An Bord Pleanála

Inspector's Report 17.PA0050

Private Application	10-year permission to facilitate further replacement of fossil fuels and allow for the introduction of alternative raw materials in the manufacturing of cement
Location	Platin Cement Works, Platin, Co. Meath
Applicant	Irish Cement Limited
Local Authority	Meath County Council
Observers	Carranstown Residents Group Commons Road Residents Association Simon Condron Regina Doherty TD Duleek Schoolboys and Girls Football Club Eimear Ferguson and others Friends of the Aquifer Frank Godfrey Cllr. Sharon Keogan Marely's Lane South Residents Group Helen McEntee TD Cllr Paddy Meade

	North East Association of Environmental Groups
	Cllr Sharon Toland
	John Woods
	Zero Waste Alliance Ireland
Date of Site Inspection	12th September 2017; 8th November 2017; 20th November 2017
Inspector	Deirdre MacGabhann

Contents

1.0 Introduction

1.1. This report concerns an application by Irish Cement Limited for a 10-year permission to facilitate (a) the further replacement of fossil fuels with alternative fuels and (b) to allow for the introduction of alternative raw materials, in the manufacturing of cement at their plant in Platin, Co. Meath. The application is made to the Board on foot of its previous determination that the development was deemed to be strategic infrastructure, within the meaning of section 37A of the Planning and Development Act 2000 (as amended), in May 2017 (PL17.PC.0221).

1.2. Platin Cement works is regulated under the terms of an Industrial Emissions (IE) licence, issued by the EPA, which controls and limits emissions from the facility (IE licence No. P0030-04). The licence is currently under review (IE licence no. P0030-05), as part of the EPA's review of IE licences for all cement plants in Ireland, to ensure compliance with the requirements of the European Commission decision on Best Available Techniques (BAT) applicable to the production of cement (Commissions Implementing Decision 2013/163/EU). The proposed development will require a further review of the licence and an application for this has been submitted to the EPA by ICL (IE no. P0030-06).

2.0 Site Location and Description

2.1. The application site lies c.750m southwest of junction 8 of the M1 (Drogheda South), approximately c.2.5km north east of Duleek village and c.1.5km to the south east of Donore village. It is situated to the west of the R152, Drogheda – Kilmoon Cross Regional Road (where the R152 joins the N2). Drogheda Town lies c.1.75km to the north east of the application site.

2.2. The existing cement works extend to approximately 40 hectares and limestone (the primary raw material used in the cement making process) is extracted from the adjoining quarry. The cement works site is divided in two by the Drogheda/Navan railway, with the main cement production area located to the northwest of the railway line and the cement dispatch/output area to the south east (see Figure 1.1, EIA Report). The 22.5ha application site lies within the main cement works area to the northwest of the railway line. The cement works site includes two cement kilns, kiln 2 and kiln 3 (kiln 1 is no longer in use and has been partly dismantled). At the time of site inspection kiln 2 was not in operation.

2.3. The site comprises large scale industrial structures associated with the preparation of raw materials (typically limestone, the main material, clay overburden, shale and small quantities of bauxite and iron) for the production of 'clinker' which, when milled, forms the main component of cement (see Figure 3.1, EIAR). The manufacture of cement entails heating the raw materials, in a kiln pre-heater tower and a rotary kiln, to a critical temperature of c.1,450˚C (with flame temperatures to 2,000 ˚C). Gas exits through a cooling tower and bag filter prior to discharge via a kiln stack.

2.4. The source of fuel for kiln 3 is currently a mix of petcoke and alternative fuels up to an annual limit of 120,000 tonnes (granted permission in 2009). At the time of site inspection, solid recovered fuel (fine solids) was being used at the plant to heat kiln 3 (front and back end, see Figure 3.2, EIAR, and photographs), with a storage and conveyor facility to the south of kiln 3 (see photographs).

2.5. There are three entrances to the application site, all located on the county road to the north of the site (the L5613); entrance A for employees, entrance B to the main factory and entrance C for materials (see Figure 12.1, EIAR). The county road joins the R152 to the north east of the application site. (Access to the quarry, cement

offices and for cement collections is directly from the R152, to the south of the application site).

2.6. The land surrounding the Platin Cement Works site is primarily agricultural, with 10 residential properties lying within 500m of the development, and a further 29 between 0.5km and 1.0km of the site boundary (Figure 4.2, EIAR). Indaver Waste to Energy Facility lies to the south of the Cement Works and a number of other quarries are located to the north west of the application site. Scoil Cholmcille Primary School is located 1.2km south east of the application site. Other schools are located over 1.5km from the site at Duleek, Donore and Drogheda.

2.7. The UNESCO World Heritage Site at Brú na Boinne lies c.4km northwest of the cement works (to the north of the River Boyne), with footpath access from the visitor centre located to the south of the River. The Battle of the Boyne Visitor's Centre at Oldbridge, also lies c.4.5km to the north of the site. The application site lies within the wider area that forms part of the Boyne Valley Scenic Drive (see Figure 4.3, EIAR), although the drive itself does not use public roads in the immediate vicinity of the site.

3.0 Proposed Development

3.1. Application Documentation

3.1.1. The proposed development is described in the application documentation which includes:

- Plans and particulars in respect of the proposed development.
- An Environmental Impact Assessment Report.
- Associated Appendices, including:
    - Firewater Risk Assessment (Appendix 3.1).
    - Emergency Response Procedures (Appendix 3.2).
    - Construction and Environmental Management Plan (Appendix 3.4).
    - List of Waste (Appendix 3.5).
    - Human Health Risk Assessment (Appendix 4.1)
    - Ecological and Sediment Study of the Nanny (Appendix 5.1).
    - Photomontages (Appendix 10.1).
    - Outline Construction and Demolition Waste Management Plan (Appendix 14.1).
- An Appropriate Assessment Screening Report.
- A Natura Impact Statement.

3.1.2. Key aspects of the development, as described in the project documentation, are set out below. The findings of the EIAR and the NIS are also summarised.

3.2. Context for the Development

3.2.1. Platin Cement Works is one of Irish Cement Limited's two cement production facilities in the country[1]. The Platin plant has been in operation at the site since

[1] In total there are four cement plants in the country, ICLs plants in Limerick and Platin, Lagan Cement Limited's' plant near Kinnegad, Co. Meath and Quinn Cement's plant at Ballyconnell, Co. Cavan).

1972. The original facility included a single kiln (no. 1), with a second added in 1977 (no. 2) and a further one, in 2008 (no. 3) following a major upgrade of the plant. The current Cement Works is the largest manufacturing facility in Ireland. It uses both fossil fuels and alternative fuels to produce a range of cement products, which it supplies across the country and exports to Britain and Europe.

3.2.2. Fossil fuels have traditionally been used to fire the cement kilns in Platin (e.g. petcoke and, to a lesser extent, coal). Fossil fuels are imported by ship usually via Dublin Port and delivered by lorry on a regular basis to an on-site storage area at the Cement Works (see Figure 3.3, EIAR). The applicant states that the use of lower carbon alternative fuels (hazardous and non-hazardous) has been an integral part of cement manufacture in Europe since the 1980s with, in 2016, an average fossil fuel replacement rate in cement plants of 41% (and up to 62% in Germany and 100% in some plants at times). The use of alternative fuels is known as 'co-processing' in that it involves both the recycling of materials and the recovery of energy from the fuel inside the kiln (NB any residues from the combustion of alternative fuels are fed into the kiln resulting in no waste material arising from the process). A wide range of alternative fuel types are used across Europe including tyres, oils, paper pulp, animal meal, solid recovered fuel (SRF), refused derived fuel (RDF), wood, secondary liquid fuels (SLF) and sewage sludge. Alternative fuels are already in use at 3 of the 4 existing cement plants in Ireland (section 3.4 EIAR)[2].

3.2.3. Planning permission currently exists for, and an Industrial Emissions Licence is in place for, the use of up to 120,000 tonnes per annum of alternative fuels (Solid Recovered Fuels (SRF), Chipped Used Tyres and Meat and Bone Meal) in kiln 3[3]. There is no permission for the use of alternative fuels in kiln 2. During 2016, the maximum permitted quantity of alternative fuels was used in Platin Cement Works, with the balance being petcoke, resulting in a saving of over 64,500 tonnes of CO_2 emissions. The 2016 figures were based on kiln 3 operating below maximum output and no operation of kiln 2. With demand growing for cement from the construction sector, and the use of alternative fuels currently restricted, the need for an increasing fuel requirement can only be met by increased importation of fossil fuels.

[2] I understand this to refer to ICLs plant at Platin, Lagan Cement's plant at Kinnegad and Lafarge Cement's plant in Northern Ireland.

[3] Under PA ref. SA120301, planning permission was granted for the co-firing of up to 120,000 tonnes per annum of SRF, with no change to the permitted maximum total of 120,000 tonnes per annum of alternative fuels.

3.3. **The Proposed Development**

3.3.1. The proposed development is brought forward to enable additional fossil fuel replacement to be achieved, progressively over the 10-year period of the permission applied for, by expanding the quantity and range of alternative fuels used in the cement works (up to 85% replacement) i.e. a 10-year permission is sought of the construction phase of the project and permission for the use of alternative fuels/raw materials is sought in perpetuity. In addition, the applicant proposes the introduction of alternative raw materials to the cement production process.

3.3.2. If the Cement Works operates at its maximum annual production capacity, 2.8 million tonnes of cement, and the target for fossil fuel replacement of c.85% is achieved, this would require use of an additional 480,000 tonnes per annum of alternative fuels/raw materials (360,000 tonnes over the existing 120,000 tonnes permitted per annum), with up to an additional 100,000 tonnes per annum of municipal derived waste (page 3.9, EIAR). A small quantity of fossil fuel (c.10,000 tonners per annum) will continue to be used for the initial firing of kilns or as a buffer fuel stock.

3.3.3. The applicant also considers that up to 120,000 tonnes per annum of alternative raw materials (c.7% of current raw material use), possessing the properties and minerals that are required in the manufacture of cement, could be used at the Cement Works, for example, water treatment sludge (containing aluminium), soils and stones (containing minerals required for the production of cement).

3.3.4. N.B. The quantity of alternative raw materials to be used is included within the additional 480,000 tonnes per annum of alternative fuels/raw materials sought in the application.

3.3.5. The use of this alternative material will reduce reliance on imported fossil fuels and reduce CO_2 emissions by up to an additional 314,000 tonnes per annum, improving operational competitiveness and environmental sustainability of the cement works.

3.3.6. Alternative fuels, which the applicant proposes to introduce to the cement manufacturing process, comprise the following broad categories of materials:

- Fine solids e.g. SRF, chipped timber, shredded plastics (c. 10-50mm). These will be delivered to the site read for use, off-loaded from trucks into enclosed bays from where they will be pneumatically conveyed to the kiln system.

- Coarse solids e.g. shredded wood, rubber, dry filter cakes (c.30-120mm). These will be prepared off site to a defined specification, delivered to site, off-loaded from trucks into bays inside enclosed buildings and from there transferred to the kiln feeding system using screw feeders and/or overhead cranes.
- 'Free flowing' solids or powders e.g. secondary liquid fuels (SLF), waste oils, sludge. These will be delivered by tanker, off-loaded using pumps, into on site storage tanks located within bunded compounds. The fuels will be pneumatically conveyed from the storage silos to kiln burners via enclosed pipelines.
- Pumpable fluids e.g. secondary liquid fuels (SLF), waste oils, distillation residues, paint sludge. These will be delivered by tanker, off-loaded using pumps into on site storage tanks located within bunded compounds. The fluid fuels will be pumped to the kiln bunkers via enclosed pipes.
- Whole tyres. These will be introduced to kiln 2 using a dedicated sorting and elevation and weighing system to feed a single tyre at a time through a double flap feeding point on the preheater tower.

3.3.7. Due to their nature and source, the materials are considered to be wastes and as such are identified in the EPA's waste classification system. Further:

- Most of the materials to be used will be non-hazardous but some are categorised as hazardous waste e.g. SLF, waste oils.
- Both types of waste can be processed effectively in the kilns because of the high temperatures.
- All materials are subject to testing to ensure they meet the agreed specifications and prior to any new material being introduced a test programme must be agreed with the EPA.
- No processing of waste will be carried out on site.

3.3.8. A full schedule of the proposed materials and their List of Waste (LOW) codes are set out in Appendix 3.5 of the EIAR. An explanation of the LOW codes is set out in submission no. 18 to the oral hearing i.e. for each of the proposed waste categories

set out above, fine solids etc. the applicant lists the waste types, by LOW code, to be used.

3.3.9. The proposed development will therefore provide for on-site handling, storage and introduction of up to 480,000 tonnes of alternative fuels and alternative raw materials per annum. The development will consist of the following elements (see drawing nos. P011-0G3-0721-02A-00 and 02B-00):

Fine Solids

- Extension to the existing kiln 3 fine solids storage building, located to the south of kiln 3 (gfa c.493sqm), with truck unloading station and connecting covered bridge over.
- Fine solids storage building for kiln 2 (gfa c.1,287sqm), with 2 no. associated truck offloading stations (c.30sqm) and associated conveyor.

Coarse Solids

- Coarse solids storage and handling building for kiln 2 and kiln 3 (gfa c.4,875sqm) to the west of the site.
- Coarse solids offloading, buffer storage and conveying building for kiln 2 (gfa c.288sqm) with a proposed kiln transfer station (gfa c.47sqm) and associated conveyors.
- Coarse solids conveyor building for kiln 3 (gfa 288sqm) and associated conveyor.

Pumpable Fluids

- 3 no. pumpable fluids storage and handling tanks for kiln 2 and kiln 3, located in a concrete bunded area, to the east of kiln 3.

Free Flowing Solids

- 2 no. silos for storage and introduction of free flowing solids for kiln no. 2, south of kiln 2.
- 2 no. silos for storage and introduction of free flowing solids for kiln no. 3, north of kiln 3.

Tyres

- Tyre storage and handling area (c.835sqm), tyre intake station (c.288sqm), transfer station (c.288sqm) and conveyors, to the north of kiln 2,

Alternative Raw Materials

- Alternative raw materials storage building (gfa c.2,846sqm), in the northwest corner of the site.

Other

- Bypass filter for kiln 2 comprising a bag filter and cooling tower, with truck loading point, to the south of kiln 2.
- Demolition of 1 no. existing firewater water retention tank.
- Provision of 5 no. new firewater retention tanks.
- Provision of a range of associated mechanical plant and equipment and ancillary works, including sections of conveyors, sections of internal roadway and pavement, fencing and landscape works.

3.3.10. In total 14,718sqm (gfa) of buildings and structures are proposed. This compares to the 38,010sqm (gfa) of existing buildings on site, to be retained. The proposed structures vary in size but are generally of low elevation, relative to the existing structures on site. Materials will be in keeping with those of existing structures and comprise a mix of exposed cast concrete, steelwork and corrugated sheeting used for their construction.

3.3.11. The proposed scheduling of the structures is set out in Table 3.1 of the EIAR with construction works phased over 10 years. In summary works comprise, in the short term (0-4 years):- the extension to the existing fine solids building for kiln 3, the construction of pumpable fluids tanks for kilns 2 and 3, the proposed free flowing solids silos for kiln 3 and the alternative raw materials building for kilns 2 and 3. In the medium term (3-7 years):- the construction of the general fine solids building for the back end of kiln 2 and a ‘selected’ fine solids fuel injection point for the front end of kiln 2 (I understand that temperatures at the front end of the kiln require a greater degree of control, hence the use of ‘selected’ fine solids). In the long term (6 to 10 years): - construction of the tyre storage area, intake station etc., proposed course

solids handling building, free flowing solids building for kiln 3 and course solids truck off-loading building etc. for kiln 2.

3.4. Potential Scenarios for Proposed Use of Alternative Fuels

3.4.1. It is the applicant's objective to maximise the replacement of fossil fuel use. However, actual replacement levels achieved will be dependent on the availability of suitable alternative fuels. The applicant is therefore seeking permission for maximum optional flexibility in the quantity and range of potential alternative fuels to be used. Where suitable alternative fuels are limited or unavailable, the cement works will revert to use of fossil fuels.

3.4.2. As the future use of alternative fuels will involve a degree of fluctuation between various alternative fuels and between alternative fuels and fossil fuel, a number of potential scenarios are set out in the EIAR (Figure 3.5), with the progressive use of a wider range of alternative fuels from Scenario 1 (current position) to Scenario 5.

3.4.3. Scenario 4 is identified as the preferred option and is the basis of the proposed development. It comprises kilns 2 and 3 operating at maximum output with 85% alternative fuels substation in both kilns and the following mix of fuel types:

- Fossil fuels (14%).
- Fine solids (SRF) (38%).
- Tyres (10%).
- MBM (9%).
- Biosolids (12%).
- Solvents (10%).
- Waste oil (4%).
- Oil sludge (1%).
- Wood waste (2%).

3.4.4. (NB There is no breakdown of alternative raw materials).

3.5. Construction

3.5.1. Detailed arrangements for the construction of the proposed development are set out in the Construction and Environmental Management Plan (Appendix 3.4, EIAR). Access for construction traffic will generally be via Entrance C on Platin Road L5613 (Figure 3.4, EIAR). A temporary construction compound will be constructed for each phase of the development. The compound will be located within the Platin Cement Works site and will be decommissioned after construction with the ground reinstated to its original condition.

3.6. Environmental Impact Assessment Report (EIAR)

3.6.1. The EIAR explains the need for the proposed development, the alternatives considered and the nature of the proposed development. It provides an assessment of the likely environmental effects of the development and concludes:

- The proposed development will have a positive impact on underpinning existing direct employment and will increase opportunities for further indirect employment.
- The development will have a positive impact in diverting materials that would otherwise go to landfill or waste export, to the Cement Works, where they would be recovered and reused as alternative fuels and/ alternative raw materials. The use of alternative fuels will offset the requirement for up to c.210,000 tonnes per annum of imported fossil fuels and could reduce potential CO_2 production at the Cement Works by a significant c.314,000 tonnes per annum.
- Whilst the proposed development would result in very minor changes to traffic, it would not have any significant impact on human health, biodiversity (flora and fauna), land, soils, geology and hydrogeology, water and hydrology, air quality, noise and vibration, traffic, material assets or on cultural heritage or the landscape and visual environment.

3.7. **Natura Impact Statement**

3.7.1. The application documentation includes a Screening for Appropriate Assessment Report and a Natura Impact Statement. The application site lies within c.15km of three Special Areas of Conservation and three Special Protection Areas (Table 1 and Figure 2, NIS). The Screening Report concludes that, by virtue of potential contamination of surface water and emissions to air during construction and operation, it is not possible to rule out significant adverse effects on these five European sites and recommends, therefore that a Natura Impact Statement is required.

3.7.2. The NIS subsequently considers that on the basis of the best scientific evidence it can be clearly demonstrated that no elements of the project will result in any impact on the integrity or the Qualifying Interests/Special Conservation Interests of any relevant European site, either on their own or in combination with other plans or projects, in light of their conservation objectives. The conclusions have regard to the proposed methodology for the construction and operation of the development, including:

- All construction activities will be carried out within the catchment of the site drainage system, with sediment and hydrocarbon controls.
- Compliance with a Construction and Environmental Management Plan (see Appendix 4 of NIS) to incorporate identified mitigation measures to prevent pollution of water courses during construction.
- The distance of the development from Natura 2000 sites and the means to limit dust generation during construction to IE licence values.
- Proposed mitigation measures in respect of the management of surface water during operation.
- Evidence that the current discharge from the Cement Works is having no significant impact on biological water quality downstream of the site.
- Continued compliance with surface water emission limit values for the emission point (SW4).

- Predicted compliance with air quality standards for the operation of the proposed development by itself, and in conjunction with the Indaver waste to energy facility (with air quality standards defined for the protection of human health and ecosystems).
- The absence of sensitivity in the Qualifying Interests of identified SACs and SPAs to changes in nitrogen deposition levels.

4.0 Planning History

4.1. Planning permission was granted for a new cement plant on the site in 1969. Since then a number of planning applications have been brought forward by the applicant. Of particular relevance to the proposed development are the following:

- PA ref. SA/803066 - Permission granted in February 2009, by the planning authority, for the substitution of a proportion of the petroleum coke fuel used at the plant to produce cement clinker, with solid recoverable fuels, chipped used tyres and meat and bone meal, up to a maximum of 120,000 tonnes per annum (with permitted maximum tonnages of up to 90,000 tonnes of SRF, 40,000 tonnes per annum for meat and bone meal 30,000 tonnes per annum for chipped tyres). The application related to an activity for which an Integrated Pollution Prevention Control Licence was required and a Licence was subsequently granted by the EPA (P0030-04) for the development.
- PA ref. SA/120301 – Permission granted in June 2012 for the co-firing up of up to 120,000 tonnes of SFR (no change to maximum permitted total).
- LB/151288 – A planning application was made for a 10-year permission to allow for further progressive replacement of fossil fuels with lower carbon alternative fuels and to allow for the use of alternative raw materials in the Cement Works. The application was not determined as the planning authority were of the view that it may comprise strategic infrastructure. The Board subsequently decided that it was (PL17.PC.0221).

4.2. I also draw the Board's attention to the following applications/appeals for thermal recovery elsewhere which are currently before the Board for decision/determination:

- PL04.PA0045 (January 2016) – Indaver Ireland's application to construct a waste to energy facility at Ringaskiddy, Co. Cork, to accept up to 200,000 tonnes of municipal waste per annum.
- PL91.248285 (April 2017) – Appeals in respect of ICL's proposed development to introduce approximately 90,000 tonnes per annum of alternative fuels/raw materials to their Limerick Cement Factory (whole tyres, fine solids, coarse solids, free flowing solids and pumpable fluids).

4.3. In addition, pre-application discussions have commenced with the Board in respect of the following waste-to-energy developments:

- PL.02.PC0241, Quinn Cement Limited's proposals to increase in the use of alternative fuels/raw materials, from 127,875 tonnes to 300,000 tonnes per annum, at cements works, Scotchtown, Co. Cavan.
- PL.03.PC0174, 300,000 tonne waste-to-energy project (pyrolysis), Bottlehill, Co. Cork.
- PL.13.PC.0242, waste-to-energy facility (gasification), Gortadroma, Co. Limerick.
- ABP-300209-17, waste-to-energy (biomass), Dundalk, Co. Louth.

4.4. In December 2017, the Board also received a request by Indaver Ireland Ltd under section 146B of the Planning and Development Act, 2000 (as amended) to alter the terms of a previous permission i.e. the proposals include a permanent installation for the acceptance of suitable aqueous wastes at the facility and an increase in its overall capacity for the acceptance of waste from 235,000 tonnes per annum to 280,000 tonnes per annum. (The waste to energy facility was originally granted permission by the Board in 2007 under PL17.219721).

5.0 Policy Context

5.1. Various EU, national and local policy documents are referred to by the applicant, prescribed bodies and in submissions made. Key policy instruments are summarised below.

5.2. **European Policy**

5.2.1. **Environment**

7th Environmental Action Programme 2013

5.2.1.1. This European Commission Programme came into force in 2014 and will guide European environmental policy until 2020. Priority objective 2 (Annex – Thematic Priorities) seeks to turn the Union into a resource-efficient, green and competitive low-carbon economy. In paragraph 34 it states that the uptake of the 'Best Available Techniques' under the Industrial Emissions Directive will deliver improved resource-use patterns and reduced emissions for over 50,000 major industrial installations in the Union, thus making a significant contribution to stimulating the development of innovative techniques, greening the economy and reducing costs for industry in the longer term. For waste, it sets out the following aims (paragraphs 40 and 43):

- Turn waste into a resource, based on strict application of the waste hierarchy and covering all types of waste,
- Limiting energy recovery to non-recyclable materials,
- Phasing out landfilling of recyclable or recoverable waste,
- The management of hazardous waste to minimise significant adverse effects on human health and the environment,
- The removal of barriers facing recycling activities in the Union internal market, and
- Review of existing prevention, re-use, recycling, recovery and landfill diversion targets so as to move towards a lifecycle-driven 'circular' economy, with a cascading use of resources and residual waste that is close to zero.

EIA Directive 2014/52/EU (amending the 2011/92/EU)

5.2.1.2. The European Commission's EIA Directive requires the assessment of the likely significant environmental effects of a wide range of defined public and private projects, prior to decision making. Directive 2014/52/EU came into force in May 2017, amending previous directives and requires, amongst other things, an assessment of the direct and indirect effects of qualifying development on the following factors:

a. Population and human health,
b. Biodiversity,
c. Land, soil, water, air and climate,
d. Material assets, cultural heritage and the landscape,
e. The interaction between the above.

5.2.1.3. The Directive also requires the preparation of an 'Environmental Impact Assessment Report' and new provisions in respect of carrying out of EIA by the competent authority and its decision making, including the incorporation of reasoned conclusions on the significant environmental effects of the project, environmental conditions and monitoring.

5.2.2. **Waste**

Waste Framework Directive 2008/98EC

5.2.2.1. This Directive lays down measures to protect the environment and human health by preventing or reducing the adverse impacts of the generation and management of waste. It sets out a very clear waste hierarchy for the European Union:

- Prevention,
- Preparing for re-use,
- Recycling,
- Other recovery, e.g. energy recovery, and
- Disposal.

5.2.2.2. Waste recovery is defined as '*any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have*

been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy'. Annex II sets out a list of recovery operations. These include under category R1, 'use principally as a fuel or means to generate energy'.

5.2.2.3. The Directive places a number of requirements on Member States, including to:

- To move towards becoming self-sufficient in terms of waste disposal, and
- To ensure that the waste disposal network enables waste to be disposed of or recovered in one of the nearest appropriate installations (proximity).

European Commission's Action Plan for a Circular Economy (COM/2015/0614 Final)

5.2.2.4. This Communication from the Commission sets out proposals to move towards a more circular economy '*where the value of products, materials and resources is maintained in the economy for as long as possible, and the generation of waste minimised*'. The legislative proposals on waste, adopted with the action plan, include long-term targets to reduce landfilling and to increase preparation for reuse and recycling of key waste streams such as municipal waste and packaging waste.

5.2.2.5. Section 3 of the Action Plan deals with waste management and states:

> *'Waste management plays a central role in the circular economy: it determines how the EU waste hierarchy is put into practice. The waste hierarchy establishes a priority order from prevention, preparation for reuse, recycling and energy recovery through to disposal, such as landfilling. This principle aims to encourage the options that deliver the best overall environmental outcome. The way we collect and manage our waste can lead either to high rates of recycling and to valuable materials finding their way back into the economy, or to an inefficient system where most recyclable waste ends in landfills or is incinerated, with potentially harmful environmental impacts and significant economic losses. To achieve high levels of material recovery, it is essential to send long-term signals to public authorities, businesses and investors, and to establish the right enabling conditions at EU level, including consistent enforcement of existing obligations'.*

'When waste cannot be prevented or recycled, recovering its energy content is in most cases preferable to landfilling it, in both environmental and economic terms. 'Waste to energy' can therefore play a role and create synergies with EU energy and climate policy, but guided by the principles of the EU waste hierarchy'.

EC Communication on the Role of Waste to Energy in the Circular Economy (Brussels, 26.1.2017, COM (2017), 34 final).

5.2.2.6. The main aim of this Communication is to ensure that the recovery of energy from waste in the EU, including the co-incineration of waste in cement production, supports the objectives of the circular economy action plan and is firmly guided by the EU waste hierarchy.

5.2.2.7. The document states that the processes have different environmental impacts and rank differently in the waste hierarchy, for example, with co-incineration operations with a high level of energy recovery having a higher ranking (waste recovery) than co-incineration operations with limited energy recovery (disposal).

5.2.2.8. The Communication recommends different approaches to waste to energy facilities depending on the existing waste infrastructure in the country. It concludes that waste-to-energy processes can play a role in the transition to a circular economy provided that the EU waste hierarchy is used as a guiding principle and that choices made do not prevent higher levels of prevention, reuse and recycling. In particular, it states that in order to avoid potential economic losses due to 'stranded assets'**,** *'investment in new waste treatment capacity needs to be framed in a long-term circular economy perspective and to be consistent with the EU waste hierarchy, which ranks waste management options according to their sustainability and gives top priority to preventing and recycling of waste'.*

European Council Decision on List of Wastes (LOW) 2000/532/EC

5.2.2.9. This Council Decision establishes a list of codes for different types of waste and is used to classify all waste types within the EU.

5.2.3. **Air Quality**

Industrial Emissions Directive 2010/75/EU

5.2.3.1. This Directive lays down rules on integrated prevention and control of pollution arising from industrial activities. It supersedes a number of previous Directives and requires operators of certain defined processes (Annex I) to obtain a permit for the activity, which amongst other things would specify emission limit values/parameters and requirements for monitoring. The Directive is based on several binding principles including the adoption of best available techniques (BAT). The Directive has been transposed into Irish Law and the proposed development is an industrial activity which falls within the scope of the Directive and is licenced by the EPA.

Commission Implementing Decision establishing BAT Conclusions under Directive 2010/75/EU on industrial emissions for Production of Cement (2013/163/EU)

5.2.3.2. This Commission document lays down conclusions on best available techniques for the control of emissions from the manufacture of cement. Competent authorities in Member States are required to set emission limit values that ensure that, under normal operating conditions, emissions do not exceed the emission levels associated with best available techniques, laid down in the BAT conclusions.

5.2.3.3. The document specifically refers to the use of waste as fuels/raw materials in cement kilns and sets out techniques to minimise emissions e.g. controlling the quality of waste and safety management in the use of hazardous materials (section 1.2.4). Section 1.2.7 of the document deals with PCDD/Fs and sets out specific techniques to prevent or minimise these emissions, e.g. controlling kiln inputs and quick cooling of kiln flue gases.

The Stockholm Convention

5.2.3.4. The Stockholm Convention is an international agreement that seeks to eliminate or reduce the release of persistent organic pollutant (chemicals that persist in the environment, bio-accumulate, and pose a risk of causing adverse effects to human health and/or the environment) into the environment.

5.2.3.5. In 2001, the EU became a signatory to the Convention and in 2004 adopted Regulation EC/850/2004 on Persistent Organic Pollutants. The objective of the Regulation is to prohibit, phase out or restrict the production and use of substances subject to the Stockholm Convention, and establishing provisions regarding waste consisting of, containing or contaminated by any of these substances. These include dioxins, furans and polychlorinated biphenyls.

5.2.3.6. Article 6(3) of the Regulation states that Member States shall, when considering proposals to construct new facilities or significantly to modify existing facilities using processes that release chemicals listed in Annex III, without prejudice to Council Directive 1996/61/EC 1, give priority consideration to alternative processes, techniques or practices that have similar usefulness but which avoid the formation and release of substances listed in Annex III.

5.2.3.7. EC/850/2004 was given effect in the State through SI No. 235 of 2010 Persistent Organic Pollutants Regulations. Article 6 of the Regulations designates the EPA as the competent authority for the purposes of Regulation 850/2004. Other public authorities are required to have regard to the requirements of the 2010 Regulations and Regulation 850/2004 in the exercise of their duties.

5.2.4. Public Participation

Aarhus Convention (June 1998)

5.2.4.1. The Aarhus Convention, which came into force in October 2001, establishes a number of rights of the public with regard to the environment, including the right of everyone to receive environmental information that is held by public authorities (access to environmental information), the right to participate in environmental decision making (public participation in decision making) and the right to review procedures to challenge public decisions (access to justice).

5.3. National Legislation and Policy

A Resource Opportunity – Waste Management Policy in Ireland, July 2012 (DECLG)

5.3.1. This document sets out government policy in respect of waste management in the country. It sets out a ‘roadmap’ indicating how Ireland will move away from an

overdependence on landfill by putting in place the most appropriate technologies and approaches to reduce waste, while at the same time maximising the resources that can be recovered from waste. Policies focus on the five key areas of prevention, re-use, recycling, recovery and disposal (the waste hierarchy). Under recovery, the plan recognises the potential of waste to contribute in a significant manner to displacing the use of finite fossil fuel resources through a number of technologies including the use of solid recovered fuel in cement kilns.

5.3.2. Of note it states *'in considering measures for the encouragement of recovery, a balance must be struck between the development of essential infrastructure and the importance of ensuring that material which could be reused or recycled is not drawn down the hierarchy and that waste generation is not encouraged in order to provide feedstock for recovery processes'.*

5.3.3. In this context, it refers to the EPA's technical guidance Document 'Municipal Solid Waste – Pre-treatment & Residuals Management', which provides that residual municipal waste is delivered to a waste to energy facility must first have been collected through a source separated system.

Waste Management Act 1996

5.3.4. The primary national legislation for waste is provided by the Waste Management Act 1996 and the Protection of the Environment Act 2003. The main objectives of the Waste Management Act are:

- To deliver a more effective organisation of public authority functions in relation to waste management (Minister, EPA and local authorities).
- Enable measures designed to improve performance in relation to the prevention and recovery of waste.
- Provide a comprehensive regulatory framework for the application of higher environmental standards in response to EU and national requirements.

National Hazardous Waste Management Plan (EPA, 2014)

5.3.5. This Plan sets out priorities to be pursued over the six-year lifetime of the plan to improve the management of hazardous waste in Ireland. Priority objectives include:

- To prevent and reduce the generation of hazardous waste by industry and society generally.

- To maximise the collection of hazardous waste with a view to reducing the environmental and health effects of any unregulated waste.
- To strive for increased self-sufficiency in the management of hazardous waste and to minimise hazardous waste export.
- To minimise the environmental, health, social and economic effects of hazardous waste generation and management.

5.3.6. The Plan refers to 28,270 tonnes of hazardous waste that was blended at EPA licensed hazardous waste treatment facilities in Ireland in 2011, prior to being exported as a waste for use as fuel in cement kilns (and incineration) abroad.

5.3.7. In section 6 the Plan, Treatment of Hazardous Waste, states that the promotion of some technologies, including combustion in cement kilns, should be facilitated in the interest of reducing exports by using existing infrastructure, provided they can be correctly operated to protect human health and the environment.

National Climate Change Policy

5.3.8. National climate change policy is set out in the National Policy Position on Climate Action and Low Carbon Development (2014). The National Policy document envisages that policy development will be guided by a long term vision based of an aggregate reduction in carbon dioxide emissions of at least 80% (compared to 1990 levels) by 2050.

5.4. Regional Policy

Regional Planning Guidelines for the Greater Dublin Area 2010-2022

5.4.1. This document supports the reduction of greenhouse gas emissions and states, in Section 6, Waste Management, that waste management policy needs to develop a greater range of choice in terms of waste treatment options, including commercial energy recovery options.

Eastern Midlands Region Waste Management Plan 2015-2021

5.4.2. This policy document is one of three Waste Plans that together cover the entire country. It covers 12 local authority areas in east/midlands of the country around the Dublin conurbation. The statutory document provides the framework for the prevention and management of wastes in the region. Major waste streams managed

in the region are household wastes, commercial wastes, construction and industrial wastes (4.1 million tonnes in 2012).

5.4.3. The plan refers to the concept of the circular economy and sets out a strategic vision to rethink the approach to managing waste by viewing waste streams as valuable material resources. Consistent with the European waste hierarchy, strategic objectives seek to:

- Place a stronger emphasis on preventing wastes and material re-use activities,
- Enhancing the collection of quality materials,
- Improving the recovery and generation of energy by maximising the resource value of the materials and the energy embodied in residual wastes, and
- Further reducing landfilling in favour of higher value recovery options.

5.4.4. Municipal solid waste (MSW) is defined in the plan as household, commercial and other waste (which is similar in nature or composition to household waste). Residual municipal waste is defined as the fraction remaining after the source separation of municipal waste fractions, such as wood and garden waste, packaging, paper and paperboard, metals and glass, which is unsuitable for recovery or recycling.

5.4.5. In section 1.1, the plan acknowledges that there remains a gap in end-of-chain residual waste treatment capacity, resulting in the export of waste. In 2013 the plan states that over 300,000 tonnes of residual municipal waste was exported which equated to c.20% of the available residual waste market in Ireland.

5.4.6. In Section 4.3, the plan states that the local authorities of the region '*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 waste resources over the plan period*'.

5.4.7. Section 16.4.5 of the plan sets out policies in respect of thermal recovery. Table 16-7 indicates that there are six facilities which are fully authorised to accept 1.2m tonnes per annum of MSW for thermal recovery, however only 3 facilities are operating providing an active capacity of 435,000 tonnes per annum. Three of the six facilities (and two of the active facilities) are cement kilns. With regard to future treatment capacity, the plan states:

- This requires careful consideration and must take into account predicted waste growth, growing recycling rates, future targets, the continued move away from landfill and the conversion of pending capacity into active treatment,
- Such facilities will be viewed as national facilities addressing the needs of the State, not the region,
- Require a co-ordinated and consultative approach between regions and national authorities, and
- Spatial distribution of recovery capacity should be considered.

5.4.8. On the basis of future projections, in Policy E15a (attached) the plan sets out a national thermal recovery capacity need of 300,000 tonnes, for the treatment of non-hazardous wastes, over and above the active and pending capacity totals set out in Table 16-7, to ensure that there is adequate active and competitive treatment in the market and the State's self-sufficiency requirements for the recovery of municipal waste are met. Policy E15a states that authorisations above this threshold will only be granted if the applicant justifies and verifies the need for the capacity, that it complies with national and regional waste policies and it does not pose a risk to future recycling rates. Notably, the capacity need has been estimated based on analysis of future projections to 2030 (page 171).

5.4.9. Policy E15b states that the waste plan supports the needs for thermal recovery capacity to be developed specifically for the on-site treatment of industrial process waste and where justifiable the treatment of such wastes at merchant thermal recovery facilities.

5.4.10. In Policy E16, it identifies the need for additional thermal recovery infrastructure for the treatment of up to 50,000 tonnes of hazardous waste (nationally).

5.5. **Local Planning Policy**

Meath County Development Plan, 2013-2019

5.5.1. The application site is located within Landscape Character area 7 'Coastal Landscape' of the Meath County Development Plan, which is described as a landscape of 'Moderate Value' and 'High Sensitivity'. Policy LC SP 1 of the plan seeks to protect landscape character. The site is also visible from the Brú na Boinne

World Heritage Site and objective CH OBJ 1 of the plan seeks to protect and enhance the outstanding value of the cultural landscape in the WHS and to enhance views within and adjacent to the site.

5.5.2. Section 8.1.9 of the Plan deals with waste to energy and states that such development will be considered by the planning authority and acknowledges that two cement plants in the County (in Kinnegad and Platin) have the ability to use waste streams in their manufacturing processes.

5.5.3. Policies of the Plan:

- Encourage rural enterprise, including energy production (ED POL 6).
- Support rural employment, in particular that which is rural resource dependent, and the expansion of existing authorised industrial enterprises in the countryside, subject to environmental safeguards (ED POL 19, ED POL 20, ED POL 21).
- Support the extractive industry where it would not unduly compromise the environmental quality of the county (RD POL 23).
- Seek to preserve and maintain air and noise quality in the county (PC POL 2).
- Facilitate energy infrastructure provision, including the development of renewable energy sources at suitable locations, support initiatives for limiting greenhouse gases and encourage the production of energy from renewable resources (EC POL 2, EC POL 3 and EC POL 4).

5.5.4. Transportation policies include the following:

- To promote and facilitate the provision of the necessary transport infrastructure to fully accommodate existing and future population needs and the demand for economic development in an environmentally sustainable manner (goal).
- To provide for the efficient movement of goods and people in the interest of commerce and enterprise (TRAN SP 3).
- To ensure the protection of the existing roads infrastructure while improving the capacity and safety of the road network to meet future demands (TRAN SP 14).

- To require planning applications for major developments to demonstrate proposals to address accessibility for pedestrians and cyclists (TRAN POL 23)

5.5.5. The Duleek Written Statement specifically acknowledges the heavy volume of traffic currently passing through the town and states '*The volume of through traffic in Duleek is recognised as a challenge for the Planning Authority to manage and alleviate over the life of the County Development Plan and beyond*'. Policy MA POL 1 seeks to provide a new bypass to the southwest of the town (no route is identified).

6.0 Submissions

6.1. **Prescribed Bodies**

6.1.1. Notification of the application for the proposed development was set to the prescribed bodies set out in Schedule 2 of the applicant's letter to the Board of the 4th August 2017. Submissions were subsequently received from following:

- Department of Culture, Heritage and the Gaeltacht (Architectural Heritage) – Raise concerns regarding the visual impact of the development on the Outstanding Universal Value of the World Heritage Site Brú na Bóinne and the risk air pollutants accelerating the natural weathering of pre-historic artwork.

- EPA – The Agency refer to (a) their review of ICL's Industrial Emissions Licence register no. P0030-04 in respect of the current plant at Platin, in order to bring the licence into compliance with the legal requirements of the European Commission Implementation Decision (CID) on Best Available Techniques (BAT) conclusions for the production of cement (2013/163/EU). (The licence no. for the BAT review is P003-05), and (b) ICL's own application to the EPA for review their existing licence for authorisation to co-incinerate waste in the cement kiln (register no. P0030-06).

  The EPA state that before any licence is granted it will be subject to an environmental impact assessment of the matters that come within the functions of the EPA. All matters to do with emissions to the environment from the activities proposed will be considered and assessed by the EPA. Should the Agency decide to grant a licence in respect of the activity, as proposed, it will incorporate conditions that will ensure that appropriate national and EU standards are applied, and that BAT will be used in the carrying on of the activities.

- Health Service Executive. The following conclusions and recommendations in respect of the development were made by the Environmental Health Officer:

- Public consultation - Meaningful public consultation be carried out with the public, with any concerns addressed by the applicant and assessed in the EIA.
- Noise monitoring – As the plant is clearly audible at night, noise monitoring be carried out at night time and if necessary further noise reduction measures implemented. Recommends that no fuel is permitted to be delivered outside of daytime hours (0700 to 1800).
- Quarantine area – Recommends that a quarantine area is provided to store waste derived fuels which do not meet specifications.
- Odour management – Recommends that an odour management plan be put in place for the operational phase of the development (to treat malodorous air from fuel storage buildings) and odour monitoring on a continuous basis.
- Health impacts - Refers to a submission made by the Department of Public Health regarding Irish Cement Limited's similar application for their facility in Limerick (PL91.248285), which included a report from Public Health England on the use of alternative fuels and raw materials at the Limerick plant. The EHO states that based on this Public Health England report, the Board should ensure that they are satisfied that the background air monitoring results are representative of the background air quality environment in the vicinity of the plant and that the increase in vehicle movements on and to the site are considered in the assessment.

The Public Health England document, referred to, generally makes comments that are specific to ICL's Limerick development. However, it concludes that the use of substitute fuels is an accepted technology for cement kilns and available evidence suggests that providing the process is effectively managed there should not be any significant changes in emissions to air that could have an impact on human health. The document recommends a risk assessment for dioxins, furans and dioxin like PCBs for ICL's Limerick plant.

- Irish Water – No objections to the proposed development. Recommend conditions to be attached to any permission to monitor water quality in Donore Reservoir during construction and to protect Irish Water assets in proximity to the development, also during construction.
- Irish Aviation Authority – No comments on the application.
- TII – No impact on Leinster Orbital Route and no comments on predicted impacts on the national road network.

6.2. **Planning Authority Report**

6.2.1. In accordance with section 37E(4) of the Planning and Development Act, 2000 (as amended), Meath County Council provide a report to the Board setting out the views of the authority on the effects of the development on the environment and the proper planning and sustainable development of the area.

6.2.2. The submission describes the site, the planning policy context for it and reviews and provides comments on the EIAR and AA report. It provides a summary of internal reports on the proposed development, a planning assessment of it and a schedule of conditions, should the Board decide to grant permission for the development. I draw the Board's attention to the following:

Planning Assessment

6.2.3. The Planning Assessment makes the following comments on the proposed development:

- EIAR - The planning authority is generally satisfied with the overall adequacy of the EIAR.
- Principle of development – The development is supported by European, regional, national and local planning policy in relation to building materials production, waste management and climate change policy. There is an existing cement processing facility on site which has permission to use alternative fuels. Subject to normal planning considerations, the principle of the proposed development is acceptable.
- Traffic and transportation:

- The applicant proposes a fourfold increase in the number of daily trips, a significant increase in traffic volumes, particularly on local road L5613, where there is limited capacity at the junction with the R156[4]. No TIA. Applicant should be requested to assess the capacity of this junction and prepare an appropriate design solution (e.g. right turning lane) and cover the cost of any upgrade required.
- Additional HGV movements (80/day) based on 330 working days per year and will require deliveries on Sundays to achieve. Any permission granted should specify a limit on the no. of HGV movements per day.
- Recommend a development charge of €250,000 as a contribution to the cost of works to facilitate the strengthening and repair of the L5613.
- Recommend that the applicant be required to complete before and after surveys of the condition of the road network affected by the proposed development.
- Source and route of deliveries - Not possible to assess the impact of traffic approaching from both directions as figures have not been provided, but it should be noted that the village of Duleek currently experiences very high volumes of traffic. There should be a restriction or limit placed on the number of additional HGVs through the village, particularly at weekends.

- Design and siting – Given the bulk and height of most of the existing structures on site, it is considered that the proposed structures will not be particularly visible or prominent from outside of the Cement Works. External finish will be in keeping with finishes on existing structures. No additional visual effects will arise.
- Landscape and heritage – The applicant has demonstrated through the submission of photomontages that the proposed development will not impact on any protected view. A visual impact assessment demonstrates that the proposal will not have an adverse impact on the Brú na Bóinne WHS.
- Environment:

[4] The R156 is a Regional road that connects Summerhill to Ashbourne. The regional road that provides access to the development is the R152.

- Considers the appropriateness of the proposed development in the context of European and national waste policy and, in particular the Regional Waste Management Plan and indicative need for greater thermal recovery capacity (300,000tpa). As no decisions have yet been made on proposed thermal recovery plants in the State (Ringaskiddy, 200,000tpa and ICL, Limerick 90,000tpa) the development is considered to be compliant with policy E15a of the EMRWMP.
- No objection to the development on the grounds of predicted impacts on air quality and climate, soils, geology and hydrogeology, noise or waste.

- Surface water – Considers that insufficient information has been provided in relation to the existing and proposed surface water network.

Conclusion and Recommendation

6.2.4. In concluding, the planning authority's report considers that the development is acceptable in principle, subject to issues raised from the Transportation and Water Services Department being addressed.

Schedule of Conditions

6.2.5. The planning authority proposed 18 no. conditions in respect of the development, summarised below:

1. Standard condition in respect of development to be completed in accordance with submitted plans and particulars lodged with the application.
2. Requires the implementation of mitigation measures set out in the EIAR and NIS.
3. Limits the duration of permission of the permission to 10 years and provides an overall capacity intake of 600,000 tpa.
4. Limits the SRF component of alternative fuels to 100,000 tonnes per annum.
5. Limits the use of alternative fuels to those set out in appendix 3.5 of the EIAR.
6. Requires the implementation of all mitigation measures set out in sections 6.6 (soils) and in sections 14.6.1 and 14.6.2 (waste management) of the EIAR.

7. Requires the preparation of a construction and environmental management plan.
8. Requires the preparation of an emergency response plan.
9. Requires the employment of mitigation measures set out in the EIAR during construction (section 9.5.1) in respect of noise.
10. Requires compliance with Waste Management Act 1996 etc.
11. Requires a cash deposit/bond for reinstatement of public roads which may arise from the transport of materials to the site.
12. Requires the applicant to maintain available for inspection a complaints register.
13. Requires the appointment of a Community Liaison Officer for all stages of the development.
14. Requires a development contribution €250,000, for the repair and strengthening of L5613.
15. Requires, prior to commencement of the development, the applicant to submit the following in respect of alternative fuels:
    a. Location and type of source material.
    b. Anticipated traffic volumes and proposed haul route from each source location.
    c. Haul routes not permitted through Duleek village.
    d. Record to be kept of all road deliveries of alternative fuels (weight, source location, time and date, route and vehicle number).
    e. The number of daily trips to not exceed the maximum daily trips presented in Table 12.8 of EIAR (109/day or 218 vehicle movements).
16. Requires the applicant to agree with the planning authority, prior to commencement of development, the extent of the design and construction works required at the R156/L5613 junction to facilitate the development. (Applicant to bear cost of such works).
17. Requires the applicant to complete before and after surveys of road network affected by the proposed development.

18. Requires the applicant to agree with the planning authority, prior to commencement of development, information to demonstrate how local watercourses will be protected during from contamination.

6.2.6. In Appendix 2 of the report is an extract from the minutes of Meath County Council meeting on 2nd October 2017 in respect of the proposed development, setting out the views of Members. Of note, these include a call for the EPA to open an office in the area and concerns regarding the duration of the permission, potential emissions to air and consequential health effects on the local population, the impact of the development on traffic in Duleek and Julianstown (and the need for a Duleek bypass) and on local roads, the number of waste facilities in the area and monitoring of compliance with conditions.

6.3. **Submissions**

6.3.1. Submissions were made to the Board, in respect of the application for the proposed development, from 16 parties (see list at front of report). Similar issues were raised in different submissions and they can be summarised under the following headings:

- Inadequate public consultation.
- Lack of clarity regarding the nature of the development (incinerator or cement plant).
- Lack of clarity regarding the quantity, type and source of waste to be used as alternative fuels (including the importation of waste).
- Consistency with the European waste hierarchy and Circular Economy and use of materials which alternative uses/processes exist, higher up the waste hierarchy.
- Compliance with International Agreements/EU Directives.
- Inadequate arrangements for waste handling and storage (e.g. if unacceptable consignment arrives) of waste, including hazardous waste, and environmental and public health risk arising.
- Inadequate consideration of alternatives.
- Emissions to air and the consequential health effects of the development.

- 10-year duration of planning permission is too long for a development of this type and the prospect of technical development of alternatives.
- Increase in number of heavy vehicles entering and exiting the plant, effect of this on the road network, which is inadequate to deal with it, and villages through which traffic passes.
- Impact on amenity and property values (arising from increase in traffic, noise, odour and litter).
- Impact on regionally important aquifer underlying the site and the Indaver plant and water quality in the River Nanny.
- No biodiversity plan for the site, e.g. to offset the increase in traffic arising from the development and AA has not taken into account the toxic emissions to atmosphere from tyres.
- Impact on heritage/tourism (location of site in historic Boyne valley region, visible from Brù na Boinne World Heritage Site and impact of development on tourism with further industrialisation of the area and greater number of HGVs.
- Impact on cultural heritage.
- Cumulative effects arising from proposed development together with other industrial sources in the area around Carranstown (Indaver) and Dundalk (notably emissions to air but also traffic impacts and impact on aquifer).
- Inadequate arrangements for monitoring.
- There should be ongoing community engagement and liaison between the applicant and the local community, about operational issues.
- The need for a community gain fund.
- The adequacy of EIAR (does not include direct and indirect effects of the project, health of people in the area and cumulative effects with the adjoining Indaver plant).
- The recent expansion of the quarry and environmental effects of this on the local community (PA ref. 2013/14).

- Timing of applications e.g. summer holidays, Easter. If submitted at such times, the public should be given more time to consider the application.

7.0 The Oral Hearing

7.1. An oral hearing in respect of the proposed development commenced at 10.30am on Tuesday 21st November, 2017 at City North Hotel, Gormanstown, County Meath. It ran for two days, finishing at 6.30pm on Wednesday 22nd November. A recording of the hearing is available at the Board's offices. It comprises the formal record of the hearing.

7.2. The following parties made oral submissions at the hearing:

<u>The Applicant</u>

- Jarlath Fitzsimons, Senior Counsel – Legal matters (submission no. 10)
- Brian Gilmore, Communications Manager, Irish Cement Ltd – Project need, public consultation, importance of an indigenous cement industry, cement manufacturing and fuel use, the difference between cement factories and incinerators, primary sources of air emissions, types, quantities and sources of fuels, duration of the permission and policy context (submission nos. 1, 1a, 2, 2A and 18).
- Seamus Breen, Head of Quality and Sustainability, Irish Cement Ltd – Project need, environmental management, sustainability, emissions and monitoring (submission no. 3).
- Thomas Burns, Partner, Brady Shipman Martin – Planning, environmental and related aspects (submission no. 4, 4a and 4b).
- Sinead Whyte, specialist in air quality, climate, noise and vibration, Arup – Air, climate, noise, hydrogeology and water (submission no. 5).
- Don Menzies, specialist in chemical engineering and health and safety, Arup – Human health risk assessment (submission nos. 6 and 16).
- Dr. Amanda Gair, environmental chemist, specialist in air quality and human risk assessment, Gair Consulting Ltd – Human health risk assessment (submission no. 7).

- Dr. Martin Hogan, specialist in toxicology, environmental health effects of industry, occupational asthma, health effects of noise and occupational hygiene, Consultant – Human health issues (submission no. 8).
- Tony Lynch, chartered engineer, specialist in transport assessments, Arup – Traffic and transportation (submission no. 9).

Elected Representatives:

- Helen McEntee, TD, Minister for State for European Affairs.
- Thomas Byrne, TD.
- Cllr Sharon Toland, Meath County Council.
- Cllr Paddy Meade, Meath County Council.
- Cllr Sharon Keogan, Meath County Council.

Individuals/groups:

- Vincent Donovan.
- Michael O'Dowd (Drogheda Environment Group)
- James Levins (Duleek District Environment Group, DDEG).
- Tom Burke (North East Association Environment Group, NEAEG)
- Pat O'Brien (NEAEG and DDEG) (submission nos. 11, 12 and 19).
- Kevin Finger (NEAEG) (submission no. 13).
- Jack O'Sullivan (NEAEG) (submission no. 14).
- Olan Herr (Zero Waste Alliance) (submission nos. 15 and 15a).
- John Woods.
- Anthony Mullen (NEAEG) (submission no. 17).

Meath County Council:

- Padraig Maguire, Senior Executive Planner.
- Joe McGarvey, Senior Executive Engineer.
- Environment Officer.

7.3. Documents submitted to the Board in the course of the hearing are attached to this report (submission nos. 1 to 19). Key points raised by the parties to the hearing are summarised in the assessment below, under the main subject headings.

8.0 Assessment

8.1. Having regard to the requirements of the Planning and Development Act, 2000 (as amended), this assessment is divided into three main parts, planning assessment, environmental impact assessment and appropriate assessment. In each assessment, where necessary, I summarise the issues raised in submissions on the application by subscribed bodies, the planning authority or by third parties, made either to the Board in response to the application, or at the oral hearing.

8.2. There is an inevitable overlap between the assessments, for example, with matters raised falling within both the planning assessment and the environmental impact assessment. In the interest of brevity, matters are not repeated but such overlaps are indicated in subsequent sections of the report.

8.3. **Planning Assessment**

8.3.1. I have read the planning application for the proposed development and all of the submissions and observations that have been made to the Board in respect of it. I have also heard all of the submissions made at the oral hearing and I have inspected the site and the surrounding area, including the villages of Duleek and Julianstown, and the WHS Brù na Boinne. Having regard to this, I consider that the key issues arising in respect of the planning assessment comprise the following. As stated above, many of the matters raised by parties are also relevant under the environmental impact assessment, which follows in section 8.4 of this report:

- Principle of development.
- Public consultation.
- Nature of the development.
- Type, quantity and source of waste.
- Consistency with waste policy.
- Compliance with International Agreements/EU Directives.
- Alternatives.
- Emissions to air/human health effects.
- Traffic.
- Waste handling/storage.
- Water.
- Bio-diversity.
- Impact on heritage/tourism.
- Impact on amenity and property values.
- Cumulative effects.
- Monitoring/Engaging with the Community.
- Duration of the permission.

- Community fund.
- Adequacy of EIAR.

8.3.2. In addition to the above, parties refer to issues arising from the expansion of quarry adjoining the application site and the discharge of water from it to the River Nanny. These matters lie largely outside the scope of this application, however, in my assessment cumulative impacts are addressed (e.g. in respect of noise, dust impacts on amenity and water).

8.3.3. With regard to the timing of the application for the proposed development (August 2017), whilst I accept that people are often away in the summer period, there is a substantial statutory window in which submissions can be submitted to the Board (from the time the site notice was erected on the 3rd August 2017 to the deadline of 2nd October 2017 for submissions to the Board) and further opportunities for the development of submissions via the oral hearing. The EU Directive 2014/52/EU amending the EIA Directive (2011/92/EU) requires that the timeframe for consulting the public on the EIAR shall not be shorter than 30 days. The application for the proposed development provided a period of 7 weeks for public consultation on the EIAR. Have regard to the above, I do not consider, that the timing of the application has been prejudicial to public comment on it.

Principle of Development

8.3.4. The proposed development is situated within the footprint of an existing long established and substantial industrial site. The development comprises, in effect, a switch to alternative fuels and alternative raw materials which will facilitate a reduction in the use of fossil fuels and greenhouse gas emissions.

8.3.5. Policies of the Meath County Development Plan encourage rural enterprise (ED POL 19), the expansion of existing authorised industrial enterprises (subject to satisfactory assessment of environmental effects, including landscape character) (ED POL 20 and 21), support initiatives for limiting greenhouse gases (EC POL 2 and 4) and encourage the production of energy from renewable sources, including waste (EC POL 3).

8.3.6. Within this context, I consider that the proposed development is consistent, in principle, with policies of the County Development Plan, subject to satisfactory

conclusions in respect of environmental effects and the other matters raised in submissions.

Public Consultation/Community Engagement

8.3.7. Parties making submissions on the application argue that the applicant's process of public consultation has been inadequate. In particular, they argue that:

- Local residents must be consulted and engaged with in the planning of the proposed development and the rights guaranteed by the Aarhus Convention should be taken into account by the Board in its decision making.
- Public meetings had not been held in an off-site neutral venue, that no public meeting had been held in the Drogheda area and that the public had been excluded from a meeting of the applicant with Louth County Council.
- Information on the proposed development had been circulated to a small number of households in the immediate area of the site and not to the wider population in the Duleek and Drogheda area.
- The venue for the hearing was a long way from the main population of East Meath and South Louth that would be affected by the development.
- There had been no use of social media by the applicant, an effective way to engage with the public.

8.3.8. The Aarhus Convention, establishes a number of rights of the public with regard to the environment, including the right to participate in environmental decision making for projects falling within Annex I of the Convention or other projects likely to have a significant effect on the environment. Included in Annex I are installations for the production of cement clinker in rotary kilns with a production capacity exceeding 500 tons per day.

8.3.9. The European Union's EIA Directive embodies the requirements of the Aarhus Convention. Specifically, Article 6(2) requires that the public are informed of certain matters early in decision making procedures to ensure effective public participation. These matters include, for developments requiring environmental impact assessment, details of the authority making the decision on the development, an indication of times and places where information on the project will be made available and arrangements for public participation etc. Article 6(4) states that that

the public concerned shall be given early and effective opportunities to participate in environmental decision making procedures and shall be entitled to express comments and opinions when all options are open to the competent authority before the decision on the request for development consent is taken. Within the planning system, these requirements are reflected in the statutory responsibilities for public notice and consultation set out in the Planning and Development Act 2000 (as amended) and Regulations 2001 (as amended).

8.3.10. I note that based on the information on file, the applicant has fulfilled his statutory requirements for public consultation, including, consultation with prescribed bodies, site and newspaper notices. Further, as indicated in the EIAR (section 1.8.2) and in submission nos. 2 and 4 to the oral hearing, consultation with the public commenced in October 2015 when ICL distributed an Information Booklet on the proposed development to local residents (250 copies) and held three public information days prior to the submission of the initial planning application for the development to Meath County Council (LB151288). A subsequent round of public consultation was held in March 2017 with circulation of an updated information booklet (Appendix 1.3 of EIAR and submission no. 2A to the oral hearing) to local residents and three public information days were held at an on-site information office between Thursday 2nd March and Saturday 4th March, 2017, with extended opening hours (advertised in the local press – Appendix 1.4 of EIAR).

8.3.11. Whilst I accept that third parties may wish to have seen public consultation over a wider geographical area and in off-site venues and may wish to have been included in meetings with public bodies, I do not accept therefore that public consultation has been inadequate. Through a combination of the statutory requirements for public notice and the applicant's programme of consultation, information on the applicant's proposed development has been widely available. Consequently, there has been substantial level of public interest in the project, which has resulted in numerous submissions to the Board and to the oral hearing. Further, all matters raised are now before the Board and can be considered by them prior to decision making. I consider, therefore, that the requirements of the Aarhus Convention, EIA Directive, national legislation and the Board's own administrative procedures have been met by the applicant in respect of public consultation.

Nature of the Development

8.3.12. Parties making submissions in respect of the development have raised the following concerns:

- The precise nature of the proposed development - waste incinerator or a cement plant, recovery facility or disposal facility?
- Will the plant be used extensively for burning waste to generate a profit only, even when cement production is low? Will it result in an increase in cement production?
- The application form (section 9) and public notices inaccurately describe the proposed development. It comprises a major change from the currently permitted activity of 'production of cement and cement products' and therefore constitutes a material change of use (submissions refer the Board to PL19.RL2032 and PL19.211173 in respect of Edenderry Power Limited's proposal to use biomass and meat and bone meal as supplementary or auxiliary fuels at their plant in County Offaly).
- The development would be more correctly be described as a 'cement production plant involving co-incineration of hazardous and non-hazardous waste' (as indicated by the applicant to the EPA for a review of the plant's current Industrial Emissions Licence, P0030-04).

Waste Incinerator or Cement Plant

8.3.13. Section 9 of the application form for the proposed development, and the site and newspaper notices, describe the development as a '*ten year planning permission that will facilitate further replacement of fossil fuels with alternative fuels and allow for the introduction of alternative raw materials in the manufacturing of cement at Platin Cement Works...The proposed development will provide for on-site handling, storage, and introduction of up to an additional 480,000 tonnes per annum of alternative fuels and alternative raw materials, which includes the use of non-hazardous and hazardous wastes'.*

8.3.14. My understanding of the nature of the proposed development based on this description and the details set out in the plans and particulars in respect of the development, including submission nos. 2 and 4 to the oral hearing, is that the

primary function of the cement plant remains one of manufacturing cement, albeit via the use of a greater volume of alternative fuels (and raw materials). In effect, what is sought is permission for structures to store and handle alternative fuel (and raw materials), to allow a 'fuel swap' to occur.

8.3.15. From the information on file, it is evident that the proposed development differs from an incinerator in a number of ways (submission no. 2):

(i) In the manufacture of cement significantly higher temperatures are required inside the kiln to form clinker.

(ii) There is no requirement for the off-site treatment of ash as it becomes a constituent of clinker (ash arising from the burning of fossil fuels or alternative fuels was stated by Mr. Gilmore to comprise c.1% of cement).

(iii) The manufacture of cement is a highly technical process and alternative fuels are required to meet very specific standards (section 3.3.2, EIAR and page 3, submission no. 2A to oral hearing).

(iv) The capacity of the plant, to make cement, will not increase as a consequence of the development and that the consumption of fuel has, and will continue to, directly mirror the volume of cement produced (section 5.4, submission no. 2 to oral hearing).

8.3.16. At the oral hearing, Mr Gilmore, for the applicant, also clarified that if alternative fuels were not available, they would revert to fossil fuels and if the plant was not manufacturing concrete it would <u>not</u> continue to burn alternative fuels, because it would not be technically feasible to do so and they were prohibited from doing so by their IE licence.

8.3.17. I would consider, therefore, that the nature of the development remains essentially as it is, a facility for the production of cement and cement products.

<u>Material Change of Use</u>

8.3.18. In the Planning and Development Act, 2000 (as amended) development is defined as *'the carrying out of any works on, in over or under land or the making of <u>any material change in the use of any structures or other land'</u>* (section 3).

8.3.19. Under RL2032 the applicant to the review (Edenderry Power Ltd) argued that the introduction of alternative fuels (biomass and meat and bone meal) to the Edenderry

Power Station in Co. Offaly did not comprise development and that the structures proposed to facilitate co-fuelling would be exempt development under Class 21 of Part 1 of the Second Schedule to the 2001 Planning Regulations (Development for Industrial Purposes). However, the Board determined that the development constituted a material change of use from the development originally granted permission 'peat-fired electricity generation station' and that the proposed co-combustion of meat and bone meal with the current fuel in the power station would constitute a new and separate use as a 'waste recovery facility'.

8.3.20. An application for permission for the material change of use of the electricity station to power station and waste recovery facility was subsequently granted permission by the Board (PL19.211173).

8.3.21. In this instance, the applicant, in bringing forward the application to the Board, has recognised at the outset that the proposed development is one which comprises development and which is not exempted development under the Planning and Development Act, 2000 (as amended) i.e. as per section 3 of the Act, it comprises the carrying out of works on, in over or under land or the making of a material change in the use of any structures or land. I do not consider it necessary, therefore, to specifically refer to the any material change of use in the description of the proposed development.

Description of Facility

8.3.22. In Irish Cement's application to the EPA, for a review of their Industrial Emissions Licence (P0030-06), they list four classes of activities to which the application relates (see attachments). In summary, these include production of cement clinker in rotary kilns (class 10.2), recovery or disposal of waste in a facility (class 11.1), disposal or recovery of waste in waste incineration plants or in co-incineration plants (class 11.3) and temporary storage of hazardous waste (class 11.6). The Classes listed are set out in Schedule 1 EPA Act, 1992, and are activities which require licencing by the EPA.

8.3.23. Under PL.17.PC0221 the Board determined that the proposed development would comprise strategic infrastructure, falling within the Seventh Schedule of the Planning and Development Act 2000 (as amended) and meeting one or more of the criteria set out under section 37A(2)(a), (b) and (c). The report of the Inspector, which was

accepted by the Board, considered that notwithstanding its primary purpose for the production of cement, the proposed development fell within the Environmental Infrastructure category '*an installation for the disposal, treatment or recovery of waste with a capacity for an annual intake greater than 100,000 tonnes*'.

8.3.24. The applicant's description of the proposed development (section 9 of application form and statutory notices) does not refer to the classes of activity listed in the application for review of their Industrial Emissions Licence to the EPA or to the Environmental Infrastructure category of development, into which if falls within the Seventh Schedule of the Planning and Development Act, 2000 (as amended), for example, the 'recovery of waste' or 'co-incineration'. And I would accept that the development does fall within these different categories and can be described, as it is in the Eastern Midland Regional Waste Management Plan, as a thermal recovery activity where the principal use of the waste is as a fuel to generate energy by co-incineration in a cement kilns. However:

(a) The purpose of public notices (the newspaper and site notices), is to inform the public of the proposed development and alert them as to its nature and extent. Government guidelines (Development Management, 2007), specifically state that public notices should be drafted so as to give a brief indication of the nature and extent of the proposed development, and

(b) The plant at Platin is first and foremost a facility for the manufacture of cement and the description of the proposed development, albeit without reference to the terms 'recovery' or 'co-incineration' accurately conveys the nature of the proposed development within the context of the primary activity of the plant.

8.3.25. Further, the description of the development specifically refers to (a) the further <u>replacement of fossil fuels</u> with the introduction of alternative fuels and the introduction of alternative raw materials in the manufacturing of cement and (b) to the nature of these materials <u>as hazardous and non-hazardous waste</u>.

8.3.26. I consider, therefore, that the description of the proposed development reflects the essential nature of the development, and is adequate to inform the public on the nature and extent of the development, in non-technical language.

Type, Quantity and Source of Waste

8.3.27. Submissions in respect of the development raise concerns regarding the nature of material to be imported to the site, by way of type and quantity, (given the limited information in the application on the waste types), the extent to which material is hazardous and/or toxic, the source of waste and the likelihood of it being imported into the country.

Type

8.3.28. Section 3.6 of the EIAR sets out information on proposed alternative fuels, to comprise fine solids (similar to the SRF currently in use at the plant), coarse solids, free flowing solids, pumpable solids and whole tyres. Appendix 3.5 of the EIAR lists the Waste Codes for each fuel category (and alternative raw materials), based on the EPA's Waste Classification System, 2015 (see attachments) and is, in effect, a series of numbers.

8.3.29. I would accept therefore the view of third parties that the list, as presented, does not provide great clarity on the types of waste to be utilised either as alternative fuels and alternative raw materials. However, at the oral hearing the applicant provided an explanation of the waste codes, by fuel category, in submission no. 18 to the hearing. The first column of the applicant's submission presents the six-digit waste code. The first two digits refer to the source of waste, e.g. wastes arising from construction and demolition (category 17) or from thermal processes (category 10). Waste types arising under different categories may therefore be quite similar e.g. 'waste plastic' arising from organic chemical processes (07 02 13) and 'waste plastic' arising from municipal waste (20 01 39).

8.3.30. Having regard to the list of wastes, I summarise below the broad types of waste that it is proposed will be used in the development, as alternative fuels and alternative raw materials:

- Fine solids (no hazardous waste) – Waste categories referred to are mostly plastics, wood, paper, cardboard and textiles and to a lesser extent animal tissue waste.
- Coarse solids (some hazardous wastes) – Plant tissue, animal waste, forestry waste, waste from spirits distillation, wood waste, acid tars, contaminated or

hazardous packaging waste, absorbents and wiping cloths, end of life tyres, waste from metallurgical processes, waste from waste management facilities containing hazardous substances.

- Free flowing solids (some hazardous) – Animal and food wastes which are unsuitable for consumption or processing, sludges from the treatment of waste water, waste from shredding of metal containing wastes.
- Pumpable fluids (many of these are hazardous) – Agrochemical waste, washing liquids, solvents, waste paint, varnish, waste adhesives, sealants, fuel oil and diesel, other fuels, fat and oils.
- Whole tyres.
- Raw materials (some of which are hazardous) – Mining waste, waste from agriculture, wastes from wood processing, waste from inorganic chemical processes, waste from thermal processes, construction and demolition waste, waste from waste management facilities.

8.3.31. In his submission to the oral hearing, Brian Gilmore (ICL, Communications Manager) states that the list of 114 wastes types to be used as alternative fuels (83 codes) or alternative raw materials (31 codes) was developed by ICL following a review of similar permissions for the cement industry in Switzerland and Germany and by referencing an existing Industrial Emissions Licence approved by the EPA in Ireland (with approval for 150 LOW codes). I note that the list of proposed waste types is similar to that used in the cement kilns in Germany (page 13, submission no. 2 to the oral hearing).

8.3.32. Mr Gilmore also emphasised the following:

- Even though a waste type is included in Appendix 3.5 it does not guarantee that it will be available at the right quality or in sufficient quantities in the future to be of use to the cement plant.
- No unprocessed wastes will be accepted at the cement factory. Materials will be processed by approved suppliers (licenced by the EPA or local authority) and delivered to the cement factory only if they meet the agreed specifications.

- Any new fuel will be introduced on a gradual basis, one fuel at a time by agreement with the EPA. (This statement is reflected in the applicant's current IE Licence where any new fuel is required to be introduced on a phased and trial basis, with tests burns to ensure compliance with air emission standards, under the supervision of the EPA).
- The objective of the development is to allow greater flexibility and choice as to the types of fuels that can be used for the manufacture of cement into the future.
- It would take many years to achieve all of the necessary fuel characterisation and supply agreements and fuels/materials would be subject to ongoing review of the availability and suitability.

8.3.33. In response to a question from Pat O'Brien (NEAEG), in respect of the possible future use of incinerator ash as a proposed raw material (waste code 10 01 17, submission no. 18) e.g. from the Indaver plant, Mr Gilmore stated that industry studies suggest that the mineral fraction from incinerator ash should be brought back into the construction industry (in line with the Circular Economy). However, currently the variation in the chemical composition of incinerator ash is such that it is not suitable for the cement industry. Mr. Gilmore emphasised the purpose of the application was to 'future proof' the cement plant, should such suitable materials arise on the island and be available at an appropriate quality. In the longer term he considered that ash from the Indaver plant (or similar) could be used as an alternative material, for example, after being processed through an intermediate facility to remove valuable metals and to meet particular specifications.

Quantity

8.3.34. The applicant accepts that precise quantities of individual fuels cannot be predicted in advance (except for a further 100,000 tonnes of SRF, falling within the fine solids category) and the application itself presents five different future scenarios for the use of alternative fuels (page 3.14, EIAR), with scenario 4 identified as the preferred option and basis of the proposed development (page 3.18, EIAR).

8.3.35. I note that the categories presented in the different scenarios and the preferred scenario do not reflect the main fuel types set out in section 3.6 of the EIAR (i.e. fine

solids, coarse solids free flowing solids, pumpable fluids and whole tyres), making direct comparisons difficult.

Hazardous Material

8.3.36. Mr Gilmore clarified in his submission to the oral hearing that of the 114 waste codes referred to in Appendix 3.5, 44 are classified as hazardous. He stated that some of the material are classified as hazardous due to the presence of one or more components exceeding specified thresholds in European Regulations. Notably, the majority (29) of the 44 waste codes classified as hazardous are because the material is flammable (e.g. solvents and waste oils), with the remainder considered to be hazardous because they contain flammable, corrosive or toxic components. The applicant estimates that, based on experience in Europe of burning hazardous waste in cement kilns, no more than 10-20% of the alternative fuels to be used would be hazardous.

Analysis: Type and Quantity

8.3.37. The applicant is clearly seeking permission for the use of a very wide range of waste types for use as alternative fuels or alternative raw materials, with flexibility built into the application to utilise existing and proven fuel types (e.g. SRF) and new fuel types that may emerge, if they meet the required standards for use in cement production and if they become available. Whilst this is not ideal, I would accept that it is a reality for the sector which would appear, from the current applications before the Board, to be following wider European practices and moving towards a greater use of alternative fuels and alternative raw materials in the production of cement. Further, the proposed wastes and alternative raw materials to be used appear to be already in use in cement plants in Europe.

8.3.38. Within this context, I consider that the applicant has made a reasonable effort to identify the likely type and quantity of likely alternative raw materials and alternative fuels, based on those which are currently available in the island of Ireland. Whilst I would accept that this is indicative, given the changes taking place in the waste market, the provision of specific LOW codes does ultimately define the types of alternative wastes/raw materials that could be used in the plant. Further, whilst these appear superficially to be quite numerous, on examination of the codes, a number of similar waste types arise under the industry specific LOW code headings

and proposed waste types are not actually as extensive. Notwithstanding this, any permission granted by the Board would have to fully recognise that the precise mix of alternative fuel types/alternative raw materials to be used may well change.

Source of Alternative Fuels

8.3.39. With regard to the source of alternative fuels, in submission no. 2 (to the oral hearing), the applicant has provided an indication of the location of potential sources of alternative fuel/waste for the proposed development (i.e. based on the waste profile set out Scenario 4 on page 3.15 of the EIAR, maximum output kilns 2 and 3 with 85% substitution in both). All wastes are indicated to arise from within the country and from one facility in Northern Ireland (it was stated that all would come from EPA licenced facilities). However, the applicant also acknowledged that suppliers may well change depending on what alternative fuels/raw materials were available at the time, and which met the specific requirements for use in the cement plant.

8.3.40. With regard to the importation of waste the applicant stated at the oral hearing (submission no. 2) that ICL already import fossil fuels to the country for use in the cement plant and that much of the waste streams they would be utilising are currently exported (e.g. Secondary Liquid Fuel, SRF and tyres). Further, Mr Gilmore stated that Scenario 4, which forms the basis of the development with 85% alternative fuels in kilns 2 and 3, is based on all materials being sourced in Ireland. When questioned by Sharon Toland TD, he stated he did not anticipate any need to import wastes to the plant (outside of the island of Ireland) in the period of the permission (10 years), in particular given the progressive introduction of different fuel types over the period. When questioned by Cllr. Meade, regarding the possibility of a hypothetical waste company in Northern Ireland supplying the plant importing waste from the UK, Mr Gilmore stated that this could arise for any waste company but stressed, again, the current availability of alternative fuels and raw materials in the country.

Analysis: Source

8.3.41. It is evident from the material presented by the applicant that the proposed development will serve a national waste market (submission no. 2), with specific

suppliers determined on commercial grounds and compliance with technical standards to suit the requirements of the cement manufacturing process.

8.3.42. In considering the risk of importation, I refer the Board to the following documents:

- Eastern Midland Waste Management Plan 2015-2021
- EPA's National Hazardous Waste Management Plan 2014-2020
- EPA Ireland's Environment, 2016

8.3.43. In section 4.3 (Residual and Biowaste Exports), the EMWMP refers to the current export, in 2013, of over 300,000 tonnes of residual municipal waste from the country to Europe, the likely increase in residual waste requiring treatment with the economic recovery and to the risk of over-reliance on overseas markets to manage Ireland's waste. It also refers to the export of 40% of total managed waste tyres in the country (24,165 tonnes) in 2012, with the majority used as fuel (page 110-111). (In 2014, the EPA state in their Waste Tyre Statistics, published in 2017, that 27,989 tonnes of waste tyres were managed (*sic*) in Ireland, with c.35% exported and used as fuel).

8.3.44. Similarly, the EPA's National Hazardous Waste Management Plan refers to the 149,037 tonnes of hazardous waste exported to Europe, in 2011, which included 28,270 tonnes of hazardous waste blended at EPA licensed hazardous waste treatment facilities in Ireland prior to being exported as a waste for use as fuel in cement kilns and incineration abroad.

8.3.45. In the more recent EPA report on Ireland's Environment, 2016, it is stated that 'Ireland is currently heavily reliant on export markets for the treatment of residual and recyclable wastes', with a significant increase in the export of residual waste for use as fuel, peaking in 2014 (over 500,000 tonnes). However, it also refers to the shift from disposal to landfill to energy recovery, the growth in capacity in the state for thermal recovery (including at cement kilns) and states '*that the import of solid recovered fuel for use as a fuel at cement kilns has also been increasing since 2011'* (>40,000 tonnes in 2014). The report also comments on Ireland's hazardous waste and states that the amount of waste generated, and its treatment pathways, have remained relatively unchanged in recent years i.e. since the 2014 EPA report and that that Ireland remains dependent on export for treatment of many hazardous waste streams.

8.3.46. Having regard to the above, I would accept that there remains a substantial volume of residual municipal waste, waste tyres and hazardous waste that is exported from the country for treatment (which includes use elsewhere in Europe as an alternative fuel). I would also accept, therefore, that the proposed development is likely to source alternative fuels/raw materials within the country, at least in the short term, and I would accept the *bone fides* of the applicant's intention in this regard. However, it is important to recognise that in reality the waste market is a commercial one, with waste traded and moved around across Europe (as evidenced in the EPA's information on the importation of solid recovered fuel, above) and it is possible that this position may well change over the lifetime of the development. I refer to this matter in more detail below.

Consistency with Waste Policy

8.3.47. Submissions in respect of the proposed development argue that:

- The application refers to waste types for which alternative uses/processes exist which are higher up the waste hierarchy, for example, the re-use or recycling of waste tyres, plastic and wood and the re-use of biodegradable materials containing valuable and scarce resources, such as phosphorus and nitrogen (see submission from Zero Waste Alliance Ireland, 27th October 2017 and submission nos. 14 and 15 to the oral hearing).
- The applicant has not comprehensively examined alternative processes for dealing with these wastes.
- The market created by the cement industry for SRF (and other wastes) could increase the pressure to produce 'waste' from potentially recyclable materials and that the development, therefore, would compound poor recycling rates in the country and conflict with the European Waste Hierarchy and Circular Economy. The development could also become a 'stranded asset', if recycling rates improved.
- The development will not be as beneficial to the climate as stated by the applicant as the additional fuel will be a net contributor to greenhouse gas emissions, and therefore in conflict with Ireland's obligation to reduce such emissions (page 18, submission no. 14 to hearing).

8.3.48. In responding to the issues raised in submissions, the applicant draws the Board's attention to the following:

- The proposed development provides for waste recovery and recycling of materials (i.e. where the mineral fraction from waste, such as Aluminum, is included as a substitute raw material in the production of clinker and reduces the requirement for bauxite, a natural form of alumina) and therefore contributes to/is consistent with the Circular Economy.
- Approximately 30% of material that is placed in recycling bins cannot be recycled, for example, composite multi-layered packaging, some plastics and waste that is contaminated, and comprises 'residual waste'.
- The proposed development is brought forward to utilise residual wastes and will help to deal with these waste streams in the country.

Analysis: Consistency with Waste Management Plan

8.3.49. European, national and regional waste policy set out a number of key principles, relevant to the assessment of the proposed development: -

- The move to a Circular Economy (where the value of products, materials and resources is maintained in the economy as long as possible, and the generation of waste is minimised).
- Strict application of the waste hierarchy.
- Self-sufficiency.
- Proximity.

8.3.50. The proposed development comprises primarily energy recovery. However, it in part provides for the re-use of some materials via use of mineral fractions and/or raw materials substituting other natural resources that would have been traditionally used in the manufacturing process.

8.3.51. Energy recover sits above disposal but in a lower tier of the waste hierarchy than prevention, preparing for re-use and recycling. Some of the issues raised in submissions are clearly reflected in European and national waste policy documents. For example, the European Commission's Action Plan for a Circular Economy comments that that '*The way we collect and manage our waste can lead either to*

high rates of recycling and to valuable materials finding their way back into the economy, or to an inefficient system where most recyclable waste ends in landfills or is incinerated'. Similarly, the Commission's Communication on the Role of Waste to Energy in the Circular Economy concludes that that waste-to-energy processes can play a role in the transition to a circular economy provided that the EU waste hierarchy is used as a guiding principle and that choices made do not prevent higher levels of prevention, reuse and recycling.

8.3.52. In Ireland, as stated above, there is reliance on the export of residual municipal waste, tyres and hazardous waste to Europe for treatment or disposal. Within this context, i.e. of an under supply of waste infrastructure, European, national and regional policy currently acknowledges the potential for co-incineration of residual waste and hazardous waste to facilitate management of waste in line with the principles of self-sufficiency and proximity, without undermining the waste hierarchy of the circular economy.

8.3.53. Notably, the EMRWMP having regard to the predicted growth in waste, growing recycling rates, future targets, the continued move away from landfill and the conversion of pending capacity into active treatment, proposes an additional thermal capacity need of 300,000 tonnes per annum for residual municipal waste (Policy E15a) and up to 50,000 tonnes of additional thermal capacity to deal with hazardous waste (Policy E16). It also acknowledges the need for additional thermal recovery facilities for industrial process waste (Policy E15b), including sludges.

8.3.54. I accept, therefore:

i. That the ready availability of waste to energy facilities has the potential to influence recycling rates,

ii. Recycling rates are likely to increase in the short to medium line with European and national policy commitments,

iii. Waste generation rates are likely to reduce in the longer term as we as a society move towards a Circular Economy,

8.3.55. However, there are currently substantial waste streams which are being exported for treatment and a stated need for additional thermal capacity in the State. Whilst I do accept arguments put forward in submissions that some of the alternative fuels proposed comprise some waste streams that could be recycled, or that better

treatment options exist (e.g. for biodegradable materials), it appears that such recycling/re-use is not currently occurring, necessitating alternative treatment, at least in the short term. I would consider, therefore, that the within this context and in the short term, the proposed development would not, in principle, compound poor recycling rates or conflict with the European Waste Hierarchy or Circular Economy.

8.3.56. Notwithstanding this in principle conclusion, I also make the following important points. The applicant seeks permission to use an additional 480,000 tonnes per annum of alternative fuels or raw materials, comprising:

- 100,000 tonnes of municipal derived fuel (or SRF), and, therefore
- 120,000 tonnes of alternative raw materials,
- 260,000 tonnes per annum of non-municipal waste (i.e. tyres, liquid fuels, biosolids).

Municipal Derived Fuel

8.3.57. With regard to the proposed quantity of municipal derived fuel, I note that two other applications/appeals are before the Board for thermal recovery i.e. ICL's proposal to introduced c.90,000 tonnes of alternative fuels/raw materials to their plant in Limerick (PL04.PA0045) and Indaver Ireland's plans to construct a waste to energy facility at Ringaskiddy, Co. Cork to accept up to 200,000 tonnes of municipal waste per annum. Further, in December the Board received a request by Indaver Ireland Ltd to alter the terms of a previous permission in relation to their waste to energy facility at Carranstown (ABP-300299-17), to include an increase in its overall capacity for the acceptance of waste from 235,000 tonnes per annum to 280,000 tonnes per annum.

8.3.58. Whilst the Board will have to give collective consideration to these cases, in the absence of any determination, the proposed development is in compliance with Policy E15a of the EMRWMP i.e. the proposal for an additional 100,000 tonnes thermal capacity for residual municipal waste per annum is within the indicated capacity of 300,000 tonnes per annum.

Alternative Raw Materials

8.3.59. With regard to the proposed use of 120,000 tonnes of alternative raw materials, the use of these would offset the requirement for natural resources, and would be consistent with the waste hierarchy and circular economy, and would be acceptable.

Remaining Waste Types

8.3.60. For the remaining waste types e.g. tyres, biosolids, wood waste etc., there is clear acknowledgment in current policy documents, referred to above, of the export of some of these from the country (e.g. waste tyres) and of the need for greater thermal recovery capacity for industrial process waste (Policy E15b, EMRWMP), including sludges. For others, the Regional Plan is silent in terms of thermal capacity requirement, for example, biosolids.

8.3.61. Further, I note that where there is information on alternative fuel types e.g. waste tyres, volumes are typically quite low, relative to the permission sought by the applicant. For example, the EPA reported that in 2014, 27,989 tonnes of waste tyres were managed in Ireland (EPA Waste Tyre Statistics, 2014), with c.35% used for fuel, that 61,000 tonnes of MBM and 27,000 tonnes of biofuel from animal by-products in the same year (Ireland's Environment, EPA, 2016). Irish Water, in their National Wastewater Sludge Management Plan predict that the quantity of wastewater sludge will increase from 53,543 tonnes (dry solids) per annum in 2014 to 96,442 tonnes in 2040. (Currently most of this is treated and is reused in agriculture, however Irish Water accept that incineration may provide a future option for Irish Water).

8.3.62. Having regard to the above, and seeking to balance the need for greater self-sufficiency and proximity in the State for the treatment of waste and the risks of over-provision, I would consider that there would appear to be a need for additional thermal capacity in respect of waste tyres and industrial process waste (including sludges). With regard to MBM (meat and bone meal), the use of this product as an alternative fuel in cement kilns is well established and it does provide an option for animal waste in the event of a national emergency. Use of biosolids, may in the longer term provide an important option for the management of wastewater sludges nationally.

8.3.63. If the Board are minded to grant permission for the development, I would recommend, therefore that the use of other waste as set out by the applicant, including tyres, industrial process waste (including sludges), biosolids etc. is limited to 75,000 tonnes/annum, having regard to current pattern of disposal of some of these wastes overseas, the acknowledged requirement for additional thermal

treatment capacity of industrial process waste in the country (policy E15b, EMRWMP), the absence of any stated capacity requirement and in order to prevent too much capacity is built into the waste recovery system.

Hazardous Waste

8.3.64. The applicant proposes using 120 waste types (by LOW code) as alternative fuels and/or raw materials. Of these, 44 are identified as hazardous wastes (i.e. 44 of the waste types proposed to be used as alternative fuels and alternative raw materials comprise hazardous waste). The applicant has stated that no more than 10-20% of the alternative fuels to be used would be hazardous. As the actual mix of alternative fuels/raw materials is not specified, a worst case scenario would be that 10-20% of all of the alternative fuels/raw materials comprised hazardous waste i.e. 10-20% of 480,000 = 48,000-96,000 tonnes/annum.

8.3.65. This volume of hazardous waste would be in excess of the stated requirement set out in the EMRWMP and therefore be inappropriate. Further, having regard to the requirement in the plan to have regard to spatial distribution when considering future facilities in the State, some pro-rata limit should be placed on the capacity of the cement plant for hazardous waste. Given that three regional waste plans cover the State, I would recommend, therefore, a thermal capacity limit of 17,000 tonnes/annum.

8.3.66. With regard to NEAEG's submission (no. 14 to the oral hearing) that the development will not be as beneficial to the climate as stated by the applicant, in contrast to other treatment options, I would accept that in reality the situation is complex, ideally extending to lifecycle analysis of alternative options. However, in this instance, the applicant has brought forward a development for which there is, at least in the short term, an acknowledged need nationally. Further, I would accept that the use of alternative fuels would reduce the requirement for fossil fuels.

Compliance with International Agreements/European Directives

8.3.67. Submissions in respect of the proposed development make reference to a number of European Directives, and state that the development should be amended to take account of these. I deal elsewhere with the Waste Framework Directive and the Stockholm Convention and comment on the remaining matters below:

- The Renewable Energy Directive 2009/28/EC – The purpose of this Directive is to promote an increase in the contribution of renewable energy sources to electricity production in the internal market for electricity. In article 3(2) it requires requires Member States to set national targets for the amount of gross electricity consumption to be supplied from renewable sources by 2010. The proposed development provides for the use of alternative fuels, for the recovery of energy from these and a reduction in the use of fossil fuels. I would accept, therefore, that it is compliant with the overall objective of this Directive.
- The Energy Efficiency Directive 2009/125EC – This Directive establishes a common framework of measures for the promotion of energy efficiency within the Union in order to ensure the achievement of the Union's 2020 20% headline target on energy efficiency and to pave the way for further energy efficiency improvements beyond that date. The Directive requires Member States (MS) to set a national energy efficiency target and measures to be implemented to increase energy efficiency. Again, I would consider that the proposed development, which seeks to recover energy from waste material, is consistent with the overall objectives of this Directive.
- Carbon Capture Directive 2009/31/EC – This Directive is concerned with the geological storage of carbon dioxide. The party making the submission has not indicated how the development conflicts with it and I do not consider it significant to my assessment of the proposed development.

8.3.68. In addition to the above, submissions refer to Articles of the Treaty on the Functioning of the EU and the EU's Emissions Trading Scheme (not sufficiently priced to drive innovation). The submissions do not indicate how the policy documents are directly relevant to the proposed development and neither raise issues which are particularly pertinent to my assessment.

8.3.69. One of the parties also states that the development provides no mechanism to pass on carbon costs to consumers or purchasers of the product. Whilst I would accept this point, I would also comment that (a) the matter is one is governed by other legislation and therefore lies outside the scope of this application, and (b) the

proposed development comes forward within a wider EU and national policy framework which seeks to reduce greenhouse gas emissions.

Alternatives

8.3.70. Parties argue in their submissions that the proposed development has failed to adequately consider alternatives, namely:

- The SEA directive requires an assessment of reasonable alternatives.
- The applicant has not considered the importation of cement as an alternative, to better contribute to energy and climate targets or alternative locations, to provide for use of recovered heat.
- The applicant has not considered alternative ways to reduce energy consumption and emissions in line with the European Cement Association's document '*The Role of Cement in the 2050 Low Carbon Economy',*

8.3.71. The SEA directive, is a European Directive that requires the strategic environmental assessment of policies, plans and programmes. It is not directly relevant to the proposed development which comes forward as a standalone project.

8.3.72. With regard to importation of cement, I would accept the applicant's argument of the need for an indigenous cement industry (submission no. 2 to the hearing), being of strategic importance to the national economy and the construction industry in particular, the availability of raw materials in the country for the production of cement and the substantial costs associated with importation. I would also accept the applicant's argument that the consideration of alternative development locations outside of the Platin works is neither reasonable or practicable, having regard to the established nature of the facility, the existing workforce, the proximity of the plant to a substantial limestone reserve and strategic transport links.

8.3.73. The Cembureau publication *The Role of Cement in the 2050 Low Carbon Economy,* focuses on what can be done to reduce CO_2 emissions in cement production using today's technology, and speculates on what could be achieved by 2050 (see attachments). It focuses on five themes resource efficiency, energy efficiency, carbon sequestration and reuse, product efficiency, and downstream measures (e.g. smart buildings and infrastructure development).

8.3.74. Parties argue that the applicant has only considered one theme, use of alternative fuels (under resource efficiency) and has not considered other alternatives e.g. clinker substitution (as the majority of emissions arise from the processing of limestone), use of rail transport, using renewable energy sources for fuel.

8.3.75. The EIA Directive (85/337/EEC), as amended (most recently by Directive 2014/52/EU), states, in Article 1(d) that the EIAR should include a description of *"a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment'.*

8.3.76. Similarly, the government's guidance on the Directive (DHPCLG Circular PL1/2017) states that the EIAR must include a description of the reasonable relevant alternatives studied by the developer and an indication of the main reasons for the option chosen.

8.3.77. Whilst I do accept that many of the initiatives set out in the Cembureau report to reduce CO_2 emissions are not considered by the applicant, the proposed development comprises an initiative to reduce reliance on fossil fuels, and therein, reduce carbon dioxide emissions. Many of the Cembureau initiatives would not constitute reasonable alternatives to the project e.g. downstream measures. Other initiatives could well be taken alongside it, for example, clinker substitution. Further, given that the objective of the project is to introduce alternative fuels to the plant I consider it unreasonable, and unrelated to the project, for the applicant to consider alternative ways to reduce energy consumption or energy emissions.

8.3.78. Section 3.9 of the EIAR sets out three principle alternatives, based on the progressive introduction of alternative fuels. Table 3.2 considers the environmental effects of alternative options and, based on the relatively modest environmental effects of different options, selects Alternative 3 as the most preferable, in terms of CO_2 savings and reductions in the use of non-renewable natural resources.

8.3.79. In view of the above and having regard to the particular characteristics of the proposed development, the use of alternative fuels and raw materials in an established cement plant, I consider that the applicant has adequately identified and described reasonable alternatives which are relevant to the project and the main

reasons for the option chosen. I am also satisfied therefore that the requirements of the EIA Directive and the government have been met.

Emissions to Air/Health Effects

8.3.80. Parties to the application raise concerns regarding:

- The adequacy of the air pollution model.
- The cumulative effects of the development with the nearby Indaver waste to energy plant.
- The unproven nature of the technology and the possible harmful effects of these on human health, in particular, particulate matter, dioxins, furans, metals etc. given the wide range of waste types proposed as alternative fuels, including hazardous waste types (e.g. agrochemical waste, halogenated organic solvents).
- Conflict with the Stockholm Convention.
- Proposed means to destroy dioxins and related compounds (inclusion of quick cooling technology to prevent re-formation).
- Impacts on specific health conditions (including the high prevalence of Guillain-Barre Syndrome (GBS), cases of cancer in the Duleek area and respiratory ailments).
- Means to control dust emissions.
- Health issues associated with the subsequent use of cement with its 1% content of fuel ash.
- Impact of emissions on air traffic.
- Impact of emissions to air from increased road traffic.

Location of Sensitive Receptors

8.3.81. The proposed development is situated in a semi-rural area, c.2.5km to the north east of Duleek village, c.1.5km south east of Donore village and c.1.75km south west of Drogheda town. Within 500m of the site are 10 residential properties, with the closest c.250m to the southeast of the site (see Figure 4.2, EIAR). The nearest commercial development lies >250m to the south east of the site and includes a

motor factors and auto repair shop. Approximately 1.2km to the south east of the site is Scoil Cholmcille national school and c.1.8k to the north west of it, St. Mary's National School in Donore.

Adequacy of Air Pollution Model

8.3.82. The applicant's assessment of emissions to air is set out in Chapter 8 of the EIAR. The effects on air quality are assessed by comparing the existing permitted ground level concentrations of pollutants from the cement plant with those predicted for the proposed development. The exercise is stated to have been completed in accordance with the EPA's Guidance, Air Dispersion Modelling from Industrial Installations Guidance Note (AG4), 2010.

8.3.83. If granted permission by the Board, air emissions from the proposed development would be regulated by the EPA under a review of the applicant's Industrial Emissions Licence. Therefore, whilst detailed assessment of the modelling exercise, properly falls within the remit of the EPA, I comment below on the approach taken towards the assessment exercise, the in-principle nature of its findings and any matters arising for the land use planning system.

8.3.84. Ground level concentrations of emissions from the proposed development are modelled for the existing plant and the proposed development using Breeze AERMOD computer package. The Breeze AERMOD model is identified in the EPA guidelines (2010) as one of the commonly used advanced air dispersion models, capable of assessing the impact of large installations with multiple sources and numerous buildings.

8.3.85. Conservative assumptions built into the modelling exercise and include:

- Emissions from the plant (existing and proposed) are assumed to be at emission limit values specified in the Commission Implementing Decision establishing BAT Conclusions under Directive 2010/75/EU on Industrial Emissions for the Production of Cement (2013/163/EU).
- Emission sources are operating at maximum flow rates.
- Emission sources are operating every hour of every day of the year.
- Meteorological conditions which give rise to the maximum predicted concentration of pollutants.

- Receptor location is that which experiences the maximum concentration.

8.3.86. Two receptor grids are used, with the first extending for 4km across the facility (with receptors at 100m) and the second over 20km (with receptors at 1km intervals). Ground level concentrations are predicted at each receptor location (the receptors do not represent individual residences but of potential worst case receptor locations).

8.3.87. Using the anticipated level of emissions arising from the proposed development (e.g. from kilns and cement mills, as set out in Table 8.5 of the EIAR), the modelling exercise predicts likely ground level concentrations of pollutants arising from the development, column 'PC (proposed)' in Table 8.8, EIAR.

8.3.88. Predicted ground level concentrations are then added to existing background levels of pollutants to provide a predicted ground level concentration of pollutants (column 'PC (proposed) + environment) and percentage increase in ground level concentrations relative to air quality standards, column 'PC (proposed) + Environment relative to AQS/limit', Table 8.8).

8.3.89. Where available, the modelling exercise uses EPA monitoring data to provide baseline levels of background concentration of pollutants (section 8.3.1 of report). As there is no background monitoring data for the specific area in which the development is situated, the EIAR uses average data for Zone C (other cities and towns), which is set out in Table 8.7. It is clear, therefore how background levels for these parameters have been included in the prediction of likely ground level concentrations.

8.3.90. As stated in section 8.3.1 of the EIAR no EPA data is available for hydrogen chloride, hydrogen fluoride, thallium, antimony, chromium, cobalt, copper, manganese, vanadium, dioxins and furans and ammonia. Table 8.8 of the EIAR does not indicate any background levels for these parameters and there is no change between column 'PC (proposed)' and 'PC (proposed) + Environment'. However, when questioned on this matter at the oral hearing, i.e. whether or not background levels had been included in the assessment, Sinead Whyte, Arup stated that where EPA data was not available, actual measured background levels of pollutants had been used in the modelling exercise.

8.3.91. I note two substantial issues with the approach taken. Firstly, the use of EPA data in the modelling exercise may not accurately reflect actual background levels e.g. if

background levels of pollutants are higher, environmental effects could be underestimated. Secondly, there is no evidence of, or transparency regarding, the background levels of pollutants, used in the model, for which EPA data is not available.

8.3.92. I am mindful that the Board may consider this matter to be significant and they may wish to seek further information from the applicant in this regard. However, I would comment as follows:

i. It is evident from Table 8.8 that the predicted increase in ground level concentration of pollutants, relative to air quality standards, is extremely small for all parameters, ranging from 0-0.4%. This would suggest that the proposed development is unlikely to have a significant impact on air quality, regardless of background levels.

ii. As stated previously, the model assumes a very conservative scenario and actual concentration of pollutants, if granted, is likely to be lower. (Annual Environmental Reports on the EPA website on the operation of the existing facility indicate high levels of compliance with emission limits and in many cases substantially lower levels of emissions than limit values).

iii. It is the EPA which has statutory responsibility for both regulating industrial emissions under the Industrial Emissions Licencing programme and for monitoring air quality in the country.

iv. In the EPA's report Air Quality in Ireland 2016 - Indicators of Air Quality, identifies two key sectors that predominantly impact negatively on air quality as residential heating and transport. Further, it states that emissions from large industrial activities are well regulated through the industrial and waste licencing regimes and that further downward pressure on emissions will be realised through ongoing implementation of the European Industrial Emissions Directive and associated Best Available Techniques requirements of the IED. (The report also refers to the 2016 dioxin survey which shows that concentrations of dioxins and similar pollutants remain at consistently low level in the Irish environment).

8.3.93. Having regard to the above, I consider that (a) there is sufficient information on file to conclude from a land use planning perspective that, in principle, the proposed development is unlikely to have a significant impact on air quality, and (b) control of emissions, in the context of ambient air quality and the need to meet national, European and WHO standards, will subsequently be determined and, if licenced, controlled by the EPA.

8.3.94. I also draw the Board's attention at this point to the submission by Zero Waste Alliance Ireland. On page 47, the submission refers to issues raised in respect of the modelling of atmospheric emissions for the proposed ICL development in Limerick, including the accuracy, veracity and completeness of the air pollution model used to predict emissions, in particular cumulative emissions. They argue that similar issues arise with respect of the modelling exercise carried out for the proposed development. The Board may wish to consider this matter here.

Cumulative Effects with Indaver Plant

8.3.95. The proposed development lies immediately north of the Indaver waste to energy plant. This was granted permission by the Board in 2003 with permission to accept 170,000 tonnes of waste per annum. Emissions to air from the plant are governed by an Industrial Emissions Licence

8.3.96. In section 8.4.4 the EIAR deals with the impact of cumulative emissions to air which are assessed having regard to the EPA's guidance document Air Dispersion Modelling from Industrial Installations Guidance Note (AG4) (Section 6.6 and Appendix F of the document). The guidance provided in relation to cumulative assessment is essentially that where a nearby installation emits the same pollutant as the applicant installation, both at a significant level, a cumulative impact assessment may be necessary. In detail, the guidance requires as a first step, identification of potential cumulative emissions if they exceed 100/tonnes per annum (threshold limit) and secondly detailed assessment, for pollutants exceeding this threshold, if nearby facilities contribute to more than 25% of the air quality standard for that parameter. Of note, the guidance document states *'If the predicted pollutant concentration increase over the baseline concentration is below the applicable increment (i.e. 25% of the AQS), and the predicted total ground level concentrations*

are below the ambient air quality standards, then the applicant has successfully demonstrated compliance.'

8.3.97. Following the EPA methodology, the applicant has screened out all of the emissions from the Indaver plant, except nitrogen oxide, on the basis that the emission levels fell below the threshold (100 tonnes/annum) required for inclusion in cumulative impact assessment. The modelling exercise, therefore, clearly makes no assessment of the cumulative effects of pollutants of particular public concerns e.g. dioxins and furans, because there is no requirement to do so under the EPA Guidelines.

8.3.98. For NO_x (nitrogen oxide):

i. The applicant's assessment compared the sum of the ground level concentrations from the Indaver plant, the proposed development and background levels, to air quality standards. As indicated in Table 8.10 of the EIAR, predicted cumulative levels of nitrogen oxides are well below air quality standards, and

ii. The Indaver facility is determined not to contribute to more than 25% of the AQS for the parameters presented and the need for detailed cumulative impact assessment is ruled out.

8.3.99. If the Board are minded to grant permission for the development, emissions to air will be controlled by an Industrial Emissions Licence, that would be issued by the EPA. However, on the basis of the information set out in the application documentation I am satisfied that the applicant has included in the application an assessment of cumulative emissions to air, in accordance with the guidance provided by the EPA on air dispersion modelling for industrial installations and that no significant cumulative emissions to air will arise as a consequence of the development.

Nature of the Technology

8.3.100. The proposed development proposes a switch from traditional fuel sources to alternative sources. Use of three alternative fuels, meat and bone meal, chipped tyres and solid recovered fuel has been licenced at the plant (currently only SRF is used as an alternative fuel) and I note that the IE Licence required a test programme for each alternative fuel to be introduced to the plant, to ensure the operational efficacy of handling systems and equipment and compliance with emission limit

values. Information on file in respect of the existing development shows a high level of compliance with the standards set out in the licence.

8.3.101. Elsewhere in Europe the use of alternative fuels is well established and information which is available on these would indicate that it can be, and is, carried out without significant impact on air quality. In this regard I draw the Board's attention to the report accompanying the HSE's submission to the Board (1st September 2017) by Public Health England, which states that '*the use of substitute fuels is an accepted technology for cement kilns and available evidence would suggest that providing the process is effectively managed there should not be any significant changes in emissions to air that could have an impact on human health*'.

8.3.102. I also draw the Board's attention to the Commission's Decision on the Best Available Techniques Conclusions on Industrial Emissions for the production of cement (2013/163/EU). Article 1.2.4 of the document specifically addresses the matter of waste as fuel and sets out techniques to minimise emissions to air, for example, measures to guarantee the characteristics of the waste to be used and measures to ensure the appropriate treatment of waste in the kiln and safety management for the use of hazardous waste.

8.3.103. In view of the above I would consider that the use of waste as a fuel is a technology which has been proven and, indeed, one which is highly regulated and closely monitored.

Health Effects

8.3.104. Potential health effects of the proposed development are considered and assessed by the applicant in section 4.2 of the EIAR, Human Health. The assessment has regard to the findings of other chapters of the report, including water and hydrology, air quality and climate, noise and vibration and traffic, and to the findings of a Human Risk Assessment (Appendix 4.1) carried out in respect of the proposed development.

8.3.105. Matters raised by parties in submissions most frequently referred to the health effects arising from air emissions. This matter is addressed below. Other sections of this report deal with impacts on water and of noise, vibration and traffic and on the basis of the conclusions drawn, I would not anticipate any significant impacts on human health to arise as a consequence of these effects.

8.3.106. I draw the Board's attention to section 4.2.5.1.1 of the EIAR which presents the results of a literature review of reports and scientific studies on health effects related to the use of alternative fuels in cement plants. Having regard to the findings of these studies, the EIAR states that there appears to be little or no published evidence of adverse outcomes to the health of people living around cement facilities using or switching to alternative fuels. My own review of these studies quoted would support this conclusion and I note that in some papers, switching to alternative fuels reduced the level of dioxins emitted (Dioxin-like pcb emissions from cement kilns during the use of alternative fuels, Richards G. and Agranovski I.E, 2017). Others referred to the need for further long-term environmental studies as necessary to corroborate the harmfulness of refuse derived fuel in terms of human health risks.

8.3.107. With regard to the proposed development, Chapter 8 of the EIAR concludes that the proposed development will have a negligible impact on air quality i.e. it complies with all air quality standards, which, as argued by the applicant are set to protect the vulnerable, not the robust (section 4.2.2.2). As discussed above, I would accept on the basis of the scientific information before the Board that the proposed development would not have a significant adverse impact on air quality, and therefore no adverse health effects should arise from it as a consequence of emissions to air.

8.3.108. With regard to potential emissions of dioxins and furans, the applicant has carried out a specific Human Health Risk Assessment using the US EPAs Human Risk Assessment Protocol (HHRAP). This is presented in Appendix 4.1 of the EIAR. Further, at the oral hearing the applicant submitted a paper by Dr. Amanda Gair which reviewed this HHRAP Assessment and provided a further assessment of emissions to atmosphere using the HMIP methodology (Her Majesty's Inspectorate of Pollution, a predecessor of the UKs Environment Agency).

8.3.109. The modelling exercises carried out are complex, however, they are based on the following approach/assumptions:

- Emissions of dioxins and furans from the plant occur at IED limit values. Actual levels are predicted to be much lower (see submission no. 16 to the hearing and Figures 2.13 and 2.14).

- The evaluation of potential risk in each model is based on a hypothetical worst case exposure pathway, e.g. where the most sensitive receptor is consuming vegetables and livestock grown and reared at the point of maximum ground level exposure (more than 90% of human exposure to PCDD/Fs is through food consumption).

8.3.110. Further, given that different types of waste used as fuel can give rise to different profiles of dioxin/furans (PCDD/Fs) emitted, two different PCDD/Fs congener profiles are used, one based on data from municipal waste incinerators and one based on actual emission monitoring data from the plant. Both models have regard to background concentrations of PCDD/Fs which are indicated to be very low in comparison to WHO standards and English Environment Agency median values (page 8 and 9, Appendix 4.1, EIAR)

8.3.111. Both modelling exercises predict similar intakes of PCDD/Fs and conclude that predicted worst case scenarios are well below internationally recognised tolerability criteria (section 5 of submission no. 7, section 8 of Appendix 4.1 and section 12 of submission no. 6).

8.3.112. Impact of the development as a consequence of inhalation is also considered in both modelling exercises and is demonstrated to be significantly below intake standards (section 10 of submission no. 6 and section 4.4 of Hawkings report in submission no. 7). Similarly, emissions of dioxin-like PCBs are not considered to be significant.

8.3.113. If the Board decide to grant permission for the proposed development, it will require a licence from the EPA and the veracity of the health risk assessment will be subject to further scrutiny. However, from a land-use planning perspective, having regard to the conservative approach taken in the modelling exercise, which substantially over estimates levels of likely exposure, the low levels of risk arising from the exposure to dioxins, furans and dioxin like PCBs, and the evidence of scientific reports in respect of the use of alternative fuels (referred to above), I would consider that the proposed development, would not be likely to give rise to significant adverse impacts on human health.

8.3.114. Notwithstanding this conclusion, I would acknowledge points made in submissions that the proposed development, by virtue of its perceived impacts and

the absence of monitoring data on ambient air quality, does cause a level of stress and anxiety in the community. (I consider the matter of monitoring below).

Stockholm Convention

8.3.115. The Stockholm Convention seeks to eliminate or reduce the release of persistent organic pollutant (POPs) including dioxins, furans and polychlorinated biphenyls (PCBs).

8.3.116. Article 6(3) of the Regulation states that 'Member States shall, when considering proposals to construct new facilities or significantly to modify existing facilities using processes that release chemicals listed in Annex III, without prejudice to Council Directive 1996/61/EC 1, give priority consideration to alternative processes, techniques or practices that have similar usefulness but which avoid the formation and release of substances listed in Annex III'.

8.3.117. As demonstrated in the applicant's assessment of emissions to air, the proposed development will give rise to dioxins, furans and PCBs and is, on the face of it, inconsistent with the Stockholm Convention. However, I would comment as follows:

- The proposed development will give rise to a very modest increase in dioxin, furan and dioxin like PCB emissions (less than 1% increase relative to Air Quality Standard limit), which is based on a very conservative approach where emissions volumes used in the modelling exercise are set at their limit value, while experience of the operation of the plant shows much lower emission rates.
- Evidence from the German cement industry since 1998 would indicate that the increase in use of alternative fuels does not lead to an increase in these pollutants (see figure 3-7, submission no. 3 to the hearing).
- The high temperatures reached in a rotary kiln facilitate the complete destruction of organic dioxins and furans, resulting in the very low levels that are found in exhaust gas.
- The Commission Decision on BAT Conclusions for the Industry specifically includes techniques for the burning of alternative fuel to minimise emissions, including control of flue gas temperatures and exclusion of alternative wastes

at start up and stop times when appropriate temperatures and residency times cannot be maintained.

8.3.118. In addition, as previously discussed, I have accepted that currently the State exports a large proportion of the proposed waste streams to elsewhere in Europe, with some of these wastes subsequently used as alternative fuels. Consistent with European, national and regional policy there is a need for self-sufficiency and proximity in our capacity to treat waste arising in the country, at the very least in the short term. In the longer term, with the full implementation of the Circular Economy policy objectives, waste material that is available as an alternative fuel may well decline.

8.3.119. Having regard to the above, I consider that the proposed development provides important infrastructure for the treatment of waste in the country, in the short term. Further, over the period of the temporary permission, the development, if granted permission, will give rise to a negligible increase in the emission of POPs, will be controlled and monitored by the EPA, under the terms of a revised IED licence and the licence issued will have regard to the most recent Commission Decision on BATs. I therefore consider that the proposed development has regard to the requirements of the Stockholm Convention.

Impacts on Specific Health Conditions

8.3.120. Whilst I understand concerns raised in submissions regarding increased levels of cancer in the area and incidence of respiratory disease, no information is provided to support this and county data on cancer rates indicates no unusual occurrences (page 11, submission no. 8). With regard to the incidence of Guillain-Barre Syndrome, the applicant refers to the findings of the HSE report 'Review of a possible cluster of cases of Guillain-Barre Syndrome in Duleek, Co. Meath' and its conclusions that there is no evidence that the condition was either caused or exacerbated by current industrial activity.

8.3.121. NEAEG raised concerns regarding the 'fait accompli' presentation of the HSE's report into the incidence of Guillain-Barre Syndrome (GBS) in the area. Mr O'Brien argued that the findings of the report had been challenged by various parties, including those with GBS, on grounds including that it did not adequately

define the number of cases arising in the area[5] or refer to 19 emissions problems with the Indaver Plant in 2014 or issues in the area with water and with sewerage. Mr O'Brien stated that the report was therefore under review. Mr O'Brien stated that a county would typically have one case of GBS but the village of Duleek had many more. NEAEG were concerned that if facilities were licenced, they were deemed to be excluded from any causal relationship with health/omitted from consideration.

8.3.122. At the oral hearing, Mr Anthony Mullen gave an overview of the impact of the syndrome on his life and stated that those who were affected by it, in the village, had no prior connection with each other. He stated that consideration was being given to what was on the ground, however, attention should turn to what is in the air, based on his finding of three dead swallows on the ground (and to similar incident by neighbour).

8.3.123. In response, Dr. Hogan stated that whilst he did acknowledge the matters raised by NEAG, he had come across GBS over the last 30 years and that although a rare condition it was not unusual, was well documented and it was considered by the profession to typically follow an infectious disease (i.e. an altered immune response that affected the nerves) not an environmental one. He also stated that whilst it was unusual to get such numbers in a confined geographical area, it was not unheard of. He also stated that HSE review would have followed a specific and standardised methodology for investigating clusters and that the review was extensive.

8.3.124. Mr O'Brien stated that whilst he accepted that there was no evidence that GBS was caused by environmental factors, there was no evidence that it was not caused by environmental factors and it remained a concern for the community.

8.3.125. Whilst I do accept that there are legitimate public concerns regarding the high incidence of this syndrome in a small geographical area, there is nonetheless no evidence of a causal relationship (or any relationship) between the existing cement plant, the proposed development or other industry in the area (see attached conclusions of the HSE report). I note that the HSE report makes a series of recommendations, however, these lie outside the scope of this application and properly fall within the responsibilities of the HSE.

[5] i.e. that the report did not adequately distinguish between the three cases of GBS referred to in the report and three other similar cases in the area that were not included in it.

Dust

8.3.126. A submission by Kevin Finger to the oral hearing (no. 13) drew the Board's attention to his experience of poor housekeeping of bag filters at the plant (mid 1970s to 1983) and consequently dust arising from them and generally in the plant (e.g. in site offices). Jack O'Sullivan (NEAEG) sought clarification on the applicant's assessment of fugitive dust emissions generally, and not only those arising from distinct emission sources (e.g. kilns or cement mills).

8.3.127. In response, David O'Brien, the plant manager responded stating that bag filters at the plant were subject to preventative and predictive maintenance, were routinely inspected and replaced approximately every 1 to 2 years (dependent on measured pressure across the bag), in line with current best engineering practices. He also stated that all emissions were monitored in accordance with the plants IE licence.

8.3.128. I note that the EIAR does consider emissions of particulate matter (i.e. from kiln stacks and cement mills) and that predicted levels are indicated to be well within the relevant air quality standard (Table 8.9). Further, with regard to wider fugitive emissions, the proposed development will not directly lead to any significant ground levels sources of dust, for example, alternative fuels/materials will be delivered, 'just in time' to the site and stored in suitable enclosed structures. Notwithstanding this, the current Industrial Emissions Licence require quarterly dust deposition monitoring at the site boundary, with a standard limit value of 350mg/m^2/day and will be further addressed by the EPA in any consequential review.

8.3.129. Annual Environmental Reports available on the EPAs website in respect of the current Industrial Emissions licence for the cement works indicates high levels of compliance for emissions of particulate matter from mills and kiln stacks and compliance with emission limit values in dust monitoring.

8.3.130. In addition to the above, residential development is generally removed from the site (i.e. is over 250m from it) at the time of site inspection, whilst I did note evidence of dust along the public roads in the vicinity of the site (which might arise from a number of sources given the large volume of traffic on the road, including that used by quarries in the area), the site itself was kept in good order with little evidence of serious dust deposition.

8.3.131. In conclusion, having regard to the above, I do not consider that the proposed development is likely to give rise to significant dust emissions.

Use of Ash arising from Alternative Fuel

8.3.132. In response to a question by Cllr Meade, the applicant clarified that no health concerns arose from the use of ash from alternative fuels/raw materials in the manufacture of clinker (and subsequently its presence in cement) as the fuels/materials would be raised to such significant temperatures such that complete combustion of materials was achieved, for example, with materials broken down into their fundamental components.

8.3.133. Given that this is the underlying principle of combustion in cement kilns (i.e. combustion at extreme temperatures), this response seems reasonable and would be consistent with the material presented in Appendix A of submission no. 3 (Assessment of possible impact of increased alternative fuels on emissions of a rotary cement kiln) based on data from the German cement industry.

8.3.134. Further, as stated previously, ash arising from alternative fuels/raw materials would comprise a very small proportion of cement (c.1%). Significant health effects arising from the inclusion of ash in cement products would therefore seem unlikely.

Impact on Air Traffic

8.3.135. NEAEG raised concerns regarding the effects of the development on air traffic (i.e. emissions to air affecting pilots). However, I note that Irish Aviation Authority was consulted in respect of the application and made no objections to it.

Impact of Emissions to air from Increase in Road Traffic

8.3.136. Parties raised concerns regarding the impact of increased road traffic on air quality. This matter is addressed in section 8.2.5 of the EIAR following TII guidelines. These recommend that an air quality assessment be completed on road links where a greater than 5% change in flow is predicted to occur during operation.

8.3.137. In this instance, the applicant predicts an increase in daily trips from current maximum output levels of 71 vehicles/day (142 movements) to 109 vehicles/day (218 movements), Table 12.4 and 12.8, EIAR. Whilst the predicted increase appears quite large traffic flows on the R152 between the Cement Works and the M1 are substantial with a daily two-way traffic flow of 10,887 (section 12.5.2.5 EIAR).

The predicted increase in traffic flows (i.e. 76 vehicle movements/day) therefore comprises an increase of only 0.7% of the daily flow of traffic and 2% of peak hour flows. Having regard to these modest increases, I would accept that an air quality assessment is not required (i.e. by definition, impacts will not be significant).

Traffic

8.3.138. Submissions raised concerns regarding the impact of the development on the existing road network, notably roads and junctions in the vicinity of the site, and villages in the area (in particular, Duleek and to a lesser extent Donore and Julianstown). Parties argued that traffic should be required to use the Duleek exit of the M1 to access the site, that the development should not be permitted until the Duleek by-pass is in place and/or that the development should contribute to the delivery of the by-pass (e.g. by way of contribution). Some submissions argued that additional footpaths be put in place alongside the plant and in the vicinity of the site and others commented on the lack of use of the railway to transport fuels/materials.

8.3.139. The planning authority raised concerns regarding the substantial increase in daily trips over an extended weekly period, the limited capacity of the junction of the L5613 and R152 (and the possible need for a turning lane), the very high volumes of traffic already experienced by the village of Duleek and the need to restrict additional HGVs through the village. They recommend conditions to be attached to any grant of permission to address these matters (see section 6.2 above of this report).

Increased Traffic on the Surrounding Road Network (including Duleek Village and Julianstown)

8.3.140. Access to the application site is proposed via the L5613, a local road off the R152. The R152 itself is a regional road that runs between the N2 National Road at Kilmoon Cross and Drogheda. It bypasses the town of Duleek and has an interchange with the M1 (junction 8) northeast of the cement works.

8.3.141. Section 12.5.2 of the EIAR adopts a conservative approach and assumes that all traffic for the proposed development will arrive and depart from the M1 (i.e. maximum concentration) and that for maximum output the development will give rise to 109 vehicles movements a day or 218 vehicle trips (80 alternative fuel deliveries, 6 petcoke deliveries and 23 LGVs, Table 12.8 of EIAR) compared to the current existing maximum output of 71 vehicle movement/day or 142 vehicle trips (16

alternative fuel deliveries, 40 petcoke deliveries and 15 LGVs) i.e. an increase of 76 vehicle trips per day. (The predicted number of trips are based on a 330 working days in a year). Having regard to the substantial daily two-way traffic flows on the R152, between the cement works and the M1 (10,887 – see section 12.3.4 EIAR), the applicant states that the proposed development will have no material impact on traffic flows on the road (increase in traffic is 0.7%). Similarly, impacts on peak hour flows are not considered to be significant (2% increase in flows). I would accept therefore the findings of the assessment that the development would result in a relatively small increase in vehicles using the local road network and, as indicated in the EIAR, do not trigger a requirement for further assessment.

8.3.142. In practice, the applicant acknowledges that haul routes to the site are likely to be more varied with the applicant's submissions (nos. 2 and 9 to the hearing) indicating possible sources of fuels in the north, west and south of the country. This would have the effect of dispersing the traffic over a wider area, reducing the impact of the development on any particular stretch of the road network.

8.3.143. During the oral hearing parties repeatedly raised local concerns regarding traffic on this wider road network, notably:

(i) The already significant volume of HGVs travelling through the village of Duleek and the serious environmental and amenity impacts of this (e.g. noise from vehicles at Council meetings held in buildings in the village, congestion in the town as lorries are unable to pass each other),

(ii) The demand for a bypass for the village or the exclusion of further heavy vehicles from it (i.e. it had reached saturation point), and

(iii) The risk of vehicles not using the M1 toll, but exiting at junction 7 and routing through Julianstown.

8.3.144. My own inspection of Duleek village would support the arguments put forward by members of the public and elected members. The village suffers from the visual effects of heavy through traffic (e.g. condition of road and buildings, litter, poor environmental quality arising from noise/proximity to large vehicles). Similarly, Julianstown is heavily trafficked and suffers environmentally. Effects on Donore are less evident.

8.3.145. In submission no. 9 to the oral hearing, the applicant estimates (conservatively), based on the likely location of alternative fuels, that if 30% of the traffic associated with the development was to travel from the N3 (north) via Duleek village, this would equate to 23 vehicles per day (I understand this to be 46 vehicle movements/day). The applicant also argues that this number of vehicle trips represents a very small proportion of the significant volume traffic passing through the village (traffic counts set out in Appendix 1, submission no. 9 indicate 10,700 vehicles through the village/day). With regard to traffic leaving the M1 short of junction 8, the applicant stated that commercial agreements are entered into with hauliers which require the use of junction 8 of the M1 to access the site.

8.3.146. Meath County Development Plan 2013-2019 refers to the important need to provide a new bypass to Duleek removing the existing R150 from the town centre and reducing the high level of traffic, including HGVs that pass through the town centre causing many negative impacts on it. The plan states 'government funds have been allocated towards the route selection and costing and it is anticipated that work should be pursued during the lifetime of the current Meath County Development Plan 2013-2019'. I understand from the information presented by the planning authority at the oral hearing is that work has been carried out on route selection, but further work needs to be carried out and that currently, the project is not included in any funding programme

8.3.147. Given the relatively small traffic flows associated with the development and the longstanding nature of the need for a by-pass (as acknowledged by Meath County Council and elected representatives at the oral hearing), I do not consider reasonable that the application be refused until the by-pass is in place, or that the applicant be required to contribute to it. However, I do consider that it is important to manage traffic flows through the village, such that additional vehicle trips are minimised and, given the lack of certainty of haul routes, subject to on-going scrutiny.

8.3.148. In their report to the Board, Meath County Council recommended the applicant be required to provide details of source material, haul routes and records of deliveries (their condition no. 15). At the oral hearing, the applicant proposed revised wording which would require, on an annual basis, submission of an Outline Management Plan for the Delivery of Alternative Fuels and of Alternative Raw

Materials, to include a review of the previous year's deliveries to the, source of materials for the coming year, anticipated traffic volumes and proposed haul routes. I consider that this in an acceptable way forward and would allow the planning authority to monitor traffic arising from the development (as it migrates over to alternative fuels), to control haul routes including use of the M1 motorway/junction 8 to access the site, to strictly limit traffic through Duleek, Julianstown and other villages and to ensure that the development transparently remains within the bounds of the permission granted. In this respect, I would accept the planning authority's view that any permission granted should restrict the number of maximum daily trips to the volume set out in the EIAR, in order to control maximum traffic flows, for example, in the event that fuels were delivered over a shorter period (Table 12.8).

Junction of the R152/L5613

8.3.149. Submission no. 9 to the oral hearing includes traffic counts of turning movements at the junction of the R152/L5613 (submission no. 9, Table 2 and Appendix 2). It indicates that the proposed development will have little impact on the capacity of, or queues at, the junction and this reflects the dispersed nature of predicted vehicles flows across the 24-hour day. I would accept, therefore, that the applicant has demonstrated there is no requirement to substantially upgrade this junction.

Local Road L5613

8.3.150. This local road provides vehicular access to the application site. Table 3 of submission no. 9 sets out anticipated daily traffic flows on this road (based on historical traffic count data and the projected increase in traffic) and the volume predicted to arise from the proposed development. It is evident from this that the HGV traffic currently using this stretch of road to access the Platin Cement site accounts for c.34% of HGV traffic. With the proposed development, HGV traffic arising from the Platin Cement site will comprise 42% of HGV traffic on this section of the road.

8.3.151. Meath County Council propose, in their condition no. 14, a contribution towards the repair and strengthening of this road of €250,000. The applicant argued in the oral hearing (in submission no. 9) that the contribution should be reduced pro-

rata to reflect the number of non-Irish cement related HGVs that use the road i.e. to €162,500.

8.3.152. Elected representatives at the oral hearing stated that the contribution should be increased due to the impact of the proposed development on the surrounding road network and part of it allocated to fund some of the design stage of the Duleek by-pass. Another third party disagreed with this approach and considered that the applicant should not be required to contribute to the upkeep of the public roads, as this responsibility fell to the local authority.

8.3.153. At the oral hearing MCC stated that the full cost of road upgrading works, would be c.€360,000 comprising:

- Resurfacing of the local road from rom the railway bridge to third entrance to the Platin site (c.600m), some edge strengthening and local widening (bridge to first entrance) = €260,00,
- Some improvements to the junction itself (additional kerbing to stop parking, drainage and signage) = c.€100,000.

8.3.154. Further, MCC indicated that the proposed figure of €250,000 was based on 70% of the overall cost of the upgrading work.

8.3.155. The short section of the L5613 carries a large volume of traffic. In the interest of traffic safety, it is important that this road is maintained in condition. Recognising both the absolute number of vehicle trips predicted to be arise as a consequence of the development, i.e. 60 additional HGV movements/day, the proportionate increase in HGV traffic accessing the Platin site from the L5613 (43%) and the applicant's stated willingness to contribute towards the upkeep of the road, I consider that it is reasonable that the applicant contributes €154,000 towards the cost of maintaining this road (i.e. c.43% of the estimated cost of the upgrading work).

Delivery Times

8.3.156. Submissions argue that delivery times to the proposed development be restricted to 0700 – 1800 hours in the interest of amenity.

8.3.157. I note, in page 6 of submission no. 9, that deliveries of existing alternative fuels take places throughout the 24-hour day and over 330 days of the year (the

vertical scale would seem to be incorrect and possibly be reduced by a factor of 10 e.g. with 3 vehicles arriving at midnight, not 30).

8.3.158. I do accept that this constant schedule of deliveries has the potential to affect the amenity of nearby residents e.g. noise emanating from the plant, noise and traffic movements on local roads. However, as stated previously the application site is removed from centres of population, residential development in the immediate vicinity of it (i.e. less than 250m) is limited to 10 residential properties. Further, only a small number of these are situated alongside the R152 (the remainder lie on local roads which will not be affected by traffic accessing the cement plant, see Figure 4.2, EIAR). In addition to the above, relatively low levels of traffic movements are predicted relative to flows on the surrounding road network, haul routes can be further controlled by condition (as proposed above) and noise levels (at the plant) are controlled in the applicant's Industrial Emissions Licence. In view of these factors, I do not consider that the schedule of deliveries will significantly impact on the amenity of property in the vicinity of the site, or that it is necessary to limit delivery times.

8.3.159. (I note, and accept, that for the construction and operational phases of the development no traffic routes are expected to experience increases of more than 25% in total traffic flows, consequently no detailed assessment of noise impacts is required (DMRB Guidelines – Annex 1, Volume 11, Section 3, Part 7) due to the absence of likely impact).

Road Junctions

8.3.160. Parties to the appeal refer to the safety of the junction of the R152 and Julianstown Road and the need to widen the L161111-15 Breamore junction before the commencement of development. However, as stated above, the proposed development will give rise to a relatively small increase in traffic movements in the surrounding road network (well below the TII's threshold for traffic and transport assessment, *Traffic and Transport Assessment Guidelines, 2014*) and, therefore, impacts on junctions in the vicinity of the site are also likely to be very modest.

Provision of Footpaths

8.3.161. Submissions argue that the applicant should provide footpaths along the frontage of the site (i.e. extending the existing footpath from the Indaver plant) and connecting the R152 to Donore.

8.3.162. The proposed development comprises the replacement of existing fuels and raw materials with alternative ones. It does not propose any increase in cement production, consequently, as argued by the applicant, there will be no need for greater accessibility or connectivity to the site (e.g. by employees) than currently exists. Further, the existing plant at Platin is long established and the proposed development comprises a relatively modest alteration to the scale and form of the development (e.g. additional structures or traffic movements arising) and I consider that such a condition is not necessary for the development to proceed and may be considered unreasonable. Further, the land required for the provision of a footpath lies outside of the site boundary and there is no information on file to indicate whether this lies within the control of the applicant.

8.3.163. I do not accept that there should be any provision, or contribution to the cost of providing, footpaths from the R152 to Donore village as traffic from the development will not use this route and will have little effect on it.

Pavement Condition Surveys

8.3.164. Meath County Council propose, in their draft schedule of conditions, that the applicant complete before and after surveys of the condition of the local road network (condition no. 17).

8.3.165. In submission no. 9 to the hearing, the applicant indicated the area that would be included in the survey work and proposed in three phases, coinciding with the main phases of the development (page 19/20). This approach was acceptable to the planning authority and seems reasonable.

Rail

8.3.166. Submissions argue that the applicant makes no use of the rail network to transport alternative fuels and raw materials to the site.

8.3.167. Whilst I accept that the use of rail is potentially a more sustainable transport mode, having regard to the need for ‘just in time’ fuel deliveries and the dispersed nature of likely fuel supplies, the rail network is unlikely to provide for the operational

requirements of the plant. Further, the use of road transport for the importation of goods is established in the existing permission for the cement plant and the applicant has demonstrated that the proposed development will not result in any significant impacts on the road network. Within this context, I consider that it would be unreasonable for the Board to pursue a rail option for the transport of alternative fuels/materials.

Waste Handling/Storage

8.3.168. Submissions raised concerns regarding:

- The absence of criteria for the acceptance of waste,
- Procedures to be followed in the event of a consignment of unacceptable waste arriving e.g. provision of a quarantine area, similar to that provided at a landfill site/waste treatment facility, and
- The public and environmental risks arising from the stockpiling of tyres, the handling and storage of hazardous wastes and the transport of materials on the public road (e.g. toxic spillage).

8.3.169. The matter of waste handling/storage was addressed by the applicant in submission no. 3 to the hearing (section 3.1). I draw the Board's attention to the following key points:

- A Standard Operating Procedure is in place for the delivery, receiving and handling of alternative fuels (SRF), with the procedure reviewed by the EPA in site audits.
- ICL only contract with suppliers licenced or permitted by the EPA or a local authority to produce SRF as a ready to use fuel.
- The fuel arrives pre-prepared to a required specification and no further processing of materials/fuels takes place at the plant.
- All deliveries are scheduled in advance, and are only permitted to arrive on site in sealed, covered containers.
- Each delivery is made by an approved driver, who is issued with a unique identification card, which must be presented prior to entry to the works.

- Vehicle and driver details, and supplier information, are recorded in an automated delivery acceptance system.
- In the event of non-compliance, a delivery would be immediately returned to the supplier and no further waste would be accepted until a report dealing with the cause of non-compliance and corrective actions had been submitted. Thereafter, a more onerous sampling and testing requirement would be required. Details of non-conforming loads would also be reported to the EPA.

8.3.170. It was emphasised in this submission and in the oral hearing by Mr Gilmore that a key objective is to avoid having to reject any deliveries to the plant. Consequently, the applicant works very closely with suppliers to ensure that materials are made to specification. He also stated that materials are subject to a visual assessment on arrival and once accepted undergo quality sampling analysis to ensure compliance with specification (e.g. moisture, calorific content and chemical composition). To date it was reported that no deliveries had been rejected by the plant and returned to the supplier.

8.3.171. The proposed development differs significantly from a landfill site and a waste treatment facility in that it will only accept processed waste that has been treated by a licenced contractor to meet very specific requirements. In effect the applicant is buying a defined product. Having regard to this significant difference, the procedures in place for the acceptance of alternative fuels, the close relationship the applicant has with suppliers and the business imperative for ensuring that alternative fuels meet industry specific requirements, I consider that the arrangements for waste handling are acceptable or that a quarantine area is not required.

8.3.172. Risks associated with the handling and storing hazardous materials are considered elsewhere in this report under different environmental headings (e.g. water) and are considered to be acceptable.

8.3.173. The health and safety of employees (and the public) arising from the day to day practices for the handling and storage of alternative fuels and their transport on the public road network (and materials) fall outside of the planning system and is covered by Health and Safety Legislation.

Water

8.3.174. A number of parties raised concerns regarding the impact of the development on the aquifer underlying the site and Donore Reservoir (to the north west of the application site and north east of Donore village). In their report to the Board, MCC sought clarification on the means to manage surface water on the site and protect local watercourses.

Surface Water

8.3.175. Section 7 of the EIAR deals with water and hydrology and drawing no. P018-003-0510-02-00 (Surface Water Drainage Routes) submitted at the oral hearing (submission no. 4a), indicates existing and proposed arrangements for surface water drainage. Submission no. 5 also responds to the matters raised by third parties.

8.3.176. It is evident from the EIAR, the above drawing and site inspection, that the application site comprises mostly hardstanding, with surface water collected (together with treated process water from the cement works and groundwater from the adjoining quarry), and directed via the on-site drainage system through oil interceptors, settlement ponds (with absorbent booms,) for piped discharge to the River Nanny. The discharge point lies to the south of the R150, some 2.6km to the south east of the site (see Figure 1, Appendix 5.1, EIAR) and the discharge is licenced by the EPA (IE Licence No. P0030-04). The latest Annual Environment Report 2016 indicates compliance with all emission limit values for surface water monitoring points. The volume of water being discharged comprises mostly pumped groundwater from the adjoining quarry (c.81.9%) with the remainder comprising surface and process water (c.18%) and treated wastewater (0.1%).

8.3.177. Water quality in the River Nanny, above and below the discharge point, has varied between 1991 and 2014 between Q3 and Q4 i.e. between 'poor' and 'moderate' status. An ecological and sediment study of the River Nanny (Appendix 5.1, EIAR), found that macroinvertebrate communities, biological water quality and sediment characteristics in the River Nanny are not significantly different upstream and downstream of the Irish Cement outfall and organic compounds and heavy metals were not present in the sample of the discharge at a level considered to be harmful to the aquatic environment. The report concluded that the discharge was having a neutral effect on the ecology of local areas of the River Nanny.

8.3.178. The proposed development comprises the switch to alternative fuels/raw materials. No processing will be carried out on site. The main risks to water therefore arise from construction activities e.g. increase in sedimentation and risk of oils spills etc. (section 7.4.2, EIAR). At operation, no new emissions to surface water are proposed, however, there will be a slightly greater roof area, arising from the proposed structures, and, in the event of fire, a risk of contamination of surface water e.g. spills or by fire water (section 7.4.3, EIAR).

8.3.179. Having regard to the location of the proposed development within the existing footprint of the Cement Works at Platin, the modest nature of the proposed structures, standard measures to mitigate impacts during construction, (set out in section 7.5.1 of the EIAR), I do not foresee any substantial risks to water quality during construction of the proposed development. Proposals to store fuels in appropriate structures (with associated bunding), to upgrade the surface water system and provide fire water retention tanks (which themselves are subject to Building Control Regulations) would also be adequate to control additional surface water arising during operation and the risk of pollution in the event of a fire.

8.3.180. Having regard to the above, I do not consider that the proposed development will give rise to any significant impacts on surface water quality.

Groundwater

8.3.181. The aquifer underlying the application site has been classified by GSI as a Regionally Important Aquifer (karstified) of 'high' vulnerability and 'extreme' to the east and west (Figure 6.5, submission no. 4b to the oral hearing). Dewatering of the adjoining quarry has been taking place since 2000, causing a cone of depression, and a number of groundwater monitoring boreholes (and monitored private wells) are in place (Figure 6.8b, submission no. 4b). Monitoring of groundwater quality is required under Licence No. P0030-04 and, as stated above, the Annual Environmental Report indicates compliance with emission limit values. Appendix 6.1 of the EIAR also provides data on groundwater quality monitoring between 2000 and 2016. It also indicates generally high levels of compliance for all parameters, with the exception of potassium and chloride. There is no explanation regarding the observed levels, however they are a matter for the EPA. Further, and notwithstanding this, the proposed development, if granted permission, will take

place on a site that is substantially developed, where surface water is already actively managed and where infiltration to groundwater is, therefore, limited. The construction of the proposed structures, may in the short term give rise to the risk of pollution of surface water, and hence, via infiltration, to groundwater (see Figure 6.12, submission no. 4b). However, having regard to the relatively small footprint of construction activities and the proposed standard means to manage surface water (section 6.6.1.2 and 6.6.2.1 of the EIAR), any impacts on the underlying groundwater are unlikely to be significant.

Bio-diversity

8.3.182. Submissions argue that:

- The Appropriate Assessment does not take into account toxic emissions from the atmosphere,
- The applicant should provide a carbon sink for the development on its own lands or other mechanisms for carbon capture, and
- A biodiversity plan for the site should be required to offset the increase in traffic emissions.

8.3.183. The proposed development is situated on an existing industrial site. It hosts no habitats or features of ecological value (section 5.3.9, EIAR) and no sites of ecological value are present within 2.5km of the site (Figures 5.2 and 5.4, EIAR). No direct impacts on biodiversity are likely, therefore, as a consequence of the construction or operational phases of the development (e.g. by way of land take, disturbance from noise, dust etc.)

8.3.184. Indirect effects arise potentially from emissions to air and water, connecting the application site to sites of nature conservation interest downstream (emission to water) or at distance from it (emissions to air). These impacts are considered in detail in section 8.5 (Appropriate Assessment) of this report and it is concluded that by virtue (a) the proposed means to prevent pollution arising at source during construction and to prevent contaminated surface water leaving the site during construction and operation, and (b) due to the very modest impacts on air quality predicted during the operation of the plant, indirect impacts on sites of nature conservation interest, downstream or at distance from it are unlikely.

8.3.185. The Appropriate Assessment does not, by definition, deal with sites of nature conservation interest which do not comprise part of the Natura 2000 network. In this regard, I note that no other designated sites of conservation interest (e.g. pNHAs) lie downstream of the proposed development. Further, the conclusions raised in respect of emissions to air in the Appropriate Assessment for European sites are equally valid for other sites of nature conservation interest in the vicinity of the site (Figure 5.4, EIAR). Having regard to these points, I consider, therefore, that the effect of potentially toxic emissions to atmosphere on biodiversity have been considered.

8.3.186. The purpose of the proposed development is to facilitate alternative fuels/raw materials in order to reduce the use of fossil fuels. In doing so carbon dioxide emissions are substantially reduced. Within this context I do not consider that other measures are required to bring about further reductions in emissions which are not directly related to the development before the Board (e.g. carbon sink to offset CO_2 emissions arising from the production of clinker).

8.3.187. Whilst I would accept that emissions from the transport of alternative fuels to the site will increase, the limited application site in practice provides little opportunity for substantial planting to offset these. However, I would also note that there is a relatively small increase in vehicle movements (76/day) compared to the reduction in CO_2 emissions (314,000 tonnes/annum).

Impact on heritage/tourism

8.3.188. A number of parties refer the Board to the location of the proposed development in the Boyne valley region (with its rich heritage and destination for tourists), and its proximity to the Brù na Boinne World Heritage Site. The Department of Culture, Heritage and the Gaeltacht raise concerns on the visual impact of the development on Brù na Boinne and of air pollutants accelerating natural weathering of pre-historic artwork. At the oral hearing parties referred to the negative impact of traffic on the tourism potential of Duleek.

8.3.189. The proposed development takes place within the existing Cement Works site at Platin. The proposed structures, are all subordinate in scale to the existing substantial structures on site. Whilst, in some views, they may add to the intensity of

the development (see applicant's photomontages in Appendix 10 of the EIAR), the visual effects of the development, outside of the site, are very limited.

8.3.190. With regard to Brù na Boinne, the WHS lies to the north of the River Boyne and is separated from the plant by undulating topography. Consequently, in existing views from Newgrange, Dowth and Knowth only the tallest structures on the site are visible in some views (see photomontages, Appendix 10.1). The proposed structures, all of which are smaller than the substantial structures which already exist on site will not be demonstrably visible from WHS, as demonstrated in Figures 5, 6 and 7 of the Appendix 10.2, or detract from the visual amenity of the Site. In my assessment I concluded that emissions to air are very modest. In my opinion, therefore, there is no further substantive evidence to suggest that any consequential impacts on pre-historic art work, by virtue of weathering, are likely to be significant.

8.3.191. With regard to tourism, again the proposed development is situated within the confines of the existing Cement Plant and will not add significantly to its visual impact. I would accept that traffic arising from it has the potential to cause a level of dis-amenity on the local road network. However, given the relatively small increase in traffic predicted on the local road network, I do not consider that the effects on amenity and environmental quality will be significant to substantially detract from the tourism resource or potential of the area. (As discussed above, I do accept that additional traffic through Duleek would further detract from the amenity of the village).

Impact on Amenity and Property Values

8.3.192. A number of submission refer to the effect the development will have on the amenity of the area (e.g. from plant and traffic noise, dust, litter on local roads), with consequences for local house prices.

8.3.193. As discussed previously the site is removed from centres of population and residential development and within the immediate proximity of the site is limited to 10 residential properties (with the nearest at c.250m from the development site), with a small number of these along the R152. A further 29 residential properties lie within 0.5km and 1.0km of the site boundary, with most removed from routes that will be traversed by vehicles accessing the site.

8.3.194. The proposed development comprises the progressive switch to alternative fuels and raw materials. Potential impacts arise therefore from the predicted increase in traffic (going to and from the site), noise associated with this and the operation of the plant and concerns regarding emissions to air.

8.3.195. These matters have largely been discussed above. As stated the proposed development gives rise to a very modest increase in traffic on the local road network, in the context of already substantial flows in the area and will not significantly impact on prevailing conditions. Further, if the Board are minded to grant permission for the development, conditions are proposed below to strictly manage additional traffic flows on the local road network and to avoid routing traffic through villages.

8.3.196. With regard to noise arising from the plant and vehicle movements on site, I note that the current IE licence imposes noise controls and the applicant has indicated that future activity on the site will remain within these EPA controlled limits.

8.3.197. Finally, as stated above, it is my view that the particular nature of the proposed development, which provides for combustion at extremely high temperatures, will not give rise to significant emissions to air or to public health effects. Having regard to these conclusions, I do not consider that the proposed development will significantly detract for the amenity of the area or property values.

Cumulative Effects

8.3.198. In submissions parties argue that the assessment of cumulative effects has been absent or inadequate, in particular in respect of emissions to air, traffic and water. These matters have been addressed in other sections of this assessment. I have also addressed the matter in my environmental impact assessment below. In general, I am satisfied that the applicant has adequately consider the cumulative effects of the development on the environment and that no significant cumulative effects will arise.

Monitoring/Engaging with the Community

8.3.199. Parties expressed concerns regarding monitoring of the proposed development[6]. Given the issues raised in the application (e.g. health effects, uncertainty regarding waste type to be used), they called for:

- Independent monitoring,
- Baseline information on ambient air quality and continuous ambient air quality monitoring,
- A mechanism to identify what alternative fuels being used at any given time,
- 24-hour monitoring of emissions to air and water, and
- Live information on data monitoring, available to the public.
- Compliance with emission limits.

8.3.200. In particular, parties drew the Board's attention to the absence of monitoring in the area by the EPA and their frustration regarding this. There was a specific request that the EPA open a regional office in the area to protect the environment and to re-assure the community in this regard. Parties also suggested that an independent monitoring fund be set up to help create community confidence in monitoring.

8.3.201. In practice, arrangements for monitoring are prescribed by the EPA under the terms of the IE Licence approved for the cement works and therefore fall outside of the remit of the Board (as does any decision by the EPA for a regional office). Current requirements for monitoring are set out in section 3.4 of submission no. 3 and these are comprehensive, including monitoring of emissions to air, water and

[6] Reference was also made in section 3.11, submission no. 14 to the oral hearing, to Ambient Air Quality Directive (2008/50/EC) with the third party arguing that the public could require the competent authority to draw up an action plan to improve air quality, where there is a risk of limit values being exceeded. The Directive seeks to improve ambient air quality in the EU and includes requirements for Member States to draw up air quality plans in zones where air quality exceed defined standards and action plans indicating measures to address exceedances. In this State responsibility for the implementation of the Directive lies with the EPA and it is not directly relevant to the application in front of the Board.

noise and dust at different frequencies, dependent on the parameter being measured. For example, the IE licence requires continuous monitoring of SO_2, NO_x, particulates, HCl, HF, TOC, CO in 10 licenced emission points. Dioxins and furans are monitored by spot sampling on a biannual basis. (This approach is consistent with the frequency of monitoring of these pollutants set out in the Commissions 2013 BAT decision).

8.3.202. I would accept, therefore, that comprehensive monitoring is carried out by the applicant (i.e. it is not independent), it is submitted to and scrutinised by the EPA, with reports available to the public on the EPA website.

8.3.203. With regard to information on background air quality and on-going monitoring of air quality, this is a matter of substantial public interest. Responsibility for air monitoring in the State falls to the EPA, with air quality monitored at a number of different geographical locations ((http://www.epa.ie/air/quality/data) and reported on annually by the EPA.

8.3.204. Whilst air quality has been monitored in the past in Drogheda (Drogheda North) and at Kiltrough and Navan, there is currently no EPA air quality monitoring facility in either County Louth or County Meath. Further, the EPA's National Ambient Air Quality Monitoring Programme, 2017-2022, proposes a substantial increase in air monitoring locations in the State, to strengthen the capacity and capability to provide more comprehensive and localised air quality information. It includes a facility in Drogheda, however, there is no timescale for the implementation of this programme.

8.3.205. Having regard to the nature of the proposed development, and its proximity to the Indaver plant and other industrial development in the Drogheda area, I would accept that, in the interest of transparency and community confidence, there is a need for ambient air quality monitoring in the vicinity of the site and the wider area. Whilst this properly falls within the remit of the EPA I have considered recommending a condition requiring the applicant to provide ambient air quality monitoring in the vicinity of the site, for the duration of the development or until a facility is put in place by the EPA. However, I am mindful that section 37G of the Planning and Development Act, 2000 (as amended) precludes the Board from imposing conditions which are for the purpose of controlling emissions from the operation of any development requiring an emissions licence from the EPA, and

such a condition may be considered to be *ultra vires.* However, the Board may wish to give consideration to this option.

Community Engagement

8.3.206. Parties argue that there should be on-going community liaison between the applicant and the local community, about operational issues, incidents or unexpected emissions so that the community can have confidence in what is going on at the site.

8.3.207. As discussed above, the existing plant is, and the proposed development will be highly regulated by the EPA under the terms of the applicant's Industrial Emissions Licence. This licence will be reviewed as a consequence of the proposed development and, if considered appropriate by the EPA, a revised licence will be issue in respect of it. Operation of the plant in accordance with the terms of the licence would be indicated in the monitoring data submitted to the EPA and in inspections carried out by it.

8.3.208. Whilst substantial information is available, therefore, on the operation of the plant, including incidents occurring, this information is technical and complex and, from a land land-use planning perspective, there would be benefit in establishing a Community Liaison Officer who would be responsible for liaison with the applicant, to facilitate the exchange information and address community concerns about the operation of the plant, within their community. This matter could be addressed by condition.

Compliance with Emission Limits

8.3.209. In one of the submissions made, it was stated that different coloured smoke is emitted from the plant at the weekends (i.e. black at weekends, white during the week).

8.3.210. In response, the applicant stated (submission no. 3), that the plant operates on a 24/7/365 basis, with environmental performance regulated by the EPA on the same basis i.e. 24/7/365 and that any changes to the characteristics of emissions was likely to be due to climatic conditions.

8.3.211. Having regard to the continuous monitoring required for most stack emissions (referred to above), and licence requirements for emission limits (typically 24-hour mean) it would appear that any exceedances of emission limits would be readily

identifiable in monitoring data submitted to the EPA. Further, the Annual Environmental Report submitted to the EPA for 2016 (and previous reports) shows a high level of compliance with emission limits.

Duration of Permission

8.3.212. Submissions in respect of the development argue that the 10-year duration of permission is excessive, given the rapidly changing nature of the waste industry (including technology) and given public concerns regarding the health effects of air emissions.

8.3.213. The applicant is seeking a 10-year permission for the build out of the proposed development, but permission in perpetuity for the use of alternative fuels and raw materials. Within this context, I would accept the applicant's view that (a) the modelling carried out for the Regional Waste Management Plan uses a timescale to 2030 for the provision of a national thermal recovery capacity of 300,000 tonnes per annum (page 171), (b) the EC Communication document (Role of Waste to Energy in the Circular Economy) recommends a 'long term perspective' when assessing the capacity for the treatment of non-recyclable household waste, and (c) the increasing use of residual fuel in cement plants in Europe.

8.3.214. However, I am equally mindful of current policy guidance to prevent over-supply of waste infrastructure, and policy objectives to increase rates of re-use and recycling, and in the longer term, with the move to a Circular Economy, to reduce the generation of waste in the first instance.

8.3.215. As indicated previously in this report, I consider that there is clear evidence of a need for in-country infrastructure, at least in the short term, to enable the State to treat key streams of residual waste locally. Therefore, I consider that the proposed development be subject to a temporary permission and that a duration of 12 years be permitted to coincide with the timescale of the modelling exercise carried out for the EMRWMP ant that supports the policies of the plan. Build out of the development could be permitted over a shorter timescale than proposed i.e. 7 years. This would allow the applicant with a reasonable timescale for the progressive additional of alternative fuels to the plant. However, it would also allow the appropriateness of the use of these fuels to be reviewed, in the context of evolving

policy, technology, waste arising for use as alternative fuels and environmental compliance, in the foreseeable future.

Community Fund

8.3.216. A number of parties argued that the applicant should be required to contribute to a community fund (e.g. as per the Indaver and Knockharley Landfill developments) to support facilities or services in the area that would benefit the community. Others argued that it would be inappropriate, acting as a 'bribe' to communities.

8.3.217. Under section 37G(7)(d) of the Planning and Development Act, 2000 (as amended), the Board may attach a community gain condition requiring the construction or financing (in whole or part) of the construction of a facility or provision of a service in the area of the development, if they were of the view that it would constitute a substantial gain to the community. Historically the Board has attached such conditions to waste disposal facilities (e.g. Knockharley landfill, PL17.125891, Carranstown waste to energy facility, PL17.126307, Ringsend waste to energy facility (PL29S.EF2022).

8.3.218. In this instance, the development comprises alterations to an existing development, with a relatively modest increase in traffic arising as a consequence of it. Key issues of public concern have included emissions to air and the need for independent background air quality monitoring. Whilst I have accepted that the development is unlikely to give rise to significant emissions to air, I have also accepted that this is a legitimate public concern. However, air quality monitoring properly falls within the remit of the EPA.

Adequacy of EIAR

8.3.219. Submissions argue that the EIAR is flawed in that it does not take into account the health of people in the area and the material already burnt at the adjoining Indaver Plant.

8.3.220. The EIAR has examined the effect of emissions to air on human health and cumulative effects with the Indaver development. I have examined these matters and the adequacy of the EIAR in the Environmental Impact Assessment of this report (Section 8.4) and I do not consider it to be flawed or inadequate.

8.4. Environmental Impact Assessment

8.4.1. This section of the report comprises an environmental impact assessment of the proposed development. Many of the matters considered have already been addressed in the Planning Assessment above. This section of the report should therefore be read, where necessary, in conjunction with relevant sections of the Planning Assessment.

8.4.2. The application for the proposed development was made to the Board after the 16th May 2017 and the provisions of the EIA Directive as amended by Directive 2014/52/EU apply. The Directive has not, however, been transposed into Irish legislation to date. In accordance with the advice on administrative provisions in advance of transposition, contained in Circular letter PL 1/2017, it is proposed to apply the requirements of Directive 2014/52/EU.

Environmental Impact Assessment Report

8.4.3. The application for the proposed development is accompanied by an environmental impact assessment report. It:

- Describes the project and provides information on the site, design, size and particular features of the proposed development,
- Describes the likely significant effects of the project on the environment
- Describes the features of the project and/or measures envisaged to avoid, prevent, reduce, and if possible, remedy significant impacts,
- Provides a description of the main alternatives studied, as discussed in section 8.3 above of this report, and an indication of the main reasons for the choice of alternative put forward, taking into account environmental effects, and
- Includes a non-technical summary of the above information.

8.4.4. With regard to the effects of the project on the environment arising from its vulnerability to risks of major accidents and/or disasters (Annex IV, section 8), this matter is not directly addressed in the EIAR. However, I do not consider that the

proposed development is particularly vulnerable to natural disaster (e.g. the site is not vulnerable to flooding and is not situated in an earthquake zone etc.), triggering the requirement for additional information under Article 5(1)(f). Further, Appendix 3.2 of the EIAR does set out Emergency Response Procedures to cover any incident or disaster which may occur at the Cement Works, with the potential to impact on the environment, for example setting out appropriate responses in the event a fire, spill of flammable or environmentally harmful material etc.

8.4.5. Section 1.9 of the EIAR sets out the competencies of experts who prepared the Report and in each of the applicant's submissions to the oral hearing, again, professional competencies are summarised. Competencies are reasonable and consistent with the technical requirements of the EIAR.

8.4.6. Having regard to the above, and to my conclusions below in respect of the technical information presented, I am satisfied that the EIAR complies with article 94 of the Planning and Development Regulations, 2000, as amended and the provisions of Article 5 of the EIA Directive 2014.

Examination of the EIAR and Supplementary Information

8.4.7. In accordance with the requirements under Article 3(1)(a) to (e) of the EIA Directive, my assessment of the environmental effects of the development is set out below under the following headings. It is based on my examination of the information provided by the applicant, including the EIAR, and the additional material presented at the oral hearing, and the submissions made in the course of the application and at the oral hearing by the planning authority, prescribed bodies and observers. (A summary of the results of submissions made have been set out in section 6 of this report).

- Population and human health,
- Biodiversity with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC,
- Land, soil, water, air and climate,
- Material assets, cultural heritage and landscape,
- The interaction of the above.

Population and Human Health

8.4.8. I have considered all of the written and oral submissions made in relation to population and human health, in addition to those specifically identified in Chapter 4 and 5 of the EIAR (and in other related Chapters).

8.4.9. Positive impacts on population and human health potentially arise from employment associated with the cement works (direct and indirect) that will be maintained or created as a consequence of the development. Negative effects potentially arise as a consequence of emissions to air (including noise, dust, odour); increase in road traffic; vermin associated with the use of alternative fuels/raw materials and the risk of contamination of water. There is also the vulnerability of the project to risks of major accidents/disasters.

8.4.10. Chapter 8 of the EIAR deals with emissions to air and Chapter 9 with noise (and vibration). The proposed development lies within an existing substantial industrial site and is reasonably removed from nearby sensitive receptors (= or >250m). Further, construction works are relatively modest and will take place over three distinct phases. Standard industry practices are proposed to prevent dust, noise and vibration impacts during construction. These are set out in section 6.6, 8.5 and 9.5 of the EIAR. In addition, the applicant has stated that construction works would comply with the limit values for noise, vibration and dust set out in the existing Industrial Emissions licence. Having regard to these factors, the proposed development is unlikely to give rise to significant emissions to air during construction.

8.4.11. For the operational phase of the development, as discussed in section 8.3 above, having regard to the applicant's generally comprehensive and conservative assessment of likely emissions arising from the proposed development, the predicted modest increases, if any, in emissions to air from kilns, coolers and cement mills, the findings of the human health risk assessment carried out and the history of compliance with the existing Industrial Emissions licence (IE no. P0030-04), I have accepted that the proposed development is unlikely to give rise to any significant effects on air quality to the detriment of human health. Further, any operation of the facility will be subject to a revised Industrial Emissions licence and strict regime of

monitoring to ensure compliance. Fugitive dust emissions during operation are also not likely to be significant given the nature of the proposed development, including the absence of processing of alternative fuels/raw materials; their transport and housing in enclosed buildings/structures and subsequent direct feed into the kiln/manufacturing process. (In this regard, I note that dust monitoring at site boundaries is already required under the existing Industrial Emissions licence, with a standard limit of 350mg/m^2/day. Any new licence is likely to require on going dust monitoring within a specified limit value, that has regard to nearby sensitive receptors).

8.4.12. For the operation of the proposed development, I note that the existing Industrial Emissions Licence (Register No. P0030-04) sets noise limits at the nearest sensitive receptors to the facility (55dB(A)LAeq (30 minutes) day time and 45dB(A)LAeq (30 minutes) night time), with a tolerance factor of 2dBA, and requires monitoring at three noise sensitive locations (Figure 9.1). Noise monitoring (which would include all noise sources) indicates that the development has operated in compliance with upper limits of these emission limit values and the applicant states that the proposed development will operate within the same controls.

8.4.13. With regard to odour, alternative raw materials/fuels will be prepared off-site to required specification, will be enclosed in delivery vehicles, delivered primarily for just in time use, will be handled in purpose-designed structures and fed directly into the kiln/manufacturing process. I do not consider therefore that any significant odour issue will arise. The EIAR states that a vermin/vector control management plan will apply to the construction and operation of the proposed development, and I would accept, therefore that subject to implementation of this measure (section 4.1.4.4 of the EIAR), on-site vermin/vectors will be managed to acceptable levels.

8.4.14. Chapter 12 of the EIAR deals with traffic and transportation. During construction, 76 trips per day are predicted for the construction phase of the development (section 12.5.1.5, EIAR). Whilst this number, of itself is quite high i.e. almost equalling the total number of existing vehicle trips/day (Table, 12.4, EIAR), trip generation is very modest relative to existing traffic flows on the R152. Further, sensitive receptors are generally removed from site (typically >250m from it) and from the proposed works entrance (entrance C, Figure 3.4, EIAR). In section 12.6 of the EIAR (Mitigation Measures), the applicant proposes a Construction Traffic Strategy and a

Construction Traffic Management Plan, to be agreed with the planning authority, to manage construction traffic, hours of work and to provide a mobility management plan for the construction workforce. Subject to compliance with this mitigation measure, the impact of construction traffic on population is unlikely to be significant, and will occur over the short term (in three distinct phases).

8.4.15. For the operation of the plant, as discussed in section 8.3 above, I have accepted that the proposed development will give rise to substantial traffic movements to and from the site. However, the predicted additional vehicle movements again comprise only a small proportion of existing traffic flows on the public road network and, consequently, I would consider that, subject to compliance with conditions (a) limiting the maximum number of daily trips to those predicted in the EIAR, and (b) controlling haul routes for the delivery of alternative fuels and raw materials, including minimising HGV movements through the villages of Duleek, Donore and Julianstown, no significant impacts are likely to arise as a result of this increase on the road network, including junctions in the vicinity of the site.

8.4.16. As additional traffic movements are very modest compared to existing flows, indirect impacts arising from increased air pollution and noise, do not trigger guideline requirements for air quality impact assessment or noise impact assessment (sections 8.2.5 and 9.4.3, EIAR), and are unlikely to be significant.

8.4.17. Chapter 7 of the EIAR deals with impacts on water. Potential impacts on water quality arise during construction works and, to a lesser extent, during operation of the proposed development. All construction works will be carried out within the catchment of the existing site drainage system which incorporates balancing and settlement ponds (to remove suspended solids) and oil interceptors and absorbent booms (to remove hydrocarbons etc.) and construction works will be subject to standard measures to prevent pollution of waters (to include a Construction and Environmental Management Plan and an Emergency Response Plan). For the operation of the development, the proposed structures for alternative fuels/raw materials will give rise to additional rainwater runoff which will be directed into the upgraded drainage system and Firewater Retention Tanks and/bunded facilities will allow for retention of contaminated surface water, if required. Further, discharge to the River Nanny will be controlled and monitored under the terms of a revised Industrial Emissions licence (if approved). Having regard to these measures,

significant impacts on water quality (surface or ground), and consequentially on human health, are unlikely.

8.4.18. With regard to the vulnerability of the project to risks of major accidents/disasters, I have stated that I do not consider that the proposed development is particularly vulnerable to natural disaster. Consequently, I do not consider that the proposed development poses a substantial risk to population or human health in this regard.

8.4.19. Having regard to the matters discussed above, I am satisfied that impacts that are predicted to arise in respect of **population and human health** can be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am satisfied, therefore, that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on population or human health.

Biodiversity

8.4.20. I have considered all of the written and oral submissions made in relation to biodiversity, in addition to those specifically identified in Chapter 5 of the EIAR. (Impact of the proposed development on European sites is also considered in the appropriate assessment below).

8.4.21. The proposed development is situated within an existing industrial site. The site, and its immediate surroundings, therefore do not comprise any habitats or species of conservation interest. However, construction and operational phases of the development have the potential to impact on downstream sites of nature conservation interest (including European sites), due to emissions to water, and those within a wider geographical area of it, by virtue of emissions to air.

8.4.22. However, having regard to:

- The absence of any adverse effect of the existing surface water outfall from the cement works on water quality in the River Nanny,
- The means to control emissions to the water environment, during construction and operation, including the measures set out in sections 5.5, 6.6 and 7.5 of the EIAR (e.g. preparation of a Construction Management Plan, Firewater Protection Plan, Emergency Response Procedures and good housekeeping practices in respect of the use and storage of potential pollutants),

- The conclusions of the air modelling exercise, which I consider to be generally robust and conservative,
- The very modest changes to air quality predicted (including cumulative effects), as a consequence of the development, and
- The statutory requirement to obtain an Industrial Emission licence for the operation of the facility, which will set out emission limits in respect of water and air, and the requirement to monitor emissions to ensure compliance with limit values,

8.4.23. I am satisfied that potential impacts that are predicted to arise in respect of **biodiversity** could be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am, therefore, satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on biodiversity.

Land, Soils, Water, Air and Climate

8.4.24. I have considered all of the written and oral submissions made in relation to land, soils, water, air and climate, in addition to those specifically identified in Chapters 6, 7 and 8 of the EIAR.

8.4.25. The proposed development takes place within an existing industrial site and has a small land take. Impacts on **land**, soil and geology by virtue of land take and the limited extent of structures (including foundations), are therefore likely to be minor. Waste soils arising will be used as fill on site and where not suitable, e.g. found to be contaminated, will be transported off site for disposal or recovery at an appropriate licenced/permitted facility.

8.4.26. Potential impacts on surface and ground **water**, during construction and operation, have been considered in the Planning Assessment and under Population and Human Health above. For the reasons stated I have concluded that significant impacts on surface and groundwater are unlikely to arise.

8.4.27. It is stated that as a consequence of the proposed development savings of c.314,000 tonnes of CO_2 per annum resulting in a positive effect on **climate**, and this environmental benefit is acknowledged.

8.4.28. Likely emissions to **air** have been considered in the Planning Assessment and again above (under impacts on human health and biodiversity). For the reasons stated I have concluded that significant emissions to air (by way of noise, vibration and dust) during construction are unlikely to arise.

8.4.29. For the operation of the plant, the use of alternative fuels and raw materials will give rise to emissions to air for range of parameters (Table 8.5, EIAR). As stated previously, the proposed development comes forward within a highly regulated environment. Any permission granted by the Board will be subject to an Industrial Emissions Licence which will control emissions to air for prescribed parameters. Further, the licence is required to have regard to the Commission's decision on Best Available Techniques for the industry. Within this context, I have accepted that, in principle, the applicant has demonstrated that emissions to air from the use of alternative fuels are likely to be very modest, well within likely Emission Limit values and, therefore, unlikely to have an adverse effect on air quality or human health.

8.4.30. As stated above, no significant impacts are likely to arise for the operation of the plant in respect of noise or fugitive dust.

8.4.31. Having regard to the above, I am satisfied that potential impacts that are predicted to arise in respect of **land, soils, water, air and climate** would be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am, therefore, satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts on land, soils, water, air and climate.

Material assets, cultural heritage and landscape

8.4.32. Impacts on material assets, cultural heritage and landscape are dealt with in the following chapters of the EIAR, Traffic and Transportation – Chapter 12; Material Assets – Utilities, Chapter 13; Waste Management, Chapter 14; Cultural Heritage, Chapter 11 and Landscape, Chapter 10. I have considered all of the written and oral submissions made in relation to these matters in addition to those specifically identified in each Chapter of the EIAR. A number of the matters discussed have also been addressed in the Planning Assessment and Population and Human Health section of this report, above.

8.4.33. **Traffic and Transportation.** As stated previously, during construction and operation of the proposed development, proposed vehicle movements, whilst comprising a substantial increase over existing levels, are very modest relative to existing traffic flows on the public road network in the vicinity of the site, notably the R152. Further, the applicant proposes, at construction stage, measures to manage construction traffic (section 12.6, EIAR, Mitigation Measures) and conditions have been recommended by the planning authority to ensure that the condition of the public road is not adversely affected by the development. Subject to compliance with these measures, the impact of construction traffic is unlikely to be significant.

8.4.34. For the operation of the plant, given the relatively modest impact the proposed development would have on traffic flows on the public road network, I have concluded that, subject to compliance with conditions (a) limiting the maximum number of daily trips to those predicted in the EIAR, and (b) controlling haul routes for the delivery of alternative fuels and raw materials, including minimising HGV movements through the villages of Duleek, Donore and Julianstown, no significant impacts are likely to arise as a result of this increase on the road network, including junctions in the vicinity of the site.

8.4.35. **Material Assets – Utilities.** Potential impacts on electrical services, water supply, foul drainage, ownership and access and non-renewable resources are considered in the EIAR. The proposed development will take place within an existing serviced site, with no requirement for additional electrical or utility infrastructure, connection to the public water supply or foul drainage and no implications for ownership or access to the site. (As a mitigation measure, all utilities and services located in the vicinity of the construction site will be identified and protected during construction works, section 13.5, EIAR).

8.4.36. During construction stage, natural resources (building materials, diesel etc.) will be consumed. However, during operation the use of alternative fuels and raw materials would have a positive impact replacing 120,000 tonnes per annum of imported fossil fuel, reducing CO_2 emissions by up to 314,000 tonnes per annum; enabling the recovery of materials that would otherwise go to landfill or waste export and offsetting the requirement for 120,000 tonnes per annum of non-renewable raw materials. The proposed development would therefore, on balance, have a positive impact on material assets.

8.4.37. **Waste Management.** Construction of the proposed development will give rise to a small volume of waste e.g. from the demolition of a Firewater tank (to be replaced) and integration of the development into existing structures. Section 14.6 of the EIAR sets out measures to mitigate significant impacts arising this phase of the development, including preparation of a Construction Waste Management Plan which will maximise re-use of materials and ensure that any off site facilities to which residual waste is delivered, are appropriately permitted/licenced. Subject to these controls, no significant effects are likely to arise during construction.

8.4.38. For the operation of the plant, use of alternative fuels/raw materials would replace the use of fossil fuels or other natural resources in the cement production process, and provide facilities within the State to provide for the use of residual and hazardous waste. Mitigation measures set out in section 14.6.2 of the EIAR seek to minimise any significant impacts arising from the use of alternative fuels/raw materials, notably including appropriate storage of fuels/materials; visual inspection and sampling of all alternative fuels/materials; regular testing of composite samples; rejection of non-conforming loads and additional testing regimes for further deliveries from the same supplier. Again, subject to these controls no significant effects are likely to arise during operation.

8.4.39. **Cultural Heritage**. The proposed development takes place within an existing industrial site and there are no items of cultural heritage interest within the site or near it that would be directly, or indirectly affected by it. Potential impacts on Brù na Boinne are addressed in Planning Assessment above. By virtue of the distance of the proposed development from Brù na Boinne and the lack of visibility of proposed structures from the World Heritage site, no adverse impacts are likely to arise. Similarly, given the very modest predicted changes to air quality, physical impacts on the monument (by virtue of air pollution) are unlikely to arise.

8.4.40. **Landscape and Visual.** The proposed development is situated within existing industrial site which is dominated by substantial structures. These structures are visible at distance within the immediate and wider area of the site (see photomontages and photographs). The proposed structures will be sub-ordinate in scale and form to the existing structures at the cement works and whilst adding to the visual complexity of the plant, will not substantially add to its visual impact. Indirect impacts on tourism and heritage are discussed above in section 8.3 and are

not considered to be significant, again, primarily given the subordinate nature of the proposed development to existing structures; the lack of visibility/impact from key tourist destinations and the relatively modest increase in traffic (compared to existing volume on the public road).

8.4.41. Having regard to the above, I am satisfied that potential impacts that are predicted to arise in respect of **material assets, cultural heritage and landscape** would be avoided, managed and mitigated by the measures which form part of the proposed development, the proposed mitigation measures and through suitable conditions. I am, therefore, satisfied that the proposed development mould not have any unacceptable direct, indirect or cumulative impacts on Material assets, cultural heritage and landscape.

Inter-relationship between Factors

8.4.42. I have considered all of the written and oral submissions made in relation to impacts on inter-relationship between factors, in addition to those specifically identified in Chapter 15 of the EIAR.

8.4.43. In my assessment of each environmental topic I have considered the likelihood of significant effects arising as a consequence of interrelationships between factors. Most interactions e.g. the risk of reduced water quality on human health, are addressed under individual topic headings. Given the generally modest impacts which are predicted to occur, having regard to the nature of the proposed development, mitigation measures or as a consequence of proposed conditions, I do not foresee any likelihood of any of these interrelationships giving rise to significant effects on the environment.

8.4.44. In conclusion, I am satisfied that there are no such effects and, therefore, nothing to prevent the granting of permission on the grounds of interaction between factors.

Reasoned Conclusions of Significant Effects

8.4.45. Having regard to the examination of the environmental information contained above, and in particular to the EIAR and supplementary information provided by the developer, and the submission from the planning authority, prescribed bodies and observers in the course of the application, including the submissions made to the oral hearing, it is considered that the main significant direct and indirect effects of the proposed development on the environment are as follows:

- **Emissions to air** – The proposed development gives rise to the risk of adverse emissions to air during operation arising from the use of alternative fuels and raw materials. However, significant effects will be avoided by the statutory requirement for the applicant to obtain and operate the proposed development in accordance with an Industrial Emissions licence, which will specify emission limits for all relevant parameters (any such licence which is granted by the EPA will also have regard to the European Commission's decision on Best Available Techniques applicable to the production of cement (2013/163/EU). Monitoring of compliance with emission limit values will fall to the EPA.
- **Traffic and transportation** – The proposed development gives rise to an increase in vehicle movements during construction and operation. Significant impacts on the public road network can be (a) mitigated by measures to manage construction traffic, set out in section 12.6 of the EIAR, and (b) avoided by condition controlling haul routes for delivery vehicles (alternative fuel/raw materials). The effectiveness of these measures can be monitored by condition.
- **Biodiversity** – The proposed development gives rise to the risk of adverse effects on downstream sites of nature conservation interest, via emissions to water, and those in the wider vicinity of the site, by virtue of emissions to air, during the construction and/or operational phase of the proposed development. However, significant effects can be (a) mitigated by measures set out in sections 5.5, 6.6 and 7.5 of the EIAR[7] to prevent the pollution of water bodies, and (b) the requirement to obtain and operate the proposed development in accordance with an Industrial Emission licence. The effectiveness of mitigation measures can be controlled by condition. Monitoring of compliance with emission limit values will fall to the EPA.

8.4.46. I am therefore satisfied that the proposed development would not have any unacceptable direct or indirect effects on the environment.

[7] Section 4.5 of the NIS also refers to mitigation measures, however, these re-iterate commitments set out in section 5.5 of the EIAR.

8.5. **Appropriate Assessment**

8.5.1. Article 6(3) of the Habitats Directive (Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora) requires that any plan or project not directly related to the management of a European site of nature conservation interest (i.e. a Special Area of Conservation or a Special Protection Area), but likely to have significant effect on it, individually or in combination with other plans and projects, shall be subject appropriate assessment, for its implications for the site. Further, it provides that the competent authority shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned.

8.5.2. The Habitats Directive has been transposed into Irish law by the Planning and Development Act 2000, as amended, and the European Union (Birds and Natural Habitats) Regulations 2011-2015.

8.5.3. Guidance on appropriate assessment is provided by the EU and the NPWS in the following documents:

- Assessment of plans and projects significantly affecting Natura 2000 sites - Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (EC, 2001).
- Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (DoEHLG, 2009)

8.5.4. Both documents provide guidance on screening for appropriate assessment and the process of appropriate assessment itself.

8.5.5. In this instance the applicant has submitted a Screening Report and a Natura Impact Statement and I refer to both of these documents in my assessment below, as well as information on relevant European sites that is available from the National Parks and Wildlife Service.

8.5.6. **Screening**

Description of the Proposed Development

8.5.7. The proposed development is described in detail in section 3 of this report. In essence, it comprises the construction of structures for the storage and handling of

alternative fuels/raw materials, the transport of these fuels/materials to the site and the use of these in the manufacture of cement. The development is situated within the existing cement works site and is regulated by and Industrial Emissions licence which controls emission from it, notably to air and water.

Natura 2000 Sites

8.5.8. The application site is removed from the network of European sites, with the nearest site c.3km to the north east of the site (see Figure 2, Screening for Appropriate Assessment). Using the source-pathway-receptor model, impacts of the development on the network of sites will, therefore, be indirect i.e. they will not arise as a result of land take or directly from construction (e.g. disturbance of adjoining habitats). Pathways linking the application site to European sites are therefore likely to be by air (e.g. emissions from kiln stacks and mills) or by water (e.g. contaminated surface water leaving the site and polluting downstream sites of nature conservation interest).

8.5.9. The applicant identifies six European sites within c.15km of the proposed development which may be affected by it (Figure 2, Screening Report). This geographical area seems reasonable given (a) the 20km geographical area used for the modelling of emissions to air (i.e. 10km in each direction from the application site), (b) the relatively modest impacts that are subsequently predicted for air quality in the modelling exercise, and (c) with the likelihood of further dispersion of effects over a greater geographical area.

8.5.10. The six European sites comprise three Special Areas of Conservation and three Special Protection areas. Qualifying interests are set out below:

- River Boyne and River Blackwater SAC (002299).
- Boyne Coast and Estuary SAC (001957).
- Clogher Head SAC (001459).
- Boyne Estuary SPA (004080).
- River Boyne and River Blackwater SPA (004232).
- River Nanny Shore Estuary SPA (004158).

European site (SAC/SPA)	Qualifying Interests (Conservation Objectives) *Priority Habitat	Distance to European Site
River Boyne and Blackwater SAC (002299)	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected: Alkaline fens [7230]; *Alluvial Forests with *Alnus glutinosa* and *Fraxinus excelsior (Alno padion, Alnion incanae, Salicion albae)* [91EO]; Salmon *Salmo salar* [1106], River Lamprey *Lampetra* fluviatilis [1099] Otter *Lutra lutra* [1355].	3 km to north west
Boyne Coast and Estuary SAC (001957)	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected: Estuaries [1130]; Mudflats and sandflats not covered by seawater at low tide [1140]; *Salicornia* and other annuals colonising mud and sand [1310); Atlantic salt meadows (*Glauco-Puccinellietalia maritimae)* [1330]; Embryonic shifting dunes [2110]; Shifting dunes along the shoreline with *Ammophilia arenaria* ('white dunes') [2120]; and *Fixed coastal dunes with herbaceous vegetation ('grey dunes') [2130].	7km to north east
Clogher Head SAC (001459).	Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]; European dry heaths [4030]	15.2km to the north east

River Boyne and Blackwater SPA (004232)	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interest for this SPA: Kingfisher *Alcedo atthis* [A229].	3km to the north west
Boyne Estuary SPA (004080)	To maintain the favourable conservation condition of species and habitats listed as Special Conservation Interest in the SPA: Shelduck *Tadorna* [A048]; Oystercatcher *Haematopus* ostralegus [A130]; Golden Plover *Pluvialis apricaria* [A140]; Grey Plover *Pluvialis squatarola* [A141]; Lapwing, *Vanellus vanellus* [A142]; Knot *Calidris canutus* [A143]; Sanderling *Calidris alba* [A144]; Black-tail Godwit *Limosa* [A156]; Redshank *Tringa tetanus* [A162]; Turnstone *Arenaria interpres* [A169]; Little Tern *Sterna albifrons* [A195]; and Wetlands [A999].	5.5km to the north east
River Nanny Estuary and Shore SPA (004158)	To maintain the favourable conservation condition of species and habitats listed as Special Conservation Interest in the SPA: Oystercatcher *Haematopus* ostralegus [A130]; Ringed Plover *Charadrius hiaticula* [A137]; Golden Plover *Pluvialis apricaria* [A140]; Knot *Calidris canutus* [A143]; Sanderling *Calidris alba* [A144]; Herring Gull [A184]; and Wetlands [A999]	8km to the east

Assessment of Likely Effects

8.5.11. The applicant's Screening Report identifies possible impacts on five of the above European sites based on the source-pathway-receptor approach. (Clogher Head SAC is screened out earlier in the report as it is considered to be outside the zone of influence of the development, by virtue of its location and qualifying interests). Direct effects, for example, of habitat loss, fragmentation, disturbance, noise etc. are ruled out on the grounds that the application site is substantially removed from all of the Natura 2000 sites in the area and this approach seems very reasonable given the distances involved. However, as stated above, emissions to air from the proposed development are identified as having a possible significant effect on the above sites and this conclusion seems reasonable, in the absence of further information and having regard to the nature of the development and likely environmental effects.

8.5.12. Only one European site, River Nanny Estuary and Shore SPA, lies downstream of the application site and emissions to water during construction and operation are also identified as having a possible significant effect on the qualifying interest of this site. Whilst the SPA is somewhat removed from the proposed development, the approach taken, to conclude that significant environmental effects are possible, reflects the requirement of guidance documents to take a conservative approach to appropriate assessment.

Screening Conclusion

8.5.13. On the basis of the information provided in respect of the nature of the proposed development, likely emissions from it and the location of Natura 2000 sites, downstream of it and in the wider vicinity of the application site, which may be affected by emissions to water and air respectively, I would therefore, concur with the conclusions drawn by the applicant, that there is a risk that the proposed development would have a significant effect on a European site and that a Natura Impact Assessment, and more detailed assessment of the likely effects of the development on the following six European sites is required:- River Boyne and River Blackwater SAC (002299); Boyne Coast and Estuary SAC (001957); Clogher Head SAC (001459); Boyne Estuary SPA (004080); River Boyne and River Blackwater SPA (004232); and River Nanny Shore Estuary SPA (004158).

8.5.14. Sites in the wider area (i.e. beyond 15km) can be screened out from further assessment having regard to the 20km geographical area used for modelling of air emissions (10km in each direct i.e. <15km from the site); the relatively modest air quality impacts that are subsequently predicted to arise in the modelling exercise within this distance of the proposed development, and (c) the likelihood of further dispersion of effects over a greater geographical area (i.e. >10km). It is therefore reasonable to conclude that on the basis of the information on the file, which I consider adequate in order to issue a screening determination, that the proposed development, individually or in combination with other plans or projects would not be likely to have a significant effect on any European Sites situated >15km from it, in view of the site(s) conservation objectives and a Stage 2 Appropriate Assessment is not therefore required for these sites.

8.5.15. **Appropriate Assessment**

Information Required

8.5.16. Subsequent to the screening exercise, the applicant has prepared a Natura Impact Statement which has had regard to the additional assessments carried out and presented in the Environmental Impact Assessment Report, notably in respect of emissions to air and water (Chapters 7 and 8). This further information, together with the information made available to the oral hearing, is used below to draw conclusions on the likely effects of the proposed development on the integrity of the European sites in the vicinity of the development.

Impact Prediction

8.5.17. **Emissions to water – Direct, indirect and in-combination effects.** Potential effects of the proposed development during construction are examined in section 4.3.1 of the Natura Impact Statement. Construction activities could result in the contamination of surface water runoff, for example, with suspended solids arising from ground disturbance and excavation; hydrocarbons from accidental spillages from plant/storage depots; faecal coliforms from inadequate treatment of on-site toilet and washing facilities; and concrete/cementitious products arising from construction materials. Whilst no direct effects would arise, if inadequately treated on-site, discharge off-site into the River Nanny could result indirectly, in the pollution

of downstream waters. In-combination effects could also arise if emissions added substantially to existing loadings from other sources.

8.5.18. Section 4.3.2 identifies potential emissions to water arising from the operation of the proposed development. As indicated, the proposed development will result in a series of new structures on site, within or around the existing footprint of development. The structures will add a total impermeable area of c.1.9ha to the existing impermeable area of c.17.5ha. Run off from the roofs of new structures (and the impermeable area) will be collected in a stormwater drain and connected to the overall surface water drainage system. Again, if inadequately treated, discharge off-site into the River Nanny could indirectly result in the pollution of downstream waters and potentially in-combination effects.

8.5.19. Accompanying the proposed structures for the storage, handling and transfer of alternative fuels and raw materials are eight firewater retention tanks and/or bunded facilities. These will provide for the retention of contaminated surface water in the event of a fire and a means to retain water until approved for release, treatment on site or off site, as required.

8.5.20. As the NIS states, that there is no additional water required to cater for the increased use of alternative fuels/raw materials on site and no additional domestic effluent or treated process discharges due to the proposed development.

8.5.21. The NIS also refers to a study by Ecofact in 2016 on water quality downstream of the discharge from the cement works which concludes that there is no evidence of any impact on biological water quality from the existing works (Appendix 5, NIS). I also note that the Cement Works has shown, in its Annual Environmental Reports, a high level of compliance with the emission limit value for the discharge point to the River Nanny (SW4).

8.5.22. **Emissions to air – direct, indirect and in-combination effects**. Emissions to air from the operation of the proposed development are considered in section 4.3.2.2 of the NIS. No specific direct or indirect impacts are identified which could adversely affect the conservation interests of European sites given the modest level predicted level of impacts and the absence of any impact on air quality standards. For in-combination impacts, the EIAR screened out the need for cumulative impact assessment for all potential pollutants, except NO_x. Increased nitrogen levels can

lead to eutrophication, causing the acidification of waterbodies (Atlantic Salmon are particularly sensitive to acidification) and increased levels of acidity is soils, with consequential effects on species richness and biodiversity in habitats, for example, stimulating the growth of nitrogen loving plants (*European Environment Agency, 2014. Effects of Air Pollution on European Ecosystems: Past and Future Exposure of European Freshwater and Terrestrial Habitats to Acidifying and Eutrophying Air Pollutants. EEA Technical Report No 11. EEA, Copenhagen)*.

Conservation Objectives

8.5.23. The conservation objectives of the six European sites lying within c.15km of the application site seek to maintain or restore the conservation objectives of identified habitats and species.

8.5.24. Conservation objectives for the River Nanny Estuary and Shore SPA, potentially affected by emissions to water, seek to maintain the conservation condition of six migratory bird species and the wetland habitat in the SPA, as a resource for the regularly occurring migratory waterbirds that utilise it. Significant impacts on water quality in the SPA have the potential to affect the quality of the wetland habitat, and consequently its ability to support waterbirds, for example, with suspended solids causing turbidity, preventing light penetration.

8.5.25. For the five Special Areas of Conservation and Special Protection Areas potentially affected by emissions to air, conservation objectives seek to protect specified habitats and species (see Table above). The NIS:

a. Refers to the risk posed to inland and surface water bodies by increased nitrogen deposition levels and to the habitats listed as qualifying interests of the River Boyne and River Blackwater SAC and Boyne Coast and Estuary SAC, in particular (section 4.3.2.2, NIS),

b. States that the species listed as Qualifying Interests in the River Boyne and River Blackwater SAC (Atlantic salmon, river lamprey and otter) are not considered to be sensitive to changes in nitrogen deposition levels, and

c. States that the Special Conservation Interests (species and habitats) listed in the SPAs within the zone of influence of the development (overwintering birds and wetland habitats in the case of the River Nanny Estuary and Shore SPA and the Boyne Estuary SPA, and kingfisher in the case of the River Boyne

and Blackwater SPA) are not considered to be in in anyway sensitive to changes in nitrogen deposition levels.

8.5.26. No further explanation is given, or specific scientific information, to support the above statements, made in the NIS. However:

(i) Having regard to the scientific information provided by the European Environment Agency (above), in respect of the potential impact on excessive nitrogen deposition on habitats and species, I therefore assume a worst case scenario, that all waterbodies referred to and all habitats would potentially be at risk from significant increases in nitrogen deposition levels, and

(ii) Having regard to the modest changes in air quality predicted as a consequence of the development, discussed below, I am nonetheless satisfied that the NIS does provide sufficient information to allow for appropriate assessment of the proposed development.

Mitigation Measures

8.5.27. **Emissions to water – direct, indirect and in-combination effects.** The River Nanny Estuary and Shore SPA lies c.8km to the east of the application site. Surface, process and water from the quarry floor (arising from the Cement works as whole) is discharged into River c.2.5km south of the Cement works. The discharge is regulated by an Industrial Emissions licence; and as stated, the plant has shown a high level of compliance with emission limits for the discharge; and the Ecofact study indicates no significant impacts on water quality downstream of the discharge point.

8.5.28. Included within the application for the proposed development are:

- Means to prevent pollution of surface water arising on site during construction (at source), section 5.5, 6.5 and 7.5, EIAR and section 4.5 of the NIS. Measures are typical of good construction practices and include the preparation of a Construction and Environmental Management Plan, Firewater Risk Assessment and Emergency Response Plan, and
- Means to prevent discharge of contaminated surface water during construction and operation via the on-site drainage system, which incorporates measures to remove suspended solids and hydrocarbons etc.

8.5.29. In addition, the proposed development will be subject to an Industrial Emissions licence which will establish an emission limit value for any discharge from the site to surface waters, and require long term monitoring to ensure compliance.

8.5.30. Having regard to these measures, and the distance of the SPA from the application site, based on the information presented, I consider that it would be reasonable to conclude that the proposed development would have no direct, indirect or cumulative impact on water quality in the River Nanny SPA.

8.5.31. **Emissions to air – direct, indirect and in-combination effects.** The applicant's modelling of likely emissions to air predicts, for the proposed development, very modest changes in ground level concentrations of pollutants from current rates and on-going compliance with air quality standards (Table 8.8, EIAR). As stated previously, I consider the findings of the air modelling exercise to be generally robust and conservative. Further, I consider therefore that it is reasonable to conclude that the air emissions arising from the proposed development would not directly or indirectly, adversely affect the conservation interests of the European sites in the vicinity of it.

8.5.32. Notwithstanding the above findings, the applicant carries out an assessment of likely nitrogen deposition levels arising from the plant and in-combination effects with the emissions arising from the Indaver plant to the south of the site (section 8.4.5, EIAR). Using the highest predicted annual concentration of NO_2, to occur at the River Boyne and Blackwater River SAC, predicted levels of NO_2 for emissions from the plant (0.06kgNha^{-1}yr) and cumulative emissions (0.08kgNha^{-1}yr) are significantly lower than that the UNECE critical load for nitrogen of 5-10kgNha^{-1}yr^{-1} for inland and surface water bodies (i.e. the load beyond which, nitrogen deposition would be damaging to ecosystems).

8.5.33. There is limited information on file to support the applicant's assessment of nitrogen deposition (e.g. location and range of predicted concentrations, how total values were calculated), however, given the very modest change in nitrogen emissions predicted (Table 8.8 of EIAR), the conclusions drawn do not seem unreasonable.

Having regard to the above, therefore I would consider that reasonable to conclude that the air emissions arising from the proposed development would not result directly, indirectly or cumulatively in any significant increase in nitrogen deposition in

the vicinity of the site, to adversely affect the conservation interests of the identified European sites (or other sites).

AA Conclusion

8.5.34. Having regard to the above, I consider it reasonable to conclude on the basis of the information on the file, which I consider adequate in order to carry out a Stage 2 Appropriate Assessment, that the proposed development, individually or in combination with other plans or projects would not adversely affect the integrity of the River Boyne and River Blackwater SAC (002299); Boyne Coast and Estuary SAC (001957); Clogher Head SAC (001459); Boyne Estuary SPA (004080); River Boyne and River Blackwater SPA (004232); or the River Nanny Shore Estuary SPA (004158), or any other European site in the vicinity of the site, in view of the site's Conservation Objectives.

9.0 Recommendation

9.1. On the basis of the above planning assessment, environmental impact assessment and appropriate assessment, I recommend that the Board approve the application for the proposed development for the reasons and considerations and subject to the conditions set out below.

10.0 Reasons and Considerations

Having regard to:

i. The written submissions made in respect of the application and the submissions made at the oral hearing,

ii. The established nature of the existing Cement Works on the application site (which include use of alternative fuels in the manufacture of cement), the detailed nature, scale and form of the development and its location relative to nearby sensitive receptors,

iii. Mitigation measures which are proposed for the construction and operation phases of the development,

iv. The European, national and regional policy context for the development notably provided by:

- Waste Framework Directive 2008/98EC;
- A Resource Opportunity – Waste Management Policy in Ireland, July 2012 (DECLG); and
- The Eastern-Midlands Region Waste Management Plan, 2015-2021,

v. The timescale over which forecasting in the Eastern-Midlands Region Waste Management Plan, 2015-2021 has been carried out,

vi. The provisions of the Meath County Development Plan 2013 – 2019,

vii. The requirement to obtain an Industrial Emissions Licence for the proposed development from the EPA, which itself will be subject to the

Commission's Implementing Decision establishing Best Available Techniques for the Production of Cement (2013/163/EU),

viii. The history of environmental compliance associated with the operation of the existing plant,

It is considered that, subject to compliance with the condition set out below, the proposed development would be in accordance with the provisions of the European and national waste policy framework, would not seriously injure the amenities of the area, would not be prejudicial to public health and would be acceptable in terms of traffic safety. The proposed development would, therefore be in accordance with the proper planning and sustainable development of the area.

Appropriate Assessment

The Board completed an Appropriate Assessment Screening exercise in relation to the potential effects of the proposed development on designated European Sites, taking into account the nature, scale and location of the proposed development and emissions arising from it, the Screening Report submitted with the application, the Inspector's report and submissions on file. The Board adopted the report of the Inspector and agreed with the screening assessment and conclusion carried out in the Inspector's report that (a) the River Boyne and River Blackwater SAC (002299); Boyne Coast and Estuary SAC (001957); Clogher Head SAC (001459); Boyne Estuary SPA (004080); River Boyne and River Blackwater SPA (004232); and River Nanny Shore Estuary SPA (004158), are the only European Sites in respect of which the proposed development has the potential to have a significant effect, and (b) By itself or in combination with other development in the vicinity, the proposed development would not be likely to have a significant effect on any other European site in view of the site's conservation objectives, and that a Stage 2 Appropriate Assessment is not, therefore, required for these.

The Board completed an Appropriate Assessment exercise in relation to the potential effects of the proposed development on the identified designated European Sites, taking into account the nature, scale and location of the proposed development and emissions arising from it. In completing the appropriate assessment, the Board adopted the report of the Inspector and concluded that, by itself or in combination with other development in the vicinity, the proposed development would not be likely

to have a significant effect on the integrity of the River Boyne and River Blackwater SAC (002299); Boyne Coast and Estuary SAC (001957); Clogher Head SAC (001459); Boyne Estuary SPA (004080); River Boyne and River Blackwater SPA (004232); or the River Nanny Shore Estuary SPA (004158), or any other European site in the vicinity of the site, in view of the site's Conservation Objectives.

Environmental Impact Assessment

The Board completed an environmental impact assessment of the proposed development, taking into account:

(a) the nature, scale and extent of the proposed development;

(b) the environmental impact assessment report and associated documentation submitted in support of the application;

(c) the submissions from the Planning Authority, the observers and the prescribed bodies in the course of the application and oral hearing; and

(d) the Inspector's report.

The Board considered that the environmental impact assessment report, supported by the documentation submitted by the applicant, adequately considers alternatives to the proposed development and identifies and describes adequately the direct, indirect, secondary and cumulative effects of the proposed development on the environment.

The Board agreed with the examination, set out in the Inspector's report, of the information contained in the environmental impact assessment report and associated documentation submitted by the applicant and submissions made in the course of the application.

The Board considered, and agreed with the Inspectors reasoned conclusions, that the main significant direct and indirect effects of the proposed development on the environment are, and will be mitigated, as follows:

- Emissions to air, arising from the operational phase of the development, will be avoided by the statutory requirement for the applicant to obtain and operate the proposed development in accordance with an Industrial Emissions licence, which will specify emission limits for all relevant parameters (any such licence which is granted by the EPA will also have

regard to the European Commission's decision on Best Available Techniques applicable to the production of cement (2013/163/EU). Monitoring of compliance with emission limit values will fall to the EPA.

- Significant impacts on the public road network can be (a) mitigated by measures to manage construction traffic, set out in section 12.6 of the EIAR, and (b) avoided by condition, controlling haul routes for delivery vehicles (alternative fuel/raw materials). The effectiveness of these measures can be monitored by condition.
- Impacts on biodiversity can be (a) mitigated by measures set out in sections 5.5, 6.6 and 7.5 of the EIAR to prevent the pollution of water bodies, and (b) avoided by the statutory requirement to obtain and operate the proposed development in accordance with an Industrial Emission licence. The effectiveness of mitigation measures can be controlled by condition. Monitoring of compliance with emission limit values will fall to the EPA.

The Board concluded that subject to the implementation of the mitigation measures referred to above, and other measures set out in the EIAR (sections 8.5; 9.5; 10.6; 12.6; 13.5; 14.6) and subject to compliance with the conditions set out herein, the effects on the environment of the proposed development by itself and in combination with other development in the vicinity would be acceptable. In doing so, the Board adopted the report and conclusions of the Inspector.

Conclusions on Proper Planning and Sustainable Development:

It is considered that, subject to compliance with the conditions set out below:

a. The proposed development is consistent with European, national, regional and local planning policy, notably the Eastern Midland Region Waste Management Plan which supports the principles of proximity and self-sufficiency in the management of waste in the State and, in Policies E15a, E15b and E16, the development of additional thermal capacity for the treatment of non-hazardous municipal waste, industrial process waste and hazardous waste, over the period of the Plan.

b. The proposed development is situated in an established industrial area, is reasonably removed from nearby sensitive receptors and will be

subject to an Industrial Emissions licence which will control emissions to air, fugitive dust, noise and water. The proposed development will not, therefore, have any significant adverse impact on the residential amenities of adjacent properties.

c. The proposed development comprises structures which are sub-ordinate in scale and form to the existing structures at the Cement Works site. The proposed development will not therefore give rise to significant visual or landscape effects or indirect effects on heritage and/or tourism.

d. Traffic arising from the development will result in a very modest increase in traffic on the local road network, relative to existing levels, and, subject to compliance with conditions in respect of the management of construction and operational traffic, would not be unacceptable, therefore, in terms of traffic safety.

The Board concluded that the proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

Conditions

1. The development shall be carried out and completed in accordance with the plans and particulars lodged with the application, except as may otherwise be required in order to comply with the following conditions. Where such conditions require details to be agreed with the planning authority, the developer shall agree such details in writing with the planning authority prior to commencement of development (which shall be made available for public inspection), or, in default of agreement, shall be referred to An Bord Pleanála for determination, and the development shall be carried out and completed in accordance with the agreed particulars.

Reason: In the interest of clarity.

2. The permission shall be for a period of 12 years, from the date of this order.

Reason: Having regard to the nature of the development; to allow consideration of any future changes in the national, regional and local policy in relation to waste and the availability of waste as an alternative fuel/raw material.

1. The period during which the development hereby permitted may be carried out shall be 7 years from the date of this order. Prior to the commencement of development, the developer shall submit to the planning authority for agreement a revised phasing plan for the build out of the development.

Reason: Having regard to the nature of the proposed development, the Board considered it appropriate to specify a period of validity of this permission in excess of five years.

1. Alternative fuels/raw materials to be used at the cement works over the duration of the permission shall not exceed 432,000 tonnes per annum, in total, as follows:

    (a) Residual Solid Recovered Fuel (sourced from Municipal Solid Waste) - 100,000 tonnes/annum (bringing the maximum allowable tonnage of SRF to 220,000 tonnes/annum).

    b) Hazardous waste – 17,000 tonnes/annum.

    (c) Other waste (as set out in Appendix 3.5 of the EIAR) – 75,000 tonnes/annum.

    (d) Alternative raw materials – 120,000 tonnes/annum.

Reason: In order to comply with the policies of the Eastern Midland Region Waste Management Plan 2015 – 2021.

2. Use of alternative fuels and raw materials shall be limited to the waste types listed in Appendix 3.5 of the EIAR and other relevant information.

Reason: In the interest of orderly development and the environment.

3. No unprocessed alternative fuels/raw materials shall be delivered to the cement works, and no further processing of alternative fuels/raw materials shall take place at the cement works.

Reason: In the interest of clarity and public health.

4. (i) Prior to the commencement of development, and annually thereafter, the applicant shall submit to the planning authority for written agreement, a

Management Plan for the Delivery of Alternative Fuels and Alternative Raw Materials to the site, to include:

a. Type and quantity of alternative fuels/raw materials to be used in the forthcoming year by type (SRF, hazardous waste, other waste and alternative raw materials) and by LOW code Source of material,

b. Anticipated traffic volumes and proposed haul routes for each source location.

c. Delivery dates,

d. Entry and exit times,

e. Vehicles weight,

f. Vehicle registration, and

g. After year 1, an annual report demonstrating compliance with the agreed Management Plan.

(ii) The number of daily trips shall not exceed the maximum daily trips presented in Table 12.8 of the EIAR, Volume 2, Main Report.

(iii) Haul routes shall minimise HGV movements through the village of Duleek, Donore and Julianstown.

Reason: To protect the public road network, to clarify the extent of the permission in the interest of traffic safety and orderly development and in the interest of the amenities of the area.

5. All environmental mitigation measures outlined in the Environmental Impact Assessment Report (as set out in 5.5; 6.6; 7.5; 8.5; 9.5; 10.6; 12.6; 13.5; 14.6), as amended by the additional information submitted at the Oral Hearing, shall be implemented in full. Compliance with, and effectiveness of mitigation measures, shall be demonstrated in an annual report of compliance to the Planning Authority, which shall be made available for public inspection.

Reason: In the interest of proper planning and sustainable development.

6. No substitution of alternative fuels/raw materials, forming part of this development, shall be carried out unless and until the necessary review of the

Industrial Emissions licence for the cement works has been completed or a new licence granted.

Reason: In the interest of orderly development, the environment and public health.

7. All alternative fuels/raw materials to be delivered to the cement works shall be delivered in sealed containers/covered vehicles as appropriate.

Reason: In the interest of public health and the amenities of the area.

11. Construction and demolition waste shall be managed in accordance with a construction waste and demolition management plan, which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. This plan shall be prepared in accordance with the "Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects", published by the Department of the Environment, Heritage and Local Government in July 2006.

Reason: In the interest of sustainable waste management.

12. The applicant shall maintain and make available for inspection a complaints register for the construction, operational and decommissioning stages of the development detailing the nature of complaint, investigations and remediation undertaken.

Reason: In the interest of amenity and orderly development.

13. The applicant shall appoint a Community Liaison Officer for all the stages of the development, who shall be the first point of contact for residents seeking information or making a complaint in respect of the development. The Community Liaison Officer shall be responsible for discharging information in relation on the project to residents.

Reason: In the interest of amenity and orderly development.

14. The applicant shall complete before and after surveys of the condition of the road network affected by the proposed development (as indicated Figure 5 of submission no. 9 to the oral hearing), before and after the principal construction Phases of the development (as amended by condition no. 3 of this permission). A proposal for these surveys, and for on-going monitoring,

shall be submitted to, and agreed in writing, with the planning authority prior to the commencement.

Reason: To protect the public road network and to clarify the extent of the permission in the interest of traffic safety and orderly development.

15. Prior to commencement of development, the developer shall lodge with the planning authority a cash deposit, a bond of an insurance company, or other security to secure the reinstatement of public roads which may be damaged by the transport of materials to the site (as indicated Figure 5 of submission no. 9 to the oral hearing), coupled with an agreement empowering the local authority to apply such security or part thereof to the satisfactory completion or maintenance of any part of the development. The form and amount of the security shall be as agreed between the planning authority and the developer or, in default of agreement, shall be referred to An Bord Pleanála for determination.

Reason: To ensure the satisfactory completion and maintenance of the development until taken in charge.

16. The developer shall pay the sum of €154,000 (one hundred and fifty-four thousand euro) (updated at the time of payment in accordance with changes in the Wholesale Price Index – Building and Construction (Capital Goods), published by the Central Statistics Office), to the planning authority as a special contribution under section 48 (2)(c) of the Planning and Development Act 2000, in respect of in respect of upgrading of the public road (L5613/R152), facilitating the proposed development. This contribution shall be paid prior to commencement of development or in such phased payments as the planning authority may facilitate. The application of indexation required by this condition shall be agreed between the planning authority and the developer or, in default of such agreement, the matter shall be referred to An Bord Pleanála to determine.

Reason: It is considered reasonable that the developer should contribute towards the specific exceptional costs which are incurred by the planning authority which are not covered in the Development Contribution Scheme and which will benefit the proposed development.

Deirdre MacGabhann
Senior Planning Inspector

25th January 2017