



**OFFICE OF CLIMATE,
LICENSING &
RESOURCE USE**

INSPECTOR'S REPORT ON A LICENCE APPLICATION

TO:	DIRECTORS	
FROM:	Michael Owens	- Licensing Unit
DATE:	12 June 2014	
RE:	Application for an Industrial Emissions Licence from Bord Gais Eireann for an installation at Dock Road, Limerick (Licence Register W0281-01).	

1 Application Details

Licence application received:	4 May 2012
EIA Required:	Yes
Classes of activity under the European Union (Industrial Emissions) Regulations 2013 (P = principal activity):	11.2(b) (P) – Disposal or recovery of hazardous waste by physico-chemical treatment with a capacity exceeding 10 tonnes per day 11.1 – For associated waste recovery activity
Third party submissions:	Yes
Site Inspection:	26/08/13

2 Applicant and facility

Applicant:	Bord Gais Eireann
Type of Installation:	Treatment of hazardous waste (i.e. groundwater contaminated with coal tar). Recovery of waste soil and inert waste at the site.
Existing or new development:	Existing site (former Limerick City gasworks). New activity
Main classes of waste:	Coal tar, contaminated soil and extracted groundwater.

Quantity of waste to be managed:	Approximately – 36,500m ³ of contaminated groundwater. 600 tonnes of recovered coal tar. 100,000 tonnes of contaminated soil.
Waste activities and/or treatment processes:	<ul style="list-style-type: none"> - Treatment of extracted contaminated groundwater prior to recharge to ground. - Excavation, stabilisation and replacement of contaminated soil. - Recovery of crushed bricks and blocks (which will be generated by demolition at the installation) as inert hard core and backfill at the site.
Description of site:	Area: 1.4 Ha Location: Former gasworks site on Dock Road, Limerick City.

3 Site Description

The licence application relates to proposed remediation works at the former Limerick gasworks site which is located at Dock Road, Limerick City (see Figure 1 at the back of this report for the location of the installation). Coal gas manufacturing was carried out at the site from the 1830's to mid-1970's at which point it changed to oil gas production. This continued until 1986 at which point natural gas was introduced to the Country. The site also had a limestone quarry which was backfilled in 1938. Demolition and site clearance took place between 1988 and 1995. There are some old site offices and the remains of physical infrastructure (e.g. walls and tank plinths) at the site. Apart from that the site is derelict and is owned entirely by Bord Gais Eireann.

Coal gas manufacturing results in the production of hazardous materials such as coal tar. Coal tar is a DNAPL – a dense non-aqueous phase liquid. Some coal tar remains within underground tanks at the site and some has leaked into the ground. Other waste materials were spread over the ground when the site was cleared. Extensive investigations have identified widespread contamination of soil and groundwater at the site. The contamination is in the form of pockets of coal tar some of which is in free phase liquid form and some which is in more solidified form (i.e. tarry lumps). Contaminants include hydrocarbons, inorganic salts, PAHs and metals.

A conceptual site model was developed for the site which identified potential pollutant linkages to human health and to the River Shannon. The potential risk posed to the River Shannon is discussed in Section 5.4 below. In terms of human health, the applicant carried out a Human Health Quantitative Risk Assessment (QRA) which concluded that there is currently an unacceptable level of risk posed to the health of future site users and adjacent premises. This risk will continue to exist until the site is remediated.

The environmental and human health risk assessments were carried out using the UK EA/DEFRA and Dutch modelling and assessment methodologies, which as is required by EPA guidance¹.

It is the intention of the applicant to make the site available for development at some point in the future. However, this will require prior remediation of the site so as to eliminate risks to human health and the environment. The Human Health QRA included the derivation of soil and groundwater Remediation Target Values (RTVs) that are appropriate to the protection of human health and which will facilitate future development. A remediation strategy to achieve the RTVs (and thereby eliminate the risk to human health) was devised by the applicant.

4 Description of Remediation Strategy

The strategy involves (i) removing as much of the free phase coal tar as possible and (ii) stabilising any remaining contaminants so as to immobilise them. This is a typical approach for remediation works of this nature. It is proposed that the work will be carried out in two distinct phases as follows:

Phase 1 - pump and treat groundwater

Phase 1 works will use a 'pump and treat' methodology to remove free phase liquid coal tar from the underground tanks, ground and groundwater. This will entail the installation of wells to intercept the coal tar. Water will be heated (usually to about 35°C) and pumped into some of the wells and extracted from others over a period of time. The warm water acts as a medium to mobilise the free phase coal tar from the ground and to bring it to the surface where it can be separated from the groundwater in a mobile treatment unit (or units). The objective of the process is to remove localised pockets of coal tar and to treat contaminated groundwater.

The treatment step will involve passing the groundwater through oil separation units, sand filtration units and carbon filters. After treatment groundwater will be pumped to a holding tank prior to re-injection to ground. The rate of pumping, extraction and re-injection of groundwater will be 100m³/day approximately. After initial set up, the 'pump and treat' process will work automatically on a closed loop basis whereby the groundwater will be continually extracted, treated, recharged and extracted again (i.e. 24 hours per day) until as much of the free phase liquid coal tar as is possible is removed from the ground. This methodology is now commonplace in the UK for remediation of contaminated land.

It is considered that the extracted groundwater (prior to treatment) will be a hazardous waste. The separated coal tar liquid will be stored on-site in IBCs prior to removal off-site as a hazardous waste. Most of the free-phase liquid will be removed during Phase 1 and it is estimated that it will be completed within 12 months.

Phase 2 - Stabilisation and solidification of soils

On completion of Phase 1, Phase 2 works will commence. The top 3 metres of soil will be excavated and mixed with stabilising materials (e.g. bentonite or cement mixed with pulverised fuel ash) in a stabilisation plant and then replaced at the site. Any coal tar in solid form as well as any soil or material determined to be unsuitable

¹ Management of Contaminated Land and Groundwater at EPA licensed Sites (EPA 2013).

for on-site treatment and reuse will be removed from the site for disposal. This phase will result in the stabilisation and immobilisation of any contaminants in the soil remaining after Phase 1. The residual contaminants will be unable to migrate thus minimising the risk to the environment and to public health.

Phase 2 works will also involve the breaking up of a number of old structures and foundations. A screening/crushing plant will be used to prepare the broken concrete prior to use on-site as part of final ground-works (i.e. backfill, grading and surface placement of hard-core). Any groundwater encountered during excavation works in Phase 2 will be treated prior to discharge to sewer (i.e. it will not be re-injected to ground at that stage). As the remediation works progress temporary fencing will be installed to delineate the 'clean' and 'dirty' areas of the site. It is estimated that Phase 2 works will take 6 to 8 months to complete. Access to un-remediated areas will be restricted onsite.

Planning Permission for the remediation works was granted by Limerick City Council on the 7 March 2013.

A summary of the processes on-site is set out below:

Process Summary

Inputs	Process	Outputs	Emissions
Phase 1			
Groundwater contaminated with coal tar	Pump, treat and recharge	(i) Treated groundwater (recharged to ground in closed loop) (ii) Waste coal tar	Emissions to air Odour
Phase 2			
Inputs	Process	Outputs	Emissions
Excavated soil	Stabilisation Solidification Replacement	Stabilised soil replaced at site	Dust Noise Odour Emission to sewer
Structures and foundations	Crushing and screening of concrete and bricks	Reuse of crushed inert materials	Dust Noise

5 Consideration of Best Available Techniques (BAT) and BAT Conclusions

BAT for the installation was assessed against the BAT Conclusions contained in the following documents:

- *BREF Document for the Waste Treatment Industries (July 2006)* ^{Note 1}
- *BREF Document on Energy Efficiency (February 2009)*
- *BREF Document for Emissions from Storage (July 2006)*

Note 1: BREF currently under review.

I consider that the applicable BAT Conclusion requirements are addressed through: (i) the technologies and techniques as described in the application; (ii) the standard conditions specified in the RD; and (iii) where applicable, the inclusion of additional specific conditions (see Table 1 below). It should be noted that given the derelict nature of the site and the fact that little or no permanent infrastructure will be constructed at the site it was determined that some BAT conclusions (e.g. related to construction of impermeable standing areas and internal site drainage) are not appropriate or applicable to activities at the installation.

Table 1 - Additional Conditions in RD to address BAT Conclusion requirements

BREF Document for the Waste Treatment Industries	
Additional Requirement	New Condition
Consideration of impact at design stage (for new plant) of the eventual decommissioning of the plant	Condition 3.5.2(ii)
Label pipework	Condition 3.15.2
Prevent discharge without treatment	Condition 5.5.3
Protect soil from operational areas	Condition 3.6
Report on waste treatment efficiencies	Condition 11.9
BREF Document on Energy Efficiency	
Additional Requirement	Condition/Schedule
Energy efficiency of remediation infrastructure	Condition 3.5.2(i)
Optimising energy usage by pumps, motors, air systems and lighting	Condition 3.5.2(i)

I have examined and assessed the application documentation and I am satisfied that the technologies and techniques, as specified in the application, and as confirmed, modified or specified in the attached RD will ensure that the relevant requirements of BAT as stipulated in the above BAT Reference Documents will be applied at the installation. These include waste characterisation, suitability of waste for treatment, waste storage and operational control. In addition, I consider that the proposed activities, as described in the application, in this report, and in the RD, to be the most effective in achieving a high general level of protection of the environment having regard - as may be relevant - to the location of the installation and to the way in which it is designed, built, managed, maintained, operated and decommissioned.

6 Emissions

6.1 Air

The 'pump and treat' units (during Phase 1) will be closed loop water recirculation systems as described above. There will be no process air emissions but there will be air loss from the treatment units. Emitted air will first be passed through carbon filters to minimise emissions of VOCs (and consequently odour). In addition the stabilisation plant (Phase 2) will be fitted with dust filters in front of carbon filters to reduce dust emissions and to prevent blocking of the carbon filter. A summary of the air emissions is listed in the table below.

Air Emissions

Source	Control	Parameters of interest
Coal tar recovery plant (Phase 1)	Carbon filters	VOCs
Stabilisation plant (Phase 2)	Dust filters Carbon filters	Dust VOCs

Discharge to air will be insignificant in nature and consequently the inclusion of ELVs in the RD is not recommended. Nonetheless, so as to provide data on the nature of emissions Schedule C.1.2 *Monitoring of Emissions to Air* of the RD requires quarterly monitoring of volatile organic compounds (VOC's). In addition, in order to ensure that ambient air quality is not significantly changed from existing background levels by activities at the site Schedule C.5 *Ambient monitoring* of the RD requires monitoring of dust deposition and VOC's.

6.2 Emissions to Sewer

It is likely that it will not be necessary to discharge to sewer during Phase 1 works as the treated groundwater will be recharged to ground. However, as outlined above, it is proposed that during Phase 2 any groundwater encountered during excavation works will be treated prior to discharge to sewer. The treatment will be equivalent to that which will be applied to the extracted groundwater in Phase 1 (i.e. oil separator, carbon filtration and sand filtration). It is considered by the applicant, based on past experience, that volumes requiring discharge will not be significant. The sewer is connected to the Limerick Main Drainage Scheme (which serves Limerick City and its environs) and the Bunlicky Wastewater Treatment Plant (Licence Register No. D0013-01) the outfall from which discharges to the River Shannon.

Regarding the setting of appropriate ELVs for the discharge to sewer, reference must be made to the relevant BAT Conclusions in the 'Bref Document for the Waste Treatment Industries'. However, the ELVs as set in the BAT Conclusions are applicable to a direct discharge to surface water (i.e. without any further treatment). As the discharge from the licensed installation will be an indirect discharge (i.e. to sewer and a downstream WWTP) it is permitted to determine more appropriate ELVs while taking into account the effect of the downstream WWTP. This is allowed by Article 15(1) of the Industrial Emissions Directive provided that an equivalent level of protection of the environment is guaranteed and that the alternative ELVs do not lead to higher levels of pollution.

Irish Water was consulted on the proposed discharge to sewer under Section 99E of the EPA Act. In their response Irish Water provided consent for a discharge and submitted a table of ELVs for the discharge. The have been included in Schedule B.1 *Emissions to Sewer* of the RD. It is considered that the discharge of treated groundwater to sewer (with the ELVs as submitted by Irish Water and as set in the RD) will not affect the operation of the WWTP or cause pollution of the River Shannon for the following reasons:

- The extracted groundwater will receive a significant level of treatment prior to discharge to the sewer (comprising oil/water separation, carbon filtration and sand filtration to remove metals and organics).
- The discharge will receive further treatment at Bunlicky WWTP.
- The quality of the discharge from the WWTP is controlled under licence from the Agency.
- The actual volume of discharge to sewer during Phase 2 works will not be significant compared to the normal daily intake to the WWTP which is approximately 50,000 m³/day.

Overall, with regard to Article 15(1) of the IED – referred to above - it is concluded that an equivalent level of protection of the environment will be guaranteed and that the discharge to sewer will not lead to higher levels of pollution of the River Shannon.

There will be a discharge of sanitary effluent to sewer using an existing sewer connection. In order to cater for any extra offices or welfare facilities that may be required onsite, an additional temporary connection to the sewer may be sought by the licensee or there may be temporary storage of sanitary effluent prior to its removal off-site for treatment.

A number of other matters were raised by Irish Water in their response to the Section 99E notice. It was requested that certain details are provided by the licensee to Irish Water in advance of commencement of the discharge (e.g. provide drawings of locations of discharge and sampling points and details of measures to control discharge flow etc.). Where appropriate these requests have been addressed in the RD.

6.3 Emissions to ground/groundwater

The site was previously a limestone quarry. There is limestone head-rock at the surface in places at the site. Where ground cover is present it generally comprises a mix of limestone and brick within a clay matrix. There are alluvial deposits at points on the western end of the site towards the River Shannon. The limestone bedrock is weathered near its surface but is recorded as 'massive' (i.e. un-fractured) beneath. There is some hydraulic continuity in places between the made ground and the weathered (i.e. fractured) top section of the bedrock and there is evidence of contamination of the groundwater at this interface (i.e. the upper aquifer). This groundwater will be remediated during the Phase 1 pump and treat process. An extensive groundwater monitoring programme is on-going at the installation. Quality is consistent over time and indicates contamination as discussed above in Section 3 (Site Description).

The underlying aquifer is a locally important, moderately productive limestone aquifer. It is classified as vulnerable (which applies to the fractured upper section of

the aquifer). However, due to the largely dense and un-fractured nature of the deeper limestone bedrock beneath the site, the risk to the underlying aquifer due to the contamination at the site is not considered to be significant.

The remediation works themselves will not introduce any additional pollutants into the groundwater. Notwithstanding that fact, the effect of extracting and recharging treated groundwater constitutes a direct discharge to groundwater. In most cases such discharges are prohibited by the Groundwater Directive (2006/118/EC), however, exemptions are available for direct discharges where associated with certain types of activities, subject to prior authorisation and provided that the discharge does not compromise the achievement of the environmental objectives established for the body of groundwater into which the discharge is made. The applicant has confirmed that the exemption available under Regulation 8(b)(v) of the European Communities Environmental Objectives (Ground Water) Regulations (2010), i.e. for construction, civil engineering and building works – is applicable to the proposed remediation works as they are associated with, and will facilitate, later development and construction at the site. In addition, a licence from the Agency will represent the necessary 'prior authorisation' for the discharge. As the effect of the remediation works will be to eliminate sources of contamination (i.e. to reduce the risk of groundwater pollution) the discharge to groundwater will contribute towards, rather than compromise, the achievement of environmental objectives for the aquifer.

The proposed remediation works are essentially measures that will ensure the following:

- The prevention and limiting of input of pollutants into groundwater.
- The protection, enhancement and restoration of groundwater.
- The reversal of significant concentrations of pollutants resulting from human activity in order to progressively reduce pollution of groundwater.

These measures address a number of key provisions of the Groundwater Regulations. It is also a requirement of the RD that all fuels, liquid chemicals and wastes are stored in bunded tanks. All of these measures will ensure compliance with the relevant requirements of the Groundwater Directive (2006/118/EC).

Schedule C.6 *Soil and Groundwater Monitoring* of the RD requires quarterly monitoring of soil and groundwater, which will reveal and confirm the progress of remediation.

6.4 Emissions to Surface Waters

There will be no process emissions to surface waters. However, as groundwater in the soil and upper bedrock aquifer at the site flows to the nearby river Shannon it was recognised that there is potential for impact on this receptor due to the presence of contamination in the groundwater. A detailed quantitative risk assessment was carried out and concluded that when the free phase coal tar is removed from the soils and groundwater during Phase 1 of the remediation works the level of risk will become insignificant (i.e. the source of the risk will be effectively eliminated). Other factors acting to protect the River Shannon include the slow groundwater flow rate, the presence of physical barriers (e.g. docks, dock walls) and the alluvial deposits between the site and the River Shannon. It should be noted that there is no evidence to date of any significant impact on the River Shannon due to the site as it currently stands.

6.5 Storm Water Runoff

The site is derelict and has no infrastructure for management of storm water runoff. At present, storm water forms pools on the hard-standing areas or recharges to ground. However, as site works continue, it will be necessary to properly manage storm water run-off. Planning permission for the site permits a discharge to the local municipal storm water drainage system provided that the water is adequately treated. Condition 3.12 of the RD requires the installation of necessary infrastructure to manage and treat storm water runoff. Condition 6.15.2 of the RD requires the establishment of appropriate trigger levels for the run-off.

6.6 Wastes Generated

Wastes will be managed as follows:

Waste	Use
Liquid coal tar (approx. 600 tonnes in total)	Off-site recovery or disposal. The coal tar will be a hazardous waste.
Contaminated soils (approx. 100,000 tonnes in total)	Stabilisation and reuse on-site.
Solid coal tar and unsuitable materials	Removal off-site for disposal.
Concrete and bricks	Crushed and reuse on-site for backfill and capping.
Metal or wood uncovered at the site	Off-site recovery or disposal.

In general, it is a requirement of the RD that all wastes generated at the installation, where being sent off-site, must be sent to authorised facilities for disposal or recovery.

6.7 Noise

Both phases of works have the potential to generate noise although it is very likely that Phase 2 works, due to their nature (excavation, crushing etc.), have a higher potential to generate noise. All generators will be located within soundproofed cabins. Exhausts on pumps and vehicles will be fitted with silencers. Condition 6.13.2 requires that measures are taken at the site to control noise emissions. In addition, the RD sets noise limits and requires a bi-annual noise survey to be carried out in accordance with the Agency guidance document NG4.

6.8 Nuisance

Given the nature of the activities at the facility, there is potential for nuisance particularly with regard to noise, dust and odour (due to the emission of VOCs). Condition 6.13.1 requires the development of an Odour Management Plan which will set out the measures necessary to prevent any impact due to odour. Condition 6.13.2 requires that measures are implemented to control emissions of noise and dust. The applicant is proposing to carry out dust deposition monitoring and this

commitment is reflected in Schedule C.5 *Ambient Monitoring* of the RD. Schedule B.4 *Dust Deposition Limits* of the RD sets a limit on dust deposition.

7 Use of Resources

The site is currently unoccupied but is connected for supply of electricity and water. The principal fuels and energy to be used at the site will be electricity and diesel. It is estimated that Phase 2 works, which will involve use of earth moving machinery and other plant, will require approximately 2,000 litres of diesel per week. Condition 7 of the RD sets out the requirements with regard to resource use and energy efficiency.

8 Closure, Restoration and Aftercare

As the licensed activity is, in effect, a project to restore the site the applicant provided a description of planned arrangements for closure and decommissioning of the site and for the monitoring that will be carried out after cessation of the remediation works. The applicant is proposing the following:

- Closure and Decommissioning

After remediation works are complete all remediation plant and equipment will be removed. The site will be tidied up and clean granular material will be used as final capping of the site surface. These works will be carried out by the appointed contractor.

- Aftercare (post-activity monitoring)

The applicant is proposing that post-cessation of the activity there will be a period of monitoring to confirm the effectiveness of the remediation works. It is a requirement of the RD that a validation report be submitted to the Agency. The validation report will include test results for soil and groundwater monitoring (pre- and post-remediation) so to confirm that the Remediation Target Values have been achieved. Assuming agreement by the Agency of the validation report, the licensee will seek to surrender the licence at that point.

The above approach is considered to be an adequate description of proposed arrangements for decommissioning and aftercare of the site. The approach is in line with that taken in a previous waste licence for remediation of a former Bord Gais gasworks in Waterford (Reg. No. W0190-01) and with EPA and UK guidance on remediation of contaminated land. However, no costings for the arrangements were provided by the applicant, a matter that will need to be addressed by the licensee. It is also considered necessary that more detail be provided to the Agency after the appointment of a remediation contractor. Therefore, Condition 10.2.1 of the RD requires the submission of a detailed and fully costed CRAMP *prior* to the commencement of activities at the site. Condition 10.2.3 requires that the preparation and costing of the updated CRAMP are prepared in accordance with the latest Agency guidance. Condition 10.3 requires the CRAMP to include criteria to define the successful decommissioning and remediation of the site.

9 Waste Management Plan and National Policy

Activities at the site will in general support the waste management policies for the region (Clare/Limerick/Kerry). These policies include minimisation of waste sent

directly to landfill and the promotion of sustainable waste management practices at local, business and industrial level.

Activities will also be in line with national policy for the following reasons:

- It maximises waste recovery (i.e. reuse of soils on-site, recycling of metals recovered onsite).
- It minimises waste disposal unlike the traditional 'dig and dump' approach to site remediation.
- The treatment of the waste at the site conforms to the principles of proximity and self-sufficiency.

In addition, the Limerick City Development Plan 2010 – 2016 identifies the site as a strategic site for the development of Limerick City. The successful completion of licensed activities will support the development of the site in line with the objectives of the development plan.

10 Compliance with Directives/Regulations

The RD as drafted takes account of the requirements of the following relevant Directives/Regulations:

Directive/Regulation	Comment
Water Framework Directive	The provisions of the RD will ensure the treatment and remediation of groundwater at the site which will reduce the risk to the nearby river Shannon. Overall, the RD will contribute to the achievement of good status in the river by 2015.
European Communities Environmental Objectives (Ground Water) Regulations, S.I. No. 9 of 2010	See section 6.3 above for detail.
Environmental Liabilities Directive	The applicant submitted an Environmental Liabilities Risk Assessment (ELRA) as part of the application. Condition 12.3.2 requires that the ELRA is revised and agreed by the Agency prior to the commencement of activities at the site. Condition 12.3.3 of the RD will require the licensee to make adequate financial provision to cover any liabilities associated with the activity prior to commencement of activities.
Waste Framework Directive	Activities at the site will adhere to the waste hierarchy as well as to the provisions in the Directive related to

	reuse, recovery, recycling, self-sufficiency and proximity.
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Baseline Report

A Baseline Report, in accordance with Article 22(2) of the IED, was submitted with the application. The scope of the report was aligned to the requirements of the Industrial Emissions Directive. The report included the necessary information on present and past uses of the site, as well as soil and groundwater contaminant levels, sufficient to make a quantitative comparison upon definitive cessation of activities as per Article 22(2) of the IED.

11 Environmental Impact Assessment Directive (85/337/EEC)

An Environmental Impact Statement (EIS) was prepared in support of a planning application to Limerick City Council (Planning Reg. No. P12/87) and was submitted with the licence application. I have examined the EIS and having regard to the statutory responsibilities of the EPA, I am satisfied that it complies with the Environmental Protection Agency (Industrial Emissions) (Licensing) Regulations 2013 (S.I. No. 137 of 2013). Planning permission was granted in March 2013.

I have examined the content of the EIS and other material (e.g. information submitted in the licence application, the planning inspector's reports on the planning application and an EIA as was carried out by the planning inspector). I consider that having examined the relevant documents and with the addition of this Inspector's Report that the likely significant direct and indirect effects of the activity have been identified, described and assessed in an appropriate manner as required in Article 3, and in accordance with Articles 4 to 11, of the EIA Directive as respects the matters that come within the functions of the Agency.

An EIA, as respects the matters that come within the functions of the Agency, has been carried out as detailed below. The submitted EIS and the assessment as described in this Inspector's Report address the likely significant direct and indirect effects arising from the activity, as respects the matters that come within the functions of the Agency.

Likely significant effects

This section identifies, describes and assesses the main likely significant direct and indirect effects of the proposed activity on the environment, as respects the matters that come within the functions of the Agency, for each of the following factors: human beings, flora, fauna, soil, water, air, climate, the landscape, material assets and cultural heritage. The main mitigation measures proposed to address the range of predicted significant impacts arising from the activity have also been outlined.

Likely significant effects and associated mitigation measures

Likely significant effect	Description of effect	Mitigation measures proposed by the applicant in the EIS or licence application and/or as outlined in this report

Likely significant effect	Description of effect	Mitigation measures proposed by the applicant in the EIS or licence application and/or as outlined in this report
1. Human Beings		
Traffic	Traffic and its associated emissions, risks and dis-amenity effects.	RD requires use of wheel wash. Planning permissions sets hours of operation. Traffic Management Plan to be agreed with Limerick City Council prior to commencement of licensed activities.
Socio-Economic	No significant negative impact predicted. Overall, a positive effect is predicted (e.g. in terms of provision of employment).	RD requires measures to prevent nuisance due to litter, mud, odour and noise. RD requires public awareness and communications programme.
Impact on air quality	Emissions of VOC's, dust and odour.	RD requires control and monitoring of air emissions and dust deposition.
Noise	Dis-amenity from noise emissions due to licensed activities.	Activities will be temporary. All generators will be located within soundproofed cabins. RD sets noise limit values and requires bi-annual noise survey. RD requires measures to control noise.
2. Flora & fauna		
Impact on habitat or bats.	No significant effect is predicted as the site is derelict and has low ecological value. There are	No specific mitigation measures deemed necessary but, overall, the controls set out in the RD

Likely significant effect	Description of effect	Mitigation measures proposed by the applicant in the EIS or licence application and/or as outlined in this report
	<p>no mature trees or hedgerows.</p> <p>A bat survey did not reveal the presence of bats or bat roosts.</p>	<p>will ensure that there is no significant impact on the local environment.</p>
3. Soil		
Impact on soil.	<p>There is a risk of accidental spillage or discharge to ground.</p> <p>Overall positive effect is predicted. Soil is currently contaminated and the licensed activity will remediate the contamination.</p>	<p>Licensed activities will remediate soil and groundwater.</p> <p>RD includes requirements for safe storage and handling of wastes, fuels and materials.</p> <p>RD requires accident prevention policy and emergency response procedure.</p>
4. Water		
Impact on surface water.	<p>Surface water is at risk due to the contamination at the site.</p> <p>No significant effect is predicted due to the activity itself</p>	<p>There are no process emissions to surface water.</p> <p>Storm water will be treated prior to discharge to municipal storm water sewer.</p> <p>Licensed activities will ensure that the risk to nearby surface water due to contamination at the site is minimised.</p>
Impact on groundwater.	<p>Local groundwater in the upper aquifer is currently contaminated.</p> <p>No significant effect is predicted due to the activity itself. Overall positive effect is predicted.</p>	<p>See mitigation measures outlined above for prevention of impact on soil.</p> <p>Licensed activities will remediate groundwater.</p>

Likely significant effect	Description of effect	Mitigation measures proposed by the applicant in the EIS or licence application and/or as outlined in this report
5. Air		
Impact on air quality.	Emissions of VOC's, dust and odour.	See mitigation measures outlined above for prevention of impact on Humans – impact on air quality.
6. Climate		
Increase in greenhouse emissions	<p>Traffic and its associated emissions that may occur during construction and operation.</p> <p>No significant increase in greenhouse gases is predicted.</p>	<p>Soil excavated at the facility will be reused at the facility rather than be removed elsewhere for disposal. This will reduce the number of truck movements associated with the activity.</p> <p>Emissions due to construction traffic will be temporary.</p>
7. Landscape, Material Assets & Cultural Heritage		
Visual impact on nature of landscape.	No significant effect is predicted. No new structures are proposed.	<p>On-site derelict buildings have been demolished thus improving the appearance of the site.</p> <p>Existing walls and hoarding will restrict view of site works.</p>
Impact on material assets and cultural heritage.	<p>Two protected structures have been identified; however, no significant impact is predicted.</p> <p>No material assets are present on the site.</p>	<p>A conservation architect will be present during further demolition works on-site.</p> <p>Final design specification for the remediation works will require that protected structures are not affected by site works.</p> <p>A watching brief will kept on potential for</p>

Likely significant effect	Description of effect	Mitigation measures proposed by the applicant in the EIS or licence application and/or as outlined in this report
		architectural or archaeological finds during site works.

The detailed assessment, as set out in the remainder of this Inspector's Report, fully considers the range of likely significant effects of the activity on human beings, flora, fauna, soil, water, air, climate, landscape, material assets and cultural heritage, as respects the matters that come within the functions of the Agency, as identified in the table above, with due regard given to the proposed mitigation measures.

An EIA, as regards the functions of the planning authority, was carried out by the planning authority (Limerick City Council) when granting planning permission for the development.

Assessment of Parts 1 to 7 of Table 1 and the interaction of effects and factors

The potential for significant impact due to the interaction between effects was assessed in the EIS. It is concluded in the EIS that there will be no significant interactive effects as a result of the remediation works.

I have considered the potential for interaction between the factors and effects outlined above and I am satisfied that the proposed mitigation measures are adequate. I do not consider that the interactions identified are likely to cause or exacerbate any potentially significant environmental effects due to the activity.

Overall Conclusion on Environmental Impact Assessment

All matters to do with emissions to the environment from the proposed activity, the licence application documentation and EIS have been considered and assessed by the Agency.

I consider that having examined the relevant documents and with the addition of this Inspector's Report that the likely significant direct and indirect effects of the activity have been identified, described and assessed in an appropriate manner as required in Article 3 and in accordance with Articles 4 to 11 of the EIA Directive, as respects the matters that come within the functions of the Agency.

It is considered that the mitigation measures as proposed and the licence conditions included in the RD will adequately control any likely significant environmental effects from the activity.

12 Appropriate Assessment

The site itself is not within a designated area but is in close proximity (i.e. less than 0.2 km) to the river Shannon candidate Special Area of Conservation (SAC – site code 002165) and the River Shannon and River Fergus Special Protection Area (SPA – site code 004077). The Shannon and Fergus estuaries form the largest estuarine

complex in Ireland. The River Shannon SAC encompasses a number of rivers and estuaries (including the Shannon, Feale and Fergus) and covers a distance of 120km from Killaloe to the marine area between Kerry Head and Loop Head. The site is a candidate SAC selected for lagoons, alluvial wet woodlands, meadows and other habitats listed on Annex I of the EU Habitats Directive. The site is also selected for a range of species that are listed on Annex II of the Habitats Directive including bottlenosed dolphin, sea lamprey, Atlantic salmon and otter.

The River Shannon and River Fergus Special Protection Area comprise all of the estuarine habitat west from Limerick City and south of Ennis, extending west as far as Killadysert and Foynes on the north and south shores of the River Shannon (a distance of about 25km from east to west). Also included are several areas in the outer Shannon estuary and inter-tidal areas on the south shore of the Shannon between Tarbert and Beal Point. The site has vast expanses of intertidal flats and is important as a feeding and roosting area for wintering birds and as a stop-off point for other migrating birds. The site is the most important coastal wetland site in the country and regularly supports in excess of 50,000 wintering birds. Among other factors, the site has internationally important populations of Dunlin, Black-tailed Godwit and Redshank. A number of bird species that regularly visit the site are listed on Annex I of the EU Habitats Directive.

A screening for Appropriate Assessment was undertaken to assess, in view of best scientific knowledge and the conservation objectives of the site, if the proposed activity, individually or in combination with other plans or projects, is likely to have a significant effect on a European Site. In this context, particular attention was paid to the European sites at the River Shannon Special Area of Conservation (SAC – site code 002165) and the River Shannon and River Fergus Special Protection Area (SPA – site code 004077), which are described above, and the Agency considered, for the reasons set out below, that the proposed activity is not directly connected with or necessary to the management of those sites as European Sites and that it can be excluded on the basis of objective scientific information, that the proposed activity, individually or in combination with other plans or projects, will have a significant effect on a European site, and accordingly the Agency determined that an Appropriate Assessment of the proposed activity is not required.

This reasons for which the Agency determined that an Appropriate Assessment of the proposed activity is not required are as follows:

- The installation is not located within a European Site.
- The activity will not result in damage to, or loss of, habitat in a European Site.
- There will be no process discharge from the installation to the European Sites.
- The remediation works will result in the improvement of the quality of the groundwater that flows from the installation to the European Sites.

13 Fit & Proper Person Assessment

The 'fit and proper person' assessment requires three areas of examination:

i. Technical Ability

The applicant has confirmed that an appropriately qualified and experienced contractor will be appointed to carry out the remediation works after a licence is granted (should one be granted). The process of seeking and appointing a suitable contractor will establish their technical ability to carry out the proposed activities. I

am satisfied that the applicant's management team (i.e. within Bord Gais) are appropriately qualified and experienced with regard to their technical ability to oversee and manage activities at the site.

ii. Legal Standing

The applicant, Bord Gais Eireann, has never been convicted of any relevant offence.

iii. Financial Standing

The applicant submitted information regarding the following:

- Arrangements for closure, restoration and decommissioning of the site.
- Environmental Liabilities Risk Assessment (ELRA).
- Annual Report and Financial Statements for 2010 and 2012.

The Agency's guidance document *Guidance on Environmental Liability Risk Assessment, Residuals Management Plans and Financial Provision*, EPA 2006, was followed in the preparation of the reports, which was the guidance document that was available at the time. Since then the Agency has published a new guidance document on assessing and costing environmental liabilities².

The ELRA identifies and ranks the risks associated with unplanned events such as incidents or accidents. The applicant did not provide costings in relation to the ELRA or the CRAMP, however, a letter from Bord Gais (signed by the Business Planning Manager) was submitted which confirmed the ability and commitment of the organisation to provide financially for the licensed activities. In addition, it is stated that it will be a condition of contract that the appointed contractor has suitable insurance to cover certain liabilities.

In order to ensure that more detailed arrangements for closure and decommissioning are developed and that adequate financial arrangements are established to cover liabilities and to provide for closure etc., the RD requires that, prior to the commencement of licensed activities, the following must be carried out in a manner agreeable to the Agency:

- A fully detailed and costed CRAMP is prepared.
- The ELRA is revised and fully costed.
- Financial provision is made to cover all liabilities associated with the activity.

The RD requires the licensee to ensure that these requirements are addressed in accordance with the new Agency guidance document referred to above.

Having regard to the provision of Section 85(3)(xi) of the Environmental Protection Agency Acts 1992 as amended, the applicant can be deemed a Fit & Proper Person for the purpose of this licence application.

14 Cross Office Liaison

In preparing this report and Recommended Determination the following technical and sectoral advisors were consulted:

² Guidance on assessing and costing environmental liabilities (EPA 2014)

Inspector	Assistance provided
Matthew Craig	Matters related to remediation, groundwater quality and groundwater regulations
Pamela McDonnell	Matters related to Environmental Impact Assessment.
Donal Grant	Matters related to Appropriate Assessment.
Licensing Inspectors forum on Best Available Techniques and BAT Conclusions	BAT Conclusions

15 Proposed Determination

The RD if granted will authorise the treatment of a hazardous waste (i.e. groundwater contaminated with coal tar) and the recovery of waste materials at the site (i.e. reuse of stabilised soil). The RD includes a wide range of conditions that will ensure proper handling of wastes, the control and monitoring of emissions to air, the treatment of storm water runoff and the prevention of nuisance. Overall, I am satisfied that the conditions set out in the RD will adequately address all emissions from the installation and will ensure that the carrying on of activities in accordance with the conditions of the RD will not cause environmental pollution.

16 Submissions

Five submissions were received on the review application.

1. Development Applications Unit – Department of Arts, Heritage and the Gaeltacht (DAHG) (received June 2012)

The DAHG has concerns as the site is in close proximity to two designated European sites these being the River Shannon Special Area of Conservation (cSAC – site code 002165) and the River Shannon and River Fergus Special Protection Area (SPA – site code 004077).

Observations raised by the DAHG

- (i) The DAHG highlight the fact that the SPA was not included in the Appropriate Assessment Screening Report.

Response

In response to a notice from the Agency the applicant submitted an Appropriate Assessment Screening Report which addressed the likelihood of significant effects on the SPA. The Agency carried out a screening for appropriate assessment and concluded (as discussed above in Section 11) that significant effects on the SPA are not likely.

- (ii) It is contended that the information as provided by the applicant in the Appropriate Assessment Screening Report does not rule out the likelihood of a significant effect on the SAC or SPA. It is consequently contended that a full

Appropriate Assessment is required to include some aspects related to the site (including the potential for leakage or runoff from the site, the impact of contaminated groundwater and combination effects).

Response

The Appropriate Assessment Screening Report does in fact conclude that significant effects are not likely due to the proposed activities. Based on its screening for appropriate assessment the Agency determined that Appropriate Assessment is not required. A risk assessment was carried out and concluded that, despite the presence of contamination, the site currently does not pose a significant risk to the River Shannon (any risk will be reduced even further following completion of the remediation works). In addition, the applicant has confirmed that there are no unused sewers or ducts under the site that would provide conduits for contaminated groundwater or leaks to the River Shannon. The screening report has examined the potential for cumulative effects (i.e. due to other plans and projects).

- (iii) The DAHG request that the Agency ensures that the proposal will not lead to any impact on water quality in the River Shannon due to process or accidental emission from the site.

Response

As discussed throughout this report, the RD contains a range of measures that will prevent any significant impact on the River Shannon.

2. Health Service Executive (HSE), Newcastle West, Co. Limerick (received July 2012)

This submission is signed by a Principal Environmental Health Officer and a Senior Environmental Health Officer. Observations were offered with regard to the content of the EIS which was carried out in relation to the proposed works. The HSE highlighted a number of aspects of the EIS that were considered by them to be deficient. It should be noted that these deficiencies were recognised during the assessment of the application documentation and were consequently addressed by the applicant on request from the Agency. The observations are addressed in turn below.

Observations raised by HSE

- (i) A full assessment of potential impact on human beings was not carried out. The HSE suggests that the EIS should be revised so that this is addressed specifically with regard to the most sensitive receptors in the local community.

Response

In response to an Agency notice, the applicant provided a copy of a Human Environment Assessment report which had been prepared in November 2012 for the purposes of the planning application (to address a similar submission from the HSE on the planning application). This report considers in detail the potential for impact on the local community in particular with regard to the more sensitive sub-sections of the community. The report is considered to adequately address the requirement to assess the potential for impact on human beings due to the proposed activity. No significant impacts were predicted. Control measures were also proposed, the design of which were based on experience gained during previous remediation projects at former gasworks in Cork, Dublin and Waterford. Remediation works in Dublin and Waterford were carried out under licence from the Agency.

- (ii) Consultation with local community on the proposed works was inadequate. The HSE refers to the distribution of information flyers within the immediate vicinity of the site and contends that this does not constitute meaningful or effective communication with the wider community.

Response

The EIS outlines the nature of consultation with the local community. Initial consultation involved letter drops and distribution of flyers in the immediate vicinity of the site. These actions were carried out in advance of particular aspects of planned work (e.g. site clearance and boundary work) and were restricted to the immediate vicinity as it was considered that the potential for impact related to those only in close proximity to the site. Aside from letter drops etc., the EIS describes other consultation actions which were carried out by the applicant (e.g. a public information event in February 2012). The EIS also included a Stakeholder Management Plan which set out a comprehensive plan for communication with a wide range of stake-holders including the wider local community. It should be noted that the applicant satisfied all of the Agency's requirements in relation to public information on the application (i.e. publishing a paper notice and posting of a site notice). Overall, it is concluded that the applicant has adequately consulted with the local community and that means other than simple flyer distribution were utilised in that regard.

- (iii) In the absence of a detailed design specification it is not possible to predict impacts on the environment or public health.

Response

The application included a design specification which described the works to be carried out and the points where emissions will occur. The design provided was considered to be adequate for the purposes of processing the licence application. A more detailed design specification was submitted to Limerick City Council as part of the planning application (on foot of a request of further information) and so is publicly available. According to the applicant a final design specification will emerge when a contractor is appointed to the project. A contractor will be appointed after a licence issues as the applicant will need to be assured that a potential contractor has the technical capacity to carry out the remediation works in compliance with the requirements of the licence. This is typical for such remediation projects.

In any case, the applicant carried out (i) a Detailed Quantitative Risk Assessment which assessed the potential for impact on human health due to the presence of contaminants at the site and (ii) a Human Environment Assessment to assess the impact of proposed activities on the local community (i.e. from a socio-economic perspective). The assessment of the potential for impact due to the proposed works had to be based to a large extent on previous experience gained by the applicant on other similar and successful remediation projects. It is concluded that this approach is suitable with regard to the proposed remediation works.

- (iv) Measureable site specific data were not included in the EIS. Therefore potential impacts were not quantified and, consequently, appropriate mitigation measures were not developed.

Response

This is a similar observation to No. (iii) above. There is extensive data available in relation to the present level of contamination in the soil and groundwater. Based on

this data, as discussed above, detailed quantitative assessments of risk to human health and other receptors were carried out. All relevant reports are referenced in the EIS.

With regard to the potential for impact due to noise, dust and air emissions arising from the proposed remediation works, emissions to air from the treatment units will be insignificant (as discussed above). In addition, the RD contains a wide range of controls on other emissions (e.g. noise and dust) and will ensure that emissions are measured and controlled so as to prevent any impact on the environment or the local community.

Overall, an adequate assessment of impacts has been carried out by the applicant (based on their previous experience) and that appropriate mitigation measures have been provided and described in the EIS, the application documentation and associated investigation reports as well as in the additional information submitted on request.

- (v) Evidence that a detailed geotechnical ground investigation that would provide the basis for a comprehensive risk assessment at the site was not included in the EIS.

Response

All previous ground investigation reports and quantitative risk assessments were either included as appendices to, or referenced by, the EIS.

- (vi) The HSE sought clarification with regard to the quantification by estimation of (i) the volume of DNAPL (to be removed during Phase 1) and (ii) the amount of soil to be subject to stabilisation during Phase 2.

Response

It is contended by the applicant that accurately quantifying the amount of DNAPL present at depth is difficult. Therefore amounts had to be estimated using the detailed site investigation and monitoring. The remediation contractor (once appointed) will be required to undertake a trial of their proposed remediation technique for Phase 1 works. Revised estimates will be developed once those trials are completed.

The details and associated assumptions of the calculations used to quantify the amount of soil requiring stabilisation were provided in the appendices to the EIS.

- (vii) The Water Quality and Hydrogeological report (as included in the EIS) is inadequate and inconclusive. The contamination poses a risk to the deeper aquifer and the River Shannon but no detailed hydrogeological risk assessment was carried out.

Response

A detailed groundwater and surface water risk assessment was carried out by the applicant the report for which was referenced in an appendix to the EIS.

- (viii) Clarification was sought as to the presence of drinking water abstraction points 'downstream of the proposed development' on the River Shannon.

Response

The River Shannon is tidal and therefore saline and consequently there are no drinking water abstraction points 'downstream' of the site. The nearest groundwater

borehole is nearly 7 km west of the site in a location that is not hydrogeologically connected with the site.

- (ix) It is contended that in the absence of a site specific method statement or of predictive modelling it is not possible to accurately assess and predict impact due to odour, dust and emissions of VOCs. It is therefore contended by the HSE that the applicant should not therefore be able to predict that impact will not be significant.

Response

As discussed above, it will not be possible for the applicant to provide a detailed method statement until a contractor is appointed. The RD will require the applicant to implement measures to control odour and dust so as to prevent any impact. Carbon filters will be used to abate VOC emissions. In addition, the RD requires monitoring of ambient noise, dust and VOCs. This monitoring will assist in the early detection of any impact due to these emissions should one emerge.

- (x) It is contended by the HSE that the remediation works will have 'significant' impacts on the people in the local community and on those working on the site itself.

Response

No evidence has been offered by the HSE to support their contention of a significant impact and it is consequently not accepted. As discussed above, the applicant has predicted, based on experience with other similar remediation projects, that there will not be a significant impact on the local community or the environment due to activities at the site. In any case, the RD contains a wide range of measures to control, manage and monitor activities and emissions so as to prevent any significant impact.

3. Health Service Executive (HSE) (received October 2013)

This submission is signed by an Environmental Health Officer and a Senior Environmental Health Officer. Observations were offered with regard to the content of the Human Environment Assessment Report which was carried out in relation to the proposed works. The HSE raised the following observations:

- (i) Reference is made to the number of odour complaints that occurred at another EPA-licensed remediation project at a former Bord Gais site in Waterford. The HSE is concerned that due to the higher population density in the vicinity of the site in Limerick (over that in Waterford) there is the possibility of more odour complaints. The HSE is also concerned about fugitive dust deposition. The HSE call for strict controls and monitoring of all aspects of the remediation process particularly with regard to truck movements of contaminated soil.

Response

The RD contains a wide range of controls with regard to the proposed activities. Condition 6.13 of the RD specifically requires that measures are implemented at the site to control emissions of noise, dust and odour. In addition the RD sets a limit on dust deposition and also requires dust deposition monitoring. Condition 8 of the RD sets out a range of controls with regard to the management and movement of wastes. Notwithstanding that, most of the contaminated soil will in fact be treated and reused onsite rather than be moved off-site.

- (ii) The remediation contractor will be required to make available an emergency out-of-hours phone service. With regard to this, the HSE calls for a service based on immediate response rather than one based on a 72-hour call back.

Response

Condition 9 of the RD specifies a range of controls with regard to accident prevention and response to emergencies and incidents. In response to the submission, the applicant outlined how the proposed phone service has been amended to ensure a speedier response by the remediation contractor to complaints. In addition, Condition 2.2.2.7 of the RD requires the establishment of a Public Awareness and Communications Programme which will ensure that the public is informed on the environmental performance of the site. The applicant is proposing to appoint a local liaison officer to visit residents and other stakeholders as required for the duration of the remediation works. Overall, it is considered that there are sufficient measures in place to keep the public informed regarding activities at the site and to ensure adequate and speedy response to emergencies or complaints.

- (iii) The HSE contends that there is no information regarding pest control in the licence application and calls for a Pest Control Management Plan.

Response

Condition 5.4 of the RD requires the licensee to ensure, among other things, that there is no impact due to vermin in association with the activity. In addition, a Pest Prevention Programme was included as an appendix to the EIS. It will be a requirement of the remediation contract for the appointed contractor to control pests at the site.

- (iv) Clarification is sought as to whether the project will be scheduled so that account is taken of use patterns in the area in order to reduce the impact due to odour while major (e.g. sporting) events are taking place in the city.

Response

The RD does not specifically require such scheduling of work, however, it is requirement of the RD that adequate measures are taken to prevent odour nuisance or impact at all times.

- (v) Clarification is sought as to whether the proposed security measures will be remote or on-site.

Response

Condition 3.3 of the RD requires that adequate security measures are taken at the site. In addition, according to the applicant, a security guard (or other site staff) will be on-site during normal work hours while a remote security service will be utilised outside working hours.

- (vi) Clarification is sought on the nature of the proposed complaints call back service and on the nature of emergency response to odours and other complaints.

Response

This matter is dealt with under item (ii) above.

- (vii) The possibility of unforeseen hazards arising during the duration of the proposed works must be addressed in order that they can be responded to adequately.

Response

Condition 9 of the RD specifies a range of controls with regard to identification of potential hazards as well as preventing and responding to accidents and emergencies.

4. Department of Arts, Heritage and the Gaeltacht (received December 2013)

Concern is raised as to the potential for a negative impact on the water quality in the River Shannon (designated sites). It is contended that a number of issues were not dealt with in the Appropriate Assessment Screening Report, these being:

- Potential for effects due to runoff or leakage of pollutants through surface water, groundwater or old sewer connections.
- Potential for impact due to dust.
- Potential for combination effects.

It is also queried as to whether a full Appropriate Assessment is required.

Response

All matters related to Appropriate Assessment (i.e. screening, combination effects etc.) are dealt with above under Section 11 and Submission No. 1 above (also from the DAHG). Based on its screening for appropriate assessment the Agency determined that Appropriate Assessment is not required. I am satisfied that the Screening process has adequately addressed the potential for significant impacts on designated sites.

5. Department of Arts, Heritage and the Gaeltacht (received January 2014)

This submission is signed by an Environmental Health Officer and a Principal Environmental Health Officer. Observations were offered with regard to additional information that was submitted by the applicant on request from the Agency. Reference is made again to the nature of the emergency out-of-hours call service. The HSE further contend that in the absence of an immediate response to a complaint (e.g. odour) that the contract between the licensee and the remediation contractor (when appointed) should specify how the local liaison officer and/or the contractor may be contacted by the relevant statutory authorities following receipt of a complaint outside of site working hours in order to ensure that appropriate response measures are taken.

Response

It must be accepted that not every complaint will constitute an emergency, however, the licensee is providing an out-of-hours call service, the nature of which is described and discussed above under Objection No. 3 - sub item (ii). The licence sets out the controls that will prevent an environmental impact due to licensed activities. The licence also clearly sets out what will be required of the licensee when responding to a complaint or an emergency and that includes informing the Agency (and other authorities as appropriate).

17 Charges

An annual charge of €13,366 is specified in the RD which is based on the enforcement effort predicted for the facility.

18 Recommendation

I have considered all the documentation submitted in relation to this application and recommend that the Agency grant a licence subject to the conditions set out in the attached RD and for the reasons as drafted.

Signed



Michael Owens

Inspector

Procedural Note

In the event that no objections are received to the Proposed Determination on the application, a licence will be granted in accordance with Section 87(4) of the Environmental Protection Agency Acts 1992 and 2013 as soon as may be after the expiration of the appropriate period.

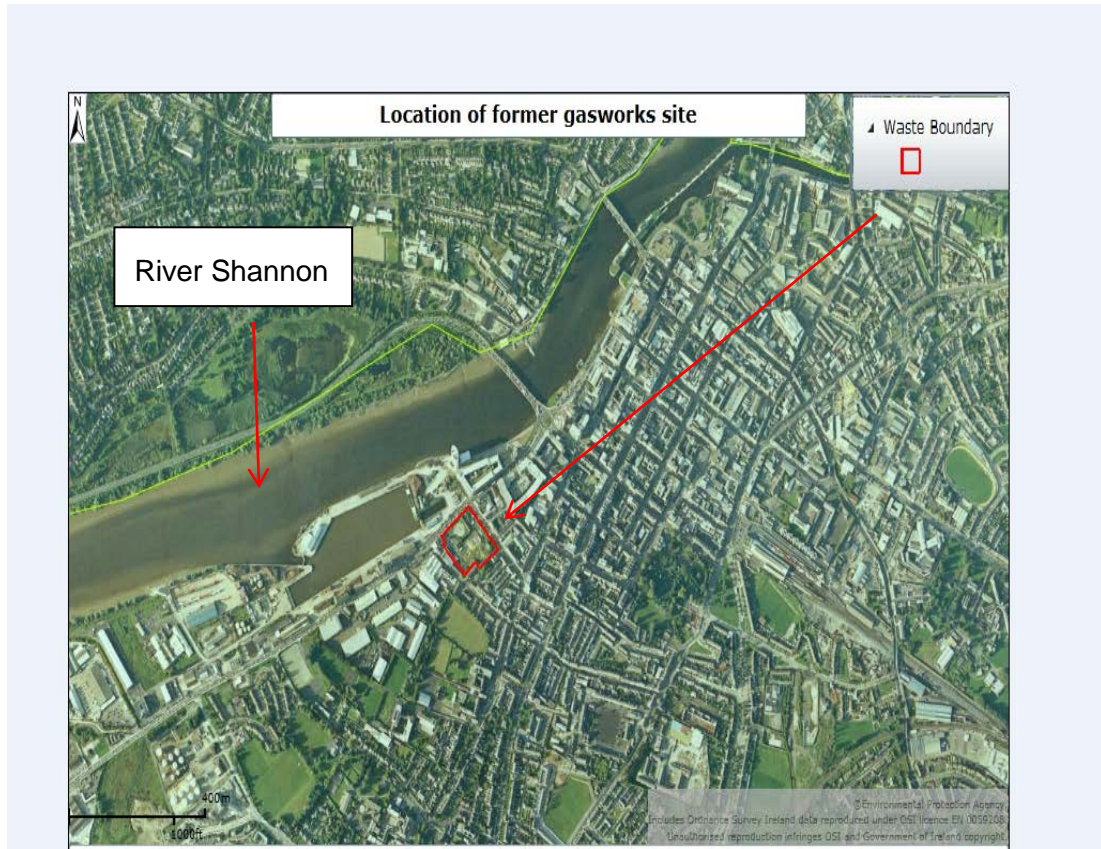


Figure 1 – Boundary of licence application at former gasworks site on Dock Road, Limerick City.