# Submission on Objection

<table>
<thead>
<tr>
<th>Submitter:</th>
<th>Mr. Seamus Breen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisation Name:</td>
<td>Irish Cement Limited</td>
</tr>
<tr>
<td>Submitter Address:</td>
<td>Castlemungret, Mungret, Limerick, Limerick, Co. Limerick.</td>
</tr>
<tr>
<td>Submission on Objection Title:</td>
<td>RESPONSE TO OBJECTIONS RECEIVED BY THE EPA</td>
</tr>
<tr>
<td>Submission on Objection Reference No.:</td>
<td>SOS005881</td>
</tr>
<tr>
<td>Submission on Objection Received:</td>
<td>15 November 2019</td>
</tr>
</tbody>
</table>

## Application

<table>
<thead>
<tr>
<th>Applicant:</th>
<th>Irish Cement Limited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reg. No.:</td>
<td>P0029-06</td>
</tr>
</tbody>
</table>

See below for Submission on Objection details.

Attachments are displayed on the following page(s).
INDUSTRIAL EMISSIONS LICENCE REVIEW APPLICATION

Irish Cement Limited
Castlemungret Works, Co. Limerick
IE Licence P0029-06

RESPONSE TO OBJECTIONS RECEIVED BY THE EPA

November 2019

Irish Cement Limited
Limerick Works
Castlemungret
County Limerick
1 Introduction

In response to the Environmental Protection Agency (EPA) correspondence (of 17 October 2019) under Regulation 26 of the EPA (Industrial Emissions) (Licensing) Regulations, it is noted that third-party objections have been submitted to the Proposed Determination to IE Licence review reg. no. P0029-06. As indicated by the EPA correspondence, Irish Cement Ltd. (ICL) wishes to make a submission on the objections received by the Agency on the Proposed Determination (PD) for licence P0029-06.

Detailed responses are provided to specific issues raised in the third-party submissions / objections to the Proposed Determination of the licence review (No. P0029-06). A response to OS005836 is provided under separate cover.

Responses to specific queries raised by the objections are summarised under the following headings:

- **Environmental Impact Assessment (EIA) Queries**
  - Adequacy of EIS/EIA
  - Lack of consultation, obligations under the EIA/Habitats Directive
  - Cumulative impacts for the purposes of EIA

- **Appropriate Assessment (AA) Queries**
  - Adequacy of NIS, Negative effects on European Sites and Ecological deficits
  - Landfilling activities
  - Cumulative impacts for the purposes of Appropriate Assessment

- **Planning Queries**
  - Change of use, Non-compliance with Planning and Development Acts
  - Location of proposed development / close to a number of schools

- **Health Queries**

- **Air quality/climate-related aspects**
  - Derogation to TOC limit of 10mg/Nm\(^3\)
  - Particulate emissions
  - Dust incidents
  - Carbon emissions savings
  - Maintenance of air quality / directive 2008/50/EU
  - PM\(_{2.5}\) and ultrafine particles
  - Data on ground level concentrations at identifiable locations
  - Modelling at emission limit values
  - Odour
  - Hexavalent Chromium

- **Other**
  - Requirement for a new licence
  - Tonnage of each waste stream/‘mixed waste’/Detail on fuels
- Use of recyclable materials
- Industrial incineration
- Use of Natural gas as an alternative fuel
- Bag filters being unsuitable
- Ageing infrastructure / kiln temperatures
- Self-regulation, Independent monitoring, ICL communications
- Conditions of PD
- Use of Landfill Leachate / Red Mud
- BAT for Waste Incineration

**Appendix 1: Non-exhaustive list of main documents, responses and reports submitted to the EPA as part of environmental assessment for the licence review process**
2 Environmental Impact Assessment (EIA) Queries

2.1 Addresses queries on the adequacy of the EIS/EIA

A detailed Environmental Impact Statement (EIS) was prepared and submitted with the licence review application. As part of the on-going Environmental Impact Assessment (EIA) process, the EPA as the competent authority, sought requested further information and clarification on a number of aspects of the environment. In each instance detailed responses were provided.

A non-exhaustive list of the main documents, responses and reports submitted to the EPA in relation to EIA and environmental aspects of the licence review is provided in Appendix 1 to this response.

2.2 Addresses queries on lack of Consultation, Obligations under EIA/Habitats Directives

At the outset it is noted that consultation, including the period for submission of objections to the Proposed Determination, is an on-going aspect of the licensing of the proposed development / proposed activities.

By way of background it is a matter of record that notification of lodgement of the planning application with Limerick City and County Council was published in the Irish Independent on 27 April 2016. Thereafter the planning process was open to submission of observations within the appropriate timeframes, to both the local authority and afterward to An Bord Pleanála. An Bord Pleanála subsequently convened a public oral hearing in August 2017, prior to granting permission for the proposed development.

Likewise notification of lodgement of the licence review with the EPA was published in the Irish Independent on 6 May 2016 after which the licence review process was open to submissions of observations. The Proposed Determination of the licence review was issued 18 September 2019 and again this aspect of the licence review process was open to submissions of objections.

It is clear that both the planning and licence review procedures have been open to extensive consultation and public engagement from the earliest opportunity and the licence review process continues to engage in consultation and in a manner which is consistent with the requirements of legalisation.

2.3 Addresses queries on cumulative impacts for the purposes of Environmental Impact Assessment (EIA)

Potential cumulative effects have been addressed in the EIS, e.g. refer to section 8.4.3 of the EIS for cumulative emission impacts and section 13.5.4 for cumulative waste impacts. Cumulative effects were further addressed in submissions to the An Bord Pleanála public oral hearing in August 2017, and by An Bord Pleanála in granting planning permission for the proposed development (April 2018), and in documentation submitted to the EPA as part of the licence review application.
3  Appropriate Assessment (AA) Queries

3.1  Addresses queries on adequacy of NIS, impacts on European Sites, and ecological deficits

A detailed Natura Impact Statement (NIS) was submitted to the EPA (11 December 2018) in response to a request for further information (1 November 2018) from the Agency. The NIS comprehensively addressed all of the points raised by the Agency in their Appropriate Assessment Screening Determination (1 November 2018). No Appropriate Assessment or ecological deficits are noted and the EPA Inspector’s Report states (section 15) that if carried out in accordance with the Proposed Determination and the conditions attached:

“An Inspector’s Appropriate Assessment has been completed and has determined, based on best scientific knowledge in the field and in accordance with the European Communities (Birds and Natural Habitats) Regulations 2011 as amended, pursuant to Article 6(3) of the Habitats Directive, that the activities, individually or in combination with other plans or projects, will not adversely affect the integrity of any European Site…”

and that:

“...no reasonable scientific doubt remains as to the absence of adverse effects on the integrity of those European Sites at Lower River Shannon SAC [002165], Askateon Fen Complex SAC [00279], Tory Hill SAC [000439], Curragheenose Woods SAC [000174], Glenmora Wood SAC [001013], Ratty River Cave SAC [002316], River Shannon and River Fergus SPA [004077] and Sleivefelim and Silvermines Mountains SPA [004165].”

Notwithstanding the above, it is noted that the Appropriate Assessment process is on-going and the process will not be complete until final determination of the licence review.

3.2  Addresses queries on landfilling activities and Appropriate Assessment

The Natura Impact Statement submitted to the EPA in December 2018 in response to a request for further information (1 November 2018), notes at section 4.4.2.1 that ICL Limerick Cement Factory, as part of the existing IE Licence (No. P0029-05), is permitted to deposit a maximum quantity of 1,300 tonnes per annum of inert waste (up to a maximum total of 23,500 tonnes), within the western part of Bunlucky Clayfield Pond. The Clayfield Pond west of the M18 Causeway is not designated as European Site.

The inert material (as described in schedule A.2 of P0029-05) that is deposited in Bunlucky pond comprises of brick, stone, soil and concrete from on-site activities. No material from external sources is deposited in this area. There is no requirement for an engineered lining or leachate or gas collection system. A schedule of the quantity and nature of material deposited is submitted to the EPA on an annual basis. This deposition has had no impacts on the habitat structure of the Clayfield Pond or the shoreline, and will continue to have no impacts on any of the qualifying interests of the SPA / SAC.
In addition, the landfilling has had no impact on the water quality in the pond, as evidenced by the regular monitoring undertaken at SW3. (Refer to the, Trigger Levels for SW3 Report (Arup, 2013) which was submitted to the EPA as part of the licence application process (refer to Appendix 17.1 of Appendix A to response prepared to EPA request for further information (March 2019)).

The potential effects of the landfill site are addressed in documents submitted to the EPA. For example, the Baseline Report on Geology and Hydrogeology, (Appendix 7 of the NIS), notes that in older areas of the plant cement cladding containing asbestos was used as a building material. When decommissioning buildings, some asbestos containing cement cladding material arising on-site was removed and landfill in lined pits, with the approval of the Agency. The material was not disposed of in Bunlicky Clayfield Pond. All contents of the cells were removed from the site and disposed of at an external licensed landfill in 2013. Any fibre cement cladding containing asbestos that arises on site is removed from the site by a licensed contractor and disposed of at a licensed facility.

3.3 Addresses queries on cumulative impacts for the purposes of Appropriate Assessment (AA)

Potential cumulative effects on European Sites are fully addressed under ‘Appraisal of likely significant effects on European sites and in-combination effects’ at section 4.4 of the NIS.

4 Planning

4.1 Addresses queries on change of use and non-compliance with Planning and Development Acts

The proposed development does not represent a change of use and planning permission for the proposed development was approved by An Bord Pleanála in April 2017.

The purpose of the factory is and will remain the manufacture of cement and cement products. The proposed development seeks solely to replace a portion of its existing imported fossil fuel use with a range of potential alternative fuels and to allow for the use of a range of potential alternative raw materials in substitution of a portion of traditional raw materials used in the manufacture of cement. It is also noted that the Limerick Cement Factory is the only cement plant on the Island of Ireland that does not have permission for the use of alternative fuels in place of fossil fuel for the manufacture of cement. These other factories did not undertake a ‘change of use’ for their similar applications to replace fossil fuels.

Limerick Cement Factory has existed on its Castlemungret site since 1938 and as such, the proposed development is located within on an established, long-standing industrial site. As indicated on Figure 4.1 of the EIS, the site for the proposed development, together with the entirety of Limerick Cement Factory is located within a large area zoned for industrial use (refer also to Map 1A of Limerick Southern Local Area Plan). The proposed development in no way represents a change of use and was approved by An Bord Pleanála (April 2018).
4.2 Addresses queries on location of proposed development / close to a number of schools

The proposed development is located within an existing cement manufacturing facility which has been located on this site since 1938. The factory is located on industrial zoned lands and no change of land use is proposed under this development. The lands surrounding the cement factory are also zoned for industrial use. The purpose of the factory is and will remain the manufacture of cement and cement products.

5 Addresses queries on Health

A detailed Assessment on the Impact on Human Heath was prepared by Dr. Martin Hogan and submitted to the EPA in December 2018 in response to a request for further information from the EPA. Dr. Hogan also carried out a thorough literature review and found (page 11, section 3.3 Assessment on the Impact on Human Heath):

“...little or no published evidence of adverse outcomes to the health of people living around cement facilities using or switching to alternative fuels. Indeed, on the balance of published evidence there may be beneficial outcomes in terms of emissions with the potential to affect human health.”

A detailed Human Health Risk Assessment was also carried out as part of the Assessment on the Impact on Human Heath and again submitted to the EPA in December 2018. In relation to the consideration of Dioxins, Dr. Hogan notes:

“The assessment notes that measurements taken at cement plants throughout Europe burning alternative fuels show that emissions generally, and in particular, emissions of PCDD/Fs, are much lower than the Emission Limit Value (ELV) set out in the Industrial Emissions Directive (IED). Alternative fuels are currently used in Irish Cement’s sister plant at Platin, County Meath, where permission for the use of alternative fuels has been in place since 2009. Monitoring over several years shows all measured concentrations of PCDD/Fs emissions are less than 10% of the ELV.”

In conclusion, Dr. Hogan states (section 5.0, page 17):

“From a Human Health perspective, all the evidence is that there will be no negative impact on emissions to air, including dioxins, noise emissions and emissions to water. The weight of evidence, as is clearly demonstrated in the Literature review, is that the use of alternative fuels does not have adverse effects on emissions or human health. Assuming compliance with EPA licenced emission limits we can be certain that this is the case with Limerick Cement Factory also.”

In addition, the EPA carry out annual testing of dioxin levels in milk fat from milk collected from locations throughout the country. A number of the sampling locations are close to large industrial facilities licenced by the EPA, including other cement factories already using alternative fuels. Examination of this annual data indicates that there is no association between industrial activity and the levels of dioxins found in milk. Indeed the data from locations close to industry and more ‘rural’ or background locations are very similar indicating that industrial facilities are not major sources of dioxins.
6 Addresses queries on air quality / climate and related aspects

6.1 Addresses queries on a derogation from TOC limit of 10mg/Nm³

Annex VI (part 4, paragraph 2.3) of the IE Directive states that the competent authority may grant derogations for emission limit values in cases where TOC (Total Organic Carbon) and SO₂ do not result from the co-incineration of waste. In this case, TOC arises from the use of local raw materials, which contain relatively high levels of TOC. Variation of the TOC content of soils and rocks is a purely natural phenomenon.

ICL is required to comply with the requirements of the BAT conclusions on industrial emissions for the production of cement, lime and magnesium oxide. BAT 24 states that in order to keep the emissions of TOC from the flue-gases of the kiln firing processes low, BAT is to avoid feeding raw materials with a high content of volatile organic compounds (VOC) into the kiln system via the raw material feeding route. No limit for TOC is stipulated in the BAT Conclusions.

In the EPA Inspector’s Report (page 37) it states:

“continuous monitoring data show that the installation is emitting TOC within a range of 4mg/Nm³ to 22mg/Nm³ for the period between mid-2018 to mid-2019. Independent monitoring undertaken by Exova Catalyst on behalf of the Agency from the 3rd – 6th April measured a value of 17.7 mg/Nm³ TOC. As the installation is not yet accepting waste for co-incineration it is evident that the TOC levels in the raw materials and fuels currently being utilised are such that the 10mg/Nm³ limit in Annex VI of the Directive cannot be achieved on an on-going basis. It is clear, therefore, that the licensee requires derogation from the Directive’s limit value of 10mg/Nm³”

A limit of 40 mg/Nm³ is currently applied at the following facilities:

- Quinn Cement (P0378-03)
- Breedon (previously Lagan) Cement (P0487-07)

The Industrial Emissions Directive provides an approach to contribute to the achievement of a level playing field in the Union by aligning environmental performance requirements for industrial installations. Therefore, a consistency in approach should be applied by the EPA in setting limits across industrial installations.

6.2 Addresses queries on particulate emissions

As outlined in the EPA report Air Quality in Ireland 2018 (EPA, 2019)

“...in Ireland the main source – especially of the smaller and more dangerous PM<sub>2.5</sub> particles – is solid fuel burning for home heating. PM<sub>10</sub> can be made up of several sources. Some can be natural sources such as pollen, or wind-blown sea salt. Others are man-made sources such as pollution from road transport and agriculture.”

The report goes on to say that:
“burning solid fuel in stoves and especially in open fires is an inefficient process – not all the solid fuel is fully burned. These unburnt particles leave the fireplace or stove by the chimney, or directly into the room they are heating. This causes both indoor and outdoor PM air pollution. This PM air pollution is then breathed in and leads to the health effects…”

Limits have been set in the PD for particulate matter which are in accordance with BAT conclusions on industrial emissions for the production of cement, lime and magnesium oxide. BAT (best available techniques) is defined in the Industrial Emissions Directive (2010/75/EU, IED) as ‘providing the basis for emission limit values and other permit conditions designed to prevent and, where that is not practicable, to reduce emissions and the impact on the environment as a whole’. Therefore, through the provision of abatement in accordance with BAT and compliance with limits outlined in its Industrial Emissions licence, ICL will continue to operate in accordance with the requirements and aims of the IED.

6.3 Addresses queries on carbon emissions savings

Projected savings in carbon emissions are calculated based on the use of alternative fuels and raw materials instead of petcoke. This reduction in carbon emissions arises as a direct effect due to the implementation of the proposed development. There will be a reduction in CO₂ emissions from the resulting substitution of fossil fuel with Alternative Fuel. This has been demonstrated throughout the cement industry and also in our sister plant in Platin Co. Meath. Emission of carbon dioxide for all cement factories within the Emission Trading System (ETS) in Europe are independently verified each year. The beneficial reduction in carbon dioxide emissions from the use of alternative fuels is widely acknowledged. The emission factors for fuels used in a variety of combustion processes are published by the Intergovernmental Panel on Climate Change (IPCC) show that ‘non-fossil’ fuels have a lower carbon intensity than fossil fuels like petroleum coke.

6.4 Addresses queries on maintenance of air quality / Directive 2008/50/EU

Directive 2008/50/EC on ambient air quality and cleaner air for Europe, states that the directive aims to maintain air quality where it is good and improving it in other cases. As outlined in the Assessment of Atmospheric Emissions submitted to the EPA in December 2018, the proposed development will have a positive impact on air quality as it will result in a reduction in predicted ground level concentrations. It is also noted that predicted concentrations comply with the air quality standards outlined in the Directive.

6.5 Addresses queries on PM₂.₅ and ultrafine particles

Ultrafine particles are defined as particulate matter of nanoscale size i.e. less than 0.1μm. Limits that apply to PM₂.₅ are not relevant to ultrafine particles. As outlined in the Assessment of Atmospheric Emissions, the ground level concentration of PM₂.₅ is predicted to reduce by 0.2% due to the proposed development and to comply with air quality standards.

6.6 Addresses queries on data on ground level concentrations at identifiable locations

A detailed air quality impact assessment was prepared for the Environmental Impact Statement (EIS) and submitted to the EPA as part of the IE licence application in May 2016. The air dispersion model and air quality assessment was fully updated and submitted to the EPA in December 2018 (Arup 2018) as part of the response to further information issued by the EPA 1 November 2018.
Ground level concentrations are predicted at the worst-case receptor locations. As outlined in the December 2018 Report, “two nested cartesian receptor grids were used. The first grid extends for 4km across the facility, with receptors at 100 metre intervals. The second grid extends for 20km across the facility, with receptors at 1km intervals. Ground level concentrations are predicted at each receptor location. These receptors do not represent individual residences but would be representative of potential “worst-case” receptors.”

Results provided in Table 8 of the Report (Arup 2018) are based on these worst-case receptors. Predicted concentrations at all other receptor points are less than the maxima presented in the table. In addition, isopleths are provided which demonstrate the worst-case predicted concentrations within the 20km square grid.

Emission concentrations and emission rates on which the modelling is based, are presented in Tables 4 (existing scenario) and Table 5 (proposed scenario) of the December 2018 Report.

6.7 Addresses queries on modelling at emission limit values

The modelling assessment submitted to the EPA is based on worst-case emissions with all plant and equipment in operation and emitting at licence limits on a continuous 24 hour, 7 days a week, 365 days/year basis. It can be seen in the Annual Environmental Reports (AERs) for the factory that in practice many of the emissions occur at a fraction of the ELV, so assuming as the model does, that each of these emissions occurs at the ELV is a highly conservative approach. In addition, an assessment of potential impacts during start-up was carried out and included in the December 2018 Modelling Report. The assessment concluded that total concentrations, including background levels are in compliance with Air Quality Standards/Limit Values.

6.8 Addresses queries on Odour

As detailed in the response to RFI Item No. 1 of the Limerick City and County Council (refer to response submitted to LCCC in June 2016 and to EPA in March 2019), no odour issues will arise as a result of the proposed development/activity, because:

- No untreated waste will be accepted at the Cement Factory
- No preparation of alternative fuels (or wastes) will take place at the Cement Factory
- Alternative fuels/raw materials will be prepared off-site to a required specification prior to delivery to the Cement Factory
- Alternative fuels / raw materials will be stored in purpose-designed buildings, tanks, and silos, and
- Alternative fuels / raw materials will be transferred or pumped directly from the storage areas via enclosed pipes or conveyors directly to the Cement Kiln.

6.9 Hexavalent Chromium

It is suggested that background levels of hexavalent chromium have been minimised to bring it within the EA guideline and that guess work has been applied where assumptions are made.
Response
This is incorrect. In May 2019, the EPA requested an update to the air quality impact assessment previously submitted in December 2018. This request required the comparison of the predicted Chromium VI to the Environment Agency (EA) guideline value of 0.0002µg/m$^3$.

Monitoring of metals in Kiln 6 is carried out in accordance with licence requirements. This monitoring provides a speciation of relevant metals. There is no requirement in the licence to provide a speciation for Chromium VI.

Previously the December 2018 modelling report compared the predicted concentration of total chromium to the EA annual guideline of 5 µg/m$^3$ which is applicable to chromium III, chromium III (compounds and chromium III compounds (as Chromium)). Predicted concentrations are in compliance with this limit value.

Chromium is a relatively common element in the Earth’s crust. It occurs predominantly in two forms or oxidation states; Chromium III and Chromium VI. Chromium VI reduces naturally to Chromium III, the more common form, in the environment. Measuring the relative frequency of the different forms of Chromium in the environment is considered difficult. In order to estimate the percentage of Chromium VI within total Chromium, a reference from the United States\textsuperscript{1}, stated that ambient concentrations indicate that Chromium VI comprises 3% to 8% of total ambient Chromium. The July 2019 RFI response document to the EPA predicted the concentration of both Chromium VI using both the lower, 3% and upper 8% concentration of total Chromium. In addition, the background levels of Chromium were estimated again for both the lower, 3% and upper, 8% factors. No guess work was applied in the estimations of Chromium VI, published data was used to estimate ground level concentrations.

Applying both the 3 and 8 percentage, the predicted concentration of Chromium VI that could arise from the process falls well within the EA guideline of 0.0002µg/m$^3$.

Predicted ground level concentrations are based on emissions at maximum licenced concentrations, with maximum flow rates, under the most unfavourable weather conditions with all plant operating 24 hours, seven days per week and 365 days per year. This is a worst case scenario and will not be realised.

7 Other Queries

7.1 Addresses queries on requirement for a new licence
The EPA has determined that a licence review is the appropriate approach in this instance.

EPA Guidance on Requests for Alterations to a Licensed Industrial or Waste Activity specifies that changes typically requiring a review of a licence include the introduction of a new/additional class of activity. The application for a review of the licence is therefore the correct approach and is in accordance with guidance from the EPA.

\textsuperscript{1} Air Resources Board (ARB) (1986) Public Hearing to Consider the Adoption of a Regulatory Amendment Identifying Hexavalent Chromium as a Toxic Air Contaminant report.
7.2 Addresses queries on tonnage of each waste stream / ‘mixed waste’ / detail on fuels

The grant of planning permission from An Bord Pleanála limits the maximum combined tonnage of all alternative fuels and alternative raw materials at 90,000 tonnes per annum. Within this overall figure, the maximum allowable quantity of Solid Recovered Fuel (SRF) is further limited at 30,000 tonnes per annum. The use of hazardous materials is not permitted.

Outside of these limitations, flexibility is required in terms of the quantity of other materials which may be used in the cement factory. This is considered critical so as to adapt to the availability of different materials, which may vary from year to year. The term ‘mixed-waste’ is not used in the application. A full detailed list of the materials that can be used as potential alternative fuels and alternative raw materials is provided at Tables G.1(i) and Table G.1(ii) of the licence application respectively.

Individual alternative fuels will be introduced to the cement factory on a phased basis and only after they meet agreed quality control specifications and test programmes completed to the satisfaction of the Agency. Each fuel will be proposed in advance to the EPA and will be covered by the on-going monitoring and reporting requirements of the IE licence.

7.3 Addresses queries on the use of recyclable materials

As set out in EIS (including at Appendix 1.1) the use of wastes as alternative fuels and/or alternative raw materials meets the objectives of the circular economy in a number of ways. First it contributes to resource efficiency through reduction in the use of primary resources, including fossil fuels. Second, it reduces the need for waste disposal options such as landfill or potentially, waste export.

Third, the proposed development/activity also provides for ‘co-processing’, which is the recycling of materials and the recovery of energy as two processes happening in parallel inside the cement kiln. The European Commission Communication 34, of January 26, 2017 (http://ec.europa.eu/environment/waste/waste-to-energy.pdf), recommends that when reviewing national waste management plans for the treatment of non-recyclable waste that:

“Member States should take a long-term perspective and carefully assess interalia, the following:

– the available capacity for co-incineration in combustion plants and in cement and lime kilns or in other suitable industrial processes;”

As noted at section 2.2.2 of the EIS (page 2-3), the Southern Regional Waste Management Plan acknowledges (Section 4.3, page 32) the increasingly significant role of cement plants in using waste for thermal recovery stating that it is policy that:

“The local authorities of the region support self-sufficiency and the development of indigenous infrastructure for the thermal recovery of residual municipal wastes in response to legislative and policy requirements. The preference is to support the development of competitive, environmentally and energy efficient thermal recovery facilities in Ireland, including the replacement of fossil fuels by co-combustion in industrial furnaces or cement kilns, and ultimately to minimise the exporting of residual municipal waste resources over the plan period.”
Replacing fossil fuels in cement kilns through Europe has a long history and it can be seen that many Member States with cement kilns using alternative fuels also achieve high levels of recycling indicating that the use of alternative fuels does not negatively impact on the levels of recycling.

7.4 Addresses queries on industrial incineration

The proposed development is to allow for the gradual and planned introduction of alternative fuels and alternative raw materials to the cement manufacturing process. The introduction of alternative fuels and alternative raw materials will replace existing fossil fuel and virgin raw material. As such the proposed development is primarily to facilitate part fossil fuel / raw material substitution. The purpose of the factory is, and will remain the manufacture of high-quality cement and cement products. The use of fuel is solely for the purposes of making cement and experience elsewhere in Europe demonstrates that cement factories using these alternative fuels continue to operate as factories.

7.5 Addresses queries on the use of Natural Gas as an alternative fuel

Natural gas is a fossil fuel, which does not meet the requirements for the proposed development to reduce existing dependency on fossil fuel use. In addition, natural gas is not a common fuel used in cement kilns elsewhere as it would increase the cost of cement production.

7.6 Addresses queries on Bag filters being unsuitable

No change is proposed to the operation of the facility as a result of the proposed development/activity. The factory currently operates with the extreme temperatures required for the manufacture of cement as well as fabric filters in place. This is part of standard operations in all cement factories. The proposed development simply facilitates the part replacement of a portion of existing fossil fuel use and traditional raw material use with alternative fuels and materials in the continued manufacture of cement. There will be no change to operation temperatures and no impact on the site’s filtration systems.

7.7 Addresses queries on ageing infrastructure / kiln temperatures

While the kiln was installed in the 1980s it undergoes annual shut down for inspection and maintenance purposes, such as regular replacement of kiln bricks, bag filters etc. This ensures that the kiln is operating at optimal efficiency. On-going investment has been made into the kiln and associated equipment over the years.

In addition, no change is proposed to the operation of the facility, its kiln, or its operating temperatures, as a result of the proposed development/activity. It simply facilitates the part replacement of a portion of existing fossil fuel use and traditional raw material use with alternative fuels and materials in the continued manufacture of cement.

There are examples of cement kilns throughout Europe that are of a similar age or older than Kiln 6 in Limerick and they are successfully using a range of alternative fuels.

7.8 Addresses queries on self-regulation, independent monitoring, ICL communications

Irish Cement complies with all of the monitoring and reporting requirements as detailed in the EPA licence.
Licence conditions require Irish Cement to inform the Agency within specific time periods of any incidents or breaches in licenced activities. The EPA has the necessary powers to carry out detailed and extensive enforcement of any licensed facilities under its control. The Agency’s annual enforcement report details the extent of the monitoring and site inspections that the Agency’s staff carry out each year, including the percentage of visits that are unannounced.

7.9 Addresses queries on conditions of PD

In addition to the standard licence conditions, a number of additional conditions are contained in the Proposed Determination that should provide reassurance to the community, including the requirement to display emissions data from the factory on our website, the requirement to establish a community liaison committee and the need to run a series of test programmes prior to using any new alternative fuel.

7.10 Addresses queries on use of landfill leachate / red mud

The proposed development includes for the use of alternative fuels to replace fossils fuels as well as allowing for the use of alternative raw materials. The use of these alternative raw materials allows for the replacement of existing virgin resources and improves the resource efficiency of the factory. Elsewhere in Europe cement kilns have permission to use these materials. Only materials that provide mineral, heat or process benefits will be accepted by Limerick Cement Factory.

7.11 Addresses queries on BAT for Waste Incineration

BAT for Waste Incineration does not apply. The current working Draft of the BREF for waste incineration confirms that cement kilns whose primary purpose is the production of material products (namely cement) is excluded from the scope of the waste incineration BREF.

It is also noted that the BREF for Waste Incineration is currently in working draft form and has yet to be formally adopted.
APPENDIX 1: Non-exhaustive list of main documents, responses and reports submitted to the EPA as part of environmental assessment for the licence review process

The licence application is subject to Environmental Impact Assessment (EIA) and the following main documents, responses and reports have been submitted to the EPA with respect to EIA and environmental considerations:

- Environmental Impact Statement with Appendices and Non Technical Summary  
  - including the following documentation  
    - Irish Cement Brochure  
    - Historical and Archaeological Background  
    - Archaeological Excavations  
    - Recorded Monuments in the Study Area  
    - Monuments included in the Archaeological Survey Database  
    - Resource and Waste Management Policy and Legislation Review  
    - Construction and Demolition Waste Statistics  
    - Outline Construction Waste Management Plan  

- Screening for Appropriate Assessment  

- Specific Responses to EPA request for further information (RFI, 1 July 2016) on:  
  - Report on Monitoring at SW1, SW2 and SW3  
  - Report on Monitoring at GW-1 to GW-4  
  - Wastewater Treatment  
  - BAT Conclusions No.1 (vii, viii & ix); 7(b)(d); 15; 16; 17; 18; 19; 20  
  - including the following documentation:  
    - Response to Monitoring (SW1, SW2 & SW3 and GW-1 to GW-4)  
    - Updated BAT Assessment  

- Specific Responses to EPA request for further information (RFI, 1 November 2018) on:  
  - Response on Waste Acceptance Capacity  
  - Response on Raw Materials, Intermediates, Products, etc., used or generated on the site  
    - Updated Table G.1(i) and (ii) listing proposed alternative fuels and alternative raw materials  
    - Updated Table D.2(i) to remove hazardous waste stream  
  - Responses on BAT  
  - Responses on Emissions to Atmosphere, including updated Air Modelling Report  
  - Responses on Fugitive Dust Emissions  
  - Submission of modelling files  
  - Response on Assessment of Impact on Human Health  
  - Responses on Hydrology and Hydrogeology  
  - Responses on Accidents and Disasters  
  - Updated Baseline Report  
  - Natura Impact Statement (NIS)  
  - Updated Non-Technical Summary  
  - and including the following documentation:  
    - Assessment of Atmospheric Emissions  
    - Ambient Metal Monitoring Reports  
    - Dust Management Plan  
    - Assessment of Impact on Human Health
- Human Health Risk Assessment of PCDD/Fs
- Firewater Tanks with Site Drainage Map
- Surface Water Mass Balance
- Report on Compliance with Groundwater Trigger Values
- Groundwater Quality Technical Assessment
- Vulnerability to Major Accidents and/or Natural Disasters
- Baseline Report on Geology and Hydrogeology
- Natura Impact Statement (NIS)
- Updated Non Technical Summary (NTS)

- Specific Responses to EPA request for further information (RFI, 15 February 2019) on:
  - Environmental Mitigation Commitments
  - Construction and Phase Development
  - Water (Flooding)
  - Climate and Noise
  - and including the following documentation:
    - Response to LCCC Request for Further Information (October 2016), which includes responses on
      - Odour
      - Quantities of Waste by EWC
      - Compliance with Southern Regional Waste Management Plan
      - Storage of Wastes
      - Quantity of Tyres
      - Spread on Invasive Alien Species
      - Updated Air Quality Assessment
      - Human Health Risk Assessment
      - Vector Management
      - Complaints Procedure
      - Noise Survey and Assessment
      - Traffic Impact Assessment
      - Emission Abatement Technology
      - and including the following documentation:
        - Emergency Procedures Plan
        - Human Health Risk Assessment of PCDD/Fs
        - Environmental Queries and Complaints Policy
        - Environmental Noise Report
        - Trigger Levels for SW3 (Bunlucky Clayfield Pond)
    - Response to LCCC Request for Clarification of Further Information (February 2017), which includes responses on:
      - Background Heavy Metals
      - Risk Assessment of PCBs
      - Complaints Procedure
    - An Bord Pleanála Inspector’s Report
    - An Bord Pleanála Grant of Permission
    - Drawing LK1400900819 Tyre Handling, Sorting & Conveyor to Kiln 6
    - Tonal Noise Baseline
    - Updated Non Technical Summary (NTS)

- Specific Responses to EPA request for further information (RFI, 29 May 2019) on:
o Derogation for NOx emissions
o Assessment of Atmospheric Emissions
o Use of Resources
o and including the following documentation:
  ▪ Air Emissions Compliance Monitoring Emissions Report
  ▪ Certificate of Incorporation