

This updated non-technical summary relates to the application for a licence for the proposed remediation of the former Limerick gasworks, and specifically complies with Regulation 9 of the EPA (Industrial Emissions)(Licensing) Regulations 2013, Paragraph (2)(w).

The 1.4ha site is located in the City of Limerick approximately 100m south-east of the River Shannon. It is roughly rectangular and slopes gently from approximately 8m MHD (Malin Head Datum) at the south-eastern boundary to approximately 5m MHD at the north-western boundary (adjacent to the Dock Road). The site is currently derelict although the former Bord Gais offices are still present on the south west boundary, together with an electricity sub-station (located in the north eastern sector of the site) and a former Generator Building (No. 5 Stores). The Generator Building and the Dock Road wall have Protected Status.

It is proposed that the electricity Sub-Station will be moved to the O'Curry Street boundary. A DRI (District Regulator Installation) Gas unit will also be placed adjacent to the O'Curry Street boundary. This work will be undertaken under planning permission from Limerick City Council.

In the 1830's, a limestone quarry was situated in the eastern part of the site, with a small gas works located to the north-west. In 1872, the gas works occupied the majority of the site. The quarry had been backfilled by 1938 with the gasworks operations now covering this area. Coal gas manufacture had ceased in 1974 and the works became an oil gas plant until 1986 when natural gas was introduced. Demolition and site clearance took place between 1988 and 1995.

The by-products of historical gas making can include hazardous chemicals, which may be toxic to humans, plants and animals, depending on the level of exposure. One of the main by-products was a tarry substance known as 'coal tar': The coal tar was stored in tanks which often leaked over a period of many decades. Other by-products were simply spread as fill on site. In order to allow future development to take place on this site, liquid tar and soils which have become contaminated must be remediated.

The classes of activity as per the First Schedule of the EPA Acts 1992 to 2013 are:

11.1- The recovery or disposal of waste in a facility, within the meaning of the Act of 1996, which facility is connected or associated with another activity specified in this schedule in respect of which a licence or revised licence under Part IV is in force or in respect of which a licence under the said Part is or will be required.

11.2- Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving one or more of the following activities:
(b) physio-chemical treatment;

The unavailability of landfill or other approved methods of disposal nationally restricts safe disposal options in Ireland. Consequently, following the extensive investigation, risk assessment and options appraisal works, the Limerick former gasworks remediation strategy comprises two distinct phases; pump and treat of coal tar and stabilisation / solidification. The two phases will be separately tendered and managed. It is therefore possible that different remediation contractors will undertake each phase.

The overall objective of the scheme is to remove or stabilise any hazardous material on site to an agreed standard, without environmental pollution.

Phase 1 - 'Coal Tar' recovery ('pump and treat')

This process comprises the drilling of small diameter holes (pumping/extraction wells), into the ground with a mixture of liquid 'coal tar' and water being pumped from the ground and separated with the liquid coal tar being transported from site for subsequent recycling or disposal. The groundwater is treated and re-injected into the ground or disposed to local authority sewer. This process reduces the potential impact of odours occurring during the removal of the 'coal tar', when excavations are being undertaken during the Phase 2 works.

Phase 2 - Excavation and stabilisation of any remaining contamination.

It is proposed that the top 3m of the site will be excavated (shallower where rockhead is present) mixed with a 'stabilising' (also called a binder) material such as cement, and replaced. In addition, fill materials present within any tanks encountered during the works will be similarly treated to the full depth of the tank.

Once stabilised these materials can no longer migrate (move) from site and are no longer considered a risk to either human health or the environment.

Phase 2 Soil excavation works would be carried out by excavators, assisted by dump trucks. Breaking out of old foundations would generally be carried out by 'breakers' fixed to excavators. A screening/crushing plant would be used to screen and crush material for re-use on the site. Diesel fuel would be used for these vehicles.

No waste will be imported to the site.

It is expected that Phase 1 would be completed within 12 months, followed by 6 to 8 months for Phase 2. Working hours would be restricted to between 08:00 and 18:00hrs, Monday to Friday.

Environmental emissions during the excavation and clean-up activity may include dust and odour and potentially noise during Phase 2. Dust would arise during excavations and possibly during crushing on-site of concrete and brick. Water sprays would be utilised to minimise dust moving off site. Phase 1 works are designed to be fully contained to minimise odours and emissions. Some odours may be released during the Phase 2 works, but several mitigation measures will be employed to minimise their impact, such as the use of fine water sprays (odour suppression system) and soil or tarpaulin cover when excavations are not being undertaken. This would mainly have an impact adjacent to the excavation and be of short duration. Wheel washing of traffic leaving the site, would be undertaken to minimise transfer of mud to adjacent roads, internal haul roads would be sprayed with water, as required, to dampen dust.

Up to 100 m³/day of groundwater will be passed through an on-site treatment works prior to discharge to the local authority sewer. Discharge will be to a standard agreed with the Sanitary Authority, with monitoring carried out from an inspection chamber immediately upstream from where water enters the sewer.

Noise could arise from Phase 1 drilling of pumping/extraction wells and from soil excavation activities in Phase 2. The noise from drilling and excavation work would

largely be contained within the site, and necessary noise reduction measures for generators, excavators and other machinery would be implemented.

Monitoring for dust will be carried out upwind and downwind of the site on a continuous basis. Personal air quality monitors will be worn at all times by operators adjacent to active excavation sites. Wastewater from the on-site treatment works will be monitored at frequent intervals. Noise monitoring will be conducted at and around the site perimeter. Appropriate mitigation measures will be implemented if monitoring identifies an exceedence of any emission level.

Monitoring of groundwater will be carried out monthly from existing boreholes around the periphery of the site during the Works, until the excavations result in their removal. New boreholes will be installed as the site is restored to its final condition and then similarly monitored for a period after the works to confirm the resultant groundwater conditions.

Final site levels are likely to be similar to existing ground levels over its full area as there are no current development plans in place.

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