts on human being that may arise from the proposed remediation works. The report considers in detail the existing socio-economic context of the site, identifies the various sensitive 'communities' within the vicinity of the site and assesses the potential impact on them. Relevant sections of the Environmental Impact Statement submitted as part of the Waste Licence application, which are relevant for the purposes of assessing impact on the socio-economic characteristics of the area, are referenced as necessary. Mitigation measures to address potential impacts are defined. Based on knowledge and previous experience of similar remediation activities there has been no significant impact on human health or the environment from emissions to air, groundwater, noise, dust or odour. Indeed the EPA themselves installed an air quality monitoring unit at the boundary of the Waterford gasworks remediation site (WL190-1) and concluded that air quality was satisfactory and would not cause any significant impact on human health or environment. An independent expert, Professor James Heffron was engaged to review odour and air emissions from both remediation schemes at Dublin (WL100-1 & WL108-1) and Waterford (WL190-1) and again concluded that there was no significant impact on human health.

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2. As stated above the relevant sections of the EIS have been referenced in the Human Environment Assessment report (a copy of which is attached), where relevant. It is not considered necessary to update the EIS on the findings of the Human Environment Assessment Report.

3. Material Assets as defined in the EPA's advice for EIS documents are-

'Resources that are valued and that are intrinsic to specific places are called 'material assets'. They may be of either human or natural origin and the value may arise for either economic or cultural reasons'.

Due to the derelict nature and former use of the site, it is not considered to retain any economic assets (such as; natural resources, transportation or major utilities) or cultural assets of a social nature (such as; language, folklore, literary association etc). The site does contain structures with protected status in the form of the Dock Road wall and the former generator building, which would be considered as physical cultural assets. The structures have been surveyed and assessed with reports provided as part of the EIS. The protection of the structures has been assessed and mitigation is required as part of the proposed methods for the works as detailed in the Specification documents for Phases 1 and 2 (Section A900 'Condition Survey and Protection of Features'), with consideration given to potential impacts due to vibration and working in the vicinity of structures.

4. An assessment of the potentially significant impact interactions due to the proposed remediation activities has been undertaken as part of the production of the ELRA report (ref. 1021927/R/29), and is included within the report in Appendix A. A copy of the ELRA report has been included.

If you have any further queries, do not hesitate to contact the undersigned.

Yours sincerely

Tony Brown
Technical Director
For and on behalf of Mouchel

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Notification of Grant of a Permission (Planning and Development Act, 2000 to 2012) from Limerick City Council dated 7th March 2013.
Letter from Bord Gais to Limerick City Council dated 3rd January 2013 providing response to a Further Information Request.
Bord Gais Annual Report and Financial Statements 2012
Bord Gais Financial provision letter dated 28th August 2013
Appropriate Assessment Screening Report (SPA 004077).
Human Environment Assessment report, ref. 1021927/R/28, dated November 2012, prepared by Mouchel Limited.
Environmental Liability Risk Assessment Report (ELRA), dated August 2013, ref. 1021927/R/29.
Example Verification Report Contents

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