



Comhairle Cathrach
& Contae Luimnigh

Limerick City
& County Council

Comhairle Cathrach agus Contae Luimnigh,
Ceanncheathrú Chorpáraideach,
Cé na gCeannaithe,
Luimneach

Planning, Environment & Place-Making,
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Limerick

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18th January 2022

To: The Mayor and Each Member of Limerick City and County Council

Re: Aughinish Alumina Limited - Strategic Infrastructure Development Application to An Bord Pleanála

A Chomhairleoir, a chara,

I wish to advise Members of the Council that the proposed extension at Aughinish Alumina Ltd., Aughinish Island, Askeaton has been determined as a Strategic Infrastructure Development application by An Bord Pleanála.

The proposed extension consists of works to facilitate the expansion of the disposal capacity at the existing Bauxite Residue Disposal Area (BRDA) including:

- Increased storage capacity within the existing footprint of the BRDA;
- Increase the height of the Salt Cell Disposal Cell;
- Extension of the permitted Borrow Pit; and
- Upgrades to the water management infrastructure to accommodate the BRDA development

The strategic infrastructure provisions of the Planning and Development (Strategic Infrastructure) Act 2006 (the 2006 Act) came into effect on 31st January 2007. The Act, which amended the Planning and Development Act 2000 (the 2000 Act), provides generally for applications for permission/approval for specified private and public strategic infrastructure developments to be made directly to the Board.

Strategic Infrastructure Developments (mostly private developments) are those listed in the 7th Schedule to the 2000 Act as amended. These generally relate to major energy, transport, environmental and health infrastructure.

Definition of Strategic Infrastructure Development

The 7th Schedule to the 2000 Act (as amended) lists the classes of infrastructure development which, if considered by the Board to be strategic infrastructure development, require direct application for permission to the Board instead of the local planning authority. To qualify as strategic infrastructure development a proposed development must first come within the scope of one or more of the classes and comply with the thresholds contained in the 7th Schedule.

Secondly, the Board must come to the opinion that the proposed development would meet one or more of the following criteria:-

- is of strategic economic or social importance to the State or the region in which it would be situate,
- would contribute substantially to the fulfilment of any of the objectives of the National Planning Framework or in any regional spatial and economic strategy in respect of the area or areas in which the development would be situate,
- would have a significant effect on the area of more than one planning authority.

This opinion is formally given by the Board at the conclusion of the pre-application consultation stage following a request for closure of the consultations from the prospective applicant.

Aughinish Alumina Limited have been advised by An Bord Pleanála that the proposed development constitutes Strategic Infrastructure Development.

Planning Authority Report

There is a requirement for the Chief Executive of the planning authority for the area to prepare and submit a report to the Board within ten weeks of the receipt of the application by the Board. This provision applies to applications made under Section 37E of the Planning and Development Act, 2000, as amended.

The report will set out the views of the authority on the effects of the proposed development on the environment and/or the proper planning and sustainable development of the area of the authority having regard to the usual considerations as set out in section 34(2) of the 2000 Act, as amended.

This report must first be submitted to the elected members of the authority.

Accordingly, I attach herewith for the information of the Members, the Planning Report prepared in respect of the Aughinish Alumina Limited Strategic Infrastructure Development.

I hereby seek the views of the Members in respect of this report.

I confirm that any recommendations made by the Members by way of resolution shall be appended to the report sent to the Board along with the administration record of the meeting.

Is mise le meas,



Nuala Gallagher
Director of Service,
Planning Environment and Place Making

**PLANNING REPORT IN ACCORDANCE WITH
SECTION 37 E (4) OF THE PLANNING AND DEVELOPMENT
ACT 2000 (as amended).**

**Aughinish Alumina Ltd. Strategic Infrastructure Development to An
Bord Pleanála**

Planning Reference No. PL21213146

Re: The proposed development seeks permission for works to facilitate an expansion of the disposal capacity at the existing Bauxite Residue Disposal Area (BRDA) capacity at Aughinish Alumina Ltd. that will consist of the following:

The construction of rock fill embankments at the perimeter of the BRDA, offset internally and founded on the previously deposited and farmed bauxite residue, in 2 m high vertical lifts. The proposed development will result in the footprint of the BRDA decreasing as it increases in height. The proposed development will result in a c.12m increase in height (over that previously permitted under Limerick County Council Ref. 05/1836; An Bord Pleanála Ref. PL13.217976) to a maximum height of c.44m OD upon closure. The proposed expansion of the BRDA will provide for the deposition of an additional c. 8.0 million m³ bauxite residue over the lifetime of the development. The proposed development also provides for an expansion of the existing capacity of the Salt Cake Disposal Cell (SCDC), which is located within the BRDA through a vertical extension of the exiting perimeter wall and associated cell lining resulting in a c.2.25m crest height increase of the existing cell to c.31.25m OD and a maximum overall height of c.35.50m OD upon closure. The increase in capacity of the SCDC will provide for the storage of an additional c. 22,500 m³ of salt cake. Additional works include a c.3.9ha expansion of the permitted borrow pit (Limerick City and County Council Ref. 17/714; An Bord Pleanála Ref. ABP-301011- 18) to the east of the BRDA resulting in a total borrow pit area of c.8.4ha with a maximum depth of c. 8.5 m O.D and providing for an additional 380,000m³ of rockfill with blasting and crushing of rock to occur between April and September each year. Further works include upgrades to the water management infrastructure to accommodate the BRDA development; the continued use of a stockpile area for rock and top-soil storage to the south east of the BRDA; use of top-soil and rock materials for the landscaped restoration and closure of the BRDA (including SCDC); restoration of the extended borrow pit extraction area; lighting; spillway ramps (drainage channels); revised boundary treatments and ancillary associated works above and below ground. Aughinish Alumina Limited carries out an activity on the site requiring an Industrial Emissions Licence (Licence Reg. No. P0035-07). This application is accompanied by an Environmental Impact Assessment Report and Natura Impact Statement - <https://www.pleanala.ie/en-ie/case/312146>

At In the townlands of Aughinish East, Aughinish West, Island Mac Teige, Glenbane West, and Fawnamore at or adjacent to Aughinish Island, Askeaton, Co. Limerick.

1.0 Background

Under the provisions of Section 37B(4)(a) of the Planning & Development Act 2000 (as amended), by notice dated 01st April 2021, An Bord Pleanála (Ref PC91.308903) determined that,

“The Board has decided that the proposed development would be strategic infrastructure within the meaning of Section 37A of the Planning and Development Act, 2000, as amended. Any application for permission for the proposed development must therefore be made directly to An Bord Pleanála under Section 37E of the Act”

In compliance with Section 37(E)(1) of the Planning & Development Act 2000 (as amended), an application for permission for development in respect of which a notice has been served under section 37B(4)(a) shall be accompanied by an environmental impact statement in respect of the proposed development.

In compliance with Section 37E(4) of the Planning & Development Act 2000 (as amended), this report has been prepared and is presented to the members of Limerick City and County.

A briefing workshop was held on 11th January 2021 at 11.30am online to brief the Members of the Adare Rathkeale Electoral Area on the contents of the proposed development.

2.0 Description of existing and proposed development and site analysis:

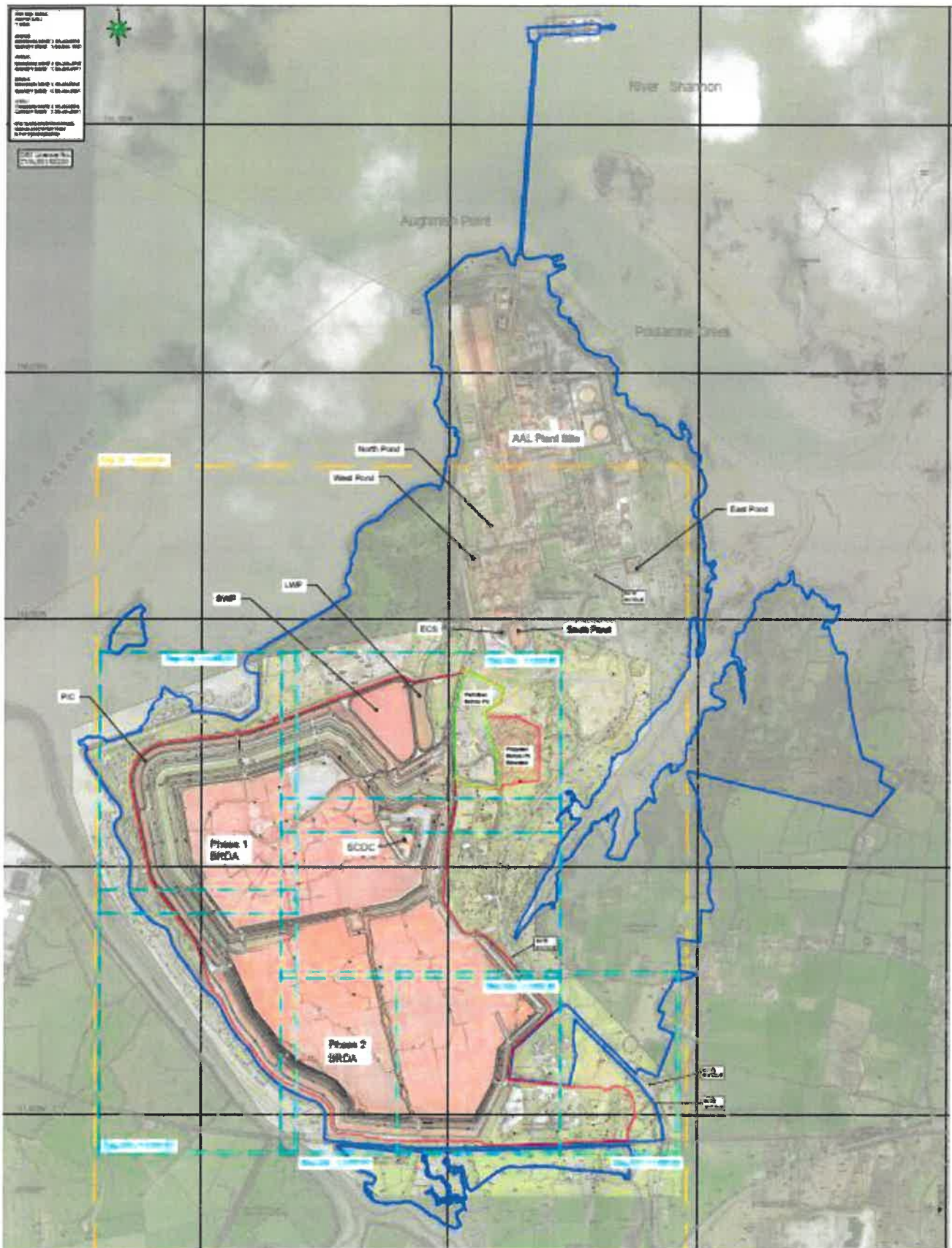
Aughinish Alumina Limited (the Applicant) has operated an alumina refinery on Aughinish Island since 1983. Aughinish Island is located on the southern side of the Shannon Estuary approximately 8 kilometres north west of Askeaton and c.33 kilometres west of Limerick City. The village of Foynes is located approximately 2 kilometres further west of the site. The Limerick Foynes railway line runs to the south of the island, as does the N69 National Secondary Route between Limerick and Foynes. The overall landholding is stated to be c.601 hectares. The current application relates to a stated site area of 222hectares.

The northern portion of the site accommodates the Aughinish Alumina Processing Plant. The lands to the south-west accommodate the Bauxite Residual Disposal Area (BRDA), which accommodates residual or leftover bauxite associated with the processing plant in the production of alumina. The BRDA is surrounded by retaining perimeter stack walls constructed of rock fill. As the bauxite is continually deposited on site these stack walls are raised systematically in 2 metre stages and stepped back from the outer perimeter with each additional stage. There is a storm water pond and liquid waste pond to the north-east of the existing BRDA. There is a borrow pit located towards the centre of the overall landholding. It comprises of largely disturbed ground with the southern section comprising the former borrow bit associated with the construction of the original plant. Surface water from the BDRA is collected into a lined Perimeter Interceptor Channel (PIC) and diverted to the Effluent Clarification System (ECS) or the Storm Water Pond (SWP), depending on water level. Excess water from the SWP and PIC is pumped to the ECS. A Liquid Waste Pond receives the treated water from the ECS and conditions this water (cooling and settling), from which there is either a controlled discharge to the River Shannon, sprinkled onto the BDRA during dry, windy weather or back to the SWP if the effluent doesn't meet its required standard.

The purpose of the proposed development is to facilitate an expansion of capacity within the existing disposal areas accommodating residues arising from the adjoining alumina refinery facility. The maximum production level permitted at the refinery plant is and will remain at c.1.95 million tonnes of alumina per annum. This represents 30% of the alumina produced in Europe. Proposed works also include an extension to the permitted borrow pit on the subject site providing for an additional 380,000m³ of rock fill material which is needed to satisfy the requirements of the construction and operation of the BRDA. Additional works include the use of portions of the site to accommodate rock and soil stockpiles and upgrades to the existing water infrastructure.

The site operates in accordance with the conditions of Industrial Emissions (IE) Licence issued by the EPA, IEL No. P0035-07.

Figure 1- Site Boundary



3.0 Policy Context:

This section sets out the key national, regional and local policy provisions that apply to the proposed development:

Project Ireland 2040- National Planning Framework

The Shannon Estuary Strategic Integrated Framework Plan (SIFP) is identified as a successful multi-agency collaboration that included Limerick City and County Council, Kerry County Council, Shannon Development and the Shannon Foynes Port Company as well as other key stakeholders with an interest in the Estuary.

Regional Economic and Spatial Strategy for the Southern Region

Aughinish Alumina (Aughinish Island is identified as Strategic Development Location F in the Shannon Estuary SIDP and therefore the development of the site is fully supported in the RSES.

Mid Western Area Strategic Plan 2012-2030

“Provide a framework to help decision making with regard to the physical and spatial development of the Region to 2030 and to promote balanced growth throughout the region to achieve the maximum social economic, health and cultural benefits for all its citizens”

Strategic Integrated Framework Plan for the Shannon Estuary

Strategic Development Location F: Aughinish Island

SIFP MRI 1.2.9:

Aughinish Alumina

To safeguard the role and function of Aughinish Alumina as a key driver of economic growth in the region, encouraging its sustainable growth, expansion and diversification to facilitate greater and more competitive trade potential.

SIFP MRI 1.2.10:

Aughinish Marine Related Industry

To support and facilitate the sustainable development of marine related industry on land within this Strategic Development Location, which harnesses the potential of the deep water, large hinterland and existing infrastructure. Other sustainable land uses may be acceptable where they are considered compatible or complementary with the level of flood risk, and where the ability to deliver the primary use (marine related industry) is not compromised. Development will be subject to compliance with the criteria set out in Objective SIFP MRI 1.2.”

Limerick County Development Plan 2010-2016, as extended

A. To ensure that economic development is located and of a form that does not have adverse environmental impacts: this is achieved through policy and development management standards and guidelines;

B. To protect and facilitate through land use zoning, service priorities, and critical interventions, the range of land uses and developments required to sustain and improve the economy in real terms.

Policy ED P1: Adequate provision of serviced and zoned lands

Ensure that adequate provision is made in terms of objectives and measures, to contribute in an effective way to employment targets within the County. This will include making sure there is adequate quantity and range of serviced and zoned lands in appropriate locations.

Policy ED P2: Hierarchy of employment centres in concordance with settlement strategy

Complement the aims of the settlement strategy and hierarchy in a mutually reinforcing and sustainable manner through a hierarchy of employment centres established at Regional, County, and local centres.

Policy ED P9: Facilitation of range of sites for industry

The Council shall facilitate and work pro-actively with development agencies to secure an adequate range of locations for both large scale and small-scale industrial development and for enterprise at key locations throughout the County in accordance with the settlement strategy.

Objective ED O5: Appropriate industrial development of Foynes and deep water facilities in the Shannon estuary

- a) It is the objective of the Council to ensure that the industrial zoned land in Foynes is safeguarded for the accommodation of port related uses and other industrial activities.
- b) Support the expansion of the Port at Foynes and promote the economic and industrial development of the Shannon Estuary as a strategic transport, energy and logistics Hub serving the County and wider region by utilising naturally occurring deep water characteristics and by identifying and safeguarding existing and future strategic transportation links, subject to fulfilling the requirements of the Habitats Directive and the conservation objectives of the Lower River Shannon SAC site.
- c) Support the consideration of new deep water berthage within the estuary to enhance the strategic economic function of the Port subject to compliance with the ecological objectives of the Lower River Shannon SAC site and other policies of the County Development Plan

Objective ED 04: Safeguard Strategic Development locations along the estuary

It is the objective of the Council to safeguard the Strategic Development Locations at Foynes Port, Foynes Island and Aughinish Island for the sustainable growth and development of marine related industry and industrial development at Askeaton.

All proposed developments shall be in accordance with regional and national priorities and the SEA Directive, Birds and Habitats Directive, Water Framework Directive, Shellfish Waters Directive, Floods Directive and EIA Directive.

Buffer zones shall be incorporated into proposals for developments where necessary to preserve potentially valuable habitats, for example, areas of estuary, shallow bays and inlets, mudflats, lagoon, salt marsh and woodland habitat which occur at or surrounding these Strategic Development Locations. The extent of such buffer distances shall be established in consultation with relevant statutory bodies. Detailed botanical, faunal and ornithological surveys should be undertaken in relation to proposed developments at these Strategic Development Locations to fully consider the potential effects of the development and inform how to best avoid significant ecological effects.”

Objective SE O2: Promoting Development

The Council will seek to promote the economic and industrial development of the Shannon estuary in order to capitalise on its location in the Mid West industrial and business region. Sufficient land will be zoned or identified for industrial and business use through the medium of Local Area Plans or zoning within this Plan including zonings in the Strategic Integrated Framework Plan for the Shannon Estuary.

Land are zoned for Marine Related Industry use in the land use zoning map for Aughinish Island as contained within the County Development Plan 2010-2016, as extended.

The land are zoned as 'Marine Related Industry' in the Development Plan. Objective ED 06 notes that the purpose of this zoning objective is as follows: "Land zoned for Marine Related Industry, shall provide for marine related industry and large scale uses that create a synergy with the marine use. Marine related industry shall be taken to include the use of land for industry that, by its nature, requires a location adjacent to estuarine/deep water including a dependency on marine transport, transshipment, bulk cargo or where the industrial process benefit from a location adjacent to the marine area." The AAL plant relies upon the Shannon Estuary for the import of raw materials and the export of alumina by ship, and is therefore consistent with this zoning objective. The proposed development will also assist in fulfilling the following Development Plan Objectives.

Draft Limerick Development Plan 2022-2028

Land are zoned for Marine Related Industry use in the land use zoning map for Aughinish Island as contained within the Draft Development Plan.

Objective ECON O42 Strategic Integrated Framework Plan

It is an objective of the Council to support and facilitate the Strategic Integrated Framework Plan for the Shannon Estuary.

Objective ECON O43 Safeguard Strategic Development locations along the Estuary.

It is an objective of the Council to safeguard the Strategic Development Locations at Foynes Port, Foynes Island and Aughinish Island for the sustainable growth and development of marine related industry and industrial development at Askeaton. All proposed developments shall be in accordance with regional and national priorities and the SEA Directive, Birds and Habitats Directive, Water Framework Directive, Shellfish Waters Directive, Floods Directive and EIA Directive. Buffer zones shall be incorporated into proposals for developments where necessary to preserve potentially valuable habitats, for example, areas of estuary, shallow bays and inlets, mudflats, lagoon, salt marsh and woodland habitat, which occur at or surrounding these Strategic Development Locations. The extent of such buffer distances shall be established in consultation with relevant statutory bodies. Detailed botanical, faunal and ornithological surveys should be undertaken in relation to proposed developments at these Strategic Development Locations, to fully consider the potential effects of the development and inform how to best avoid significant ecological effects.

4.0 Recent Planning History

20/1325: Permission granted for the provision of nature trail and upgrade of existing nature trail, construction of a car park comprising 29 no. car parking spaces, new vehicular access and associated landscaping and boundary treatment works. It is also sought to demolish existing derelict structures and a bird hide and construct a new bird hide in its place. A Natura Impact Statement(NIS) will be submitted to the planning authority with the application An Environmental Impact Statement (EIS) and Natura Impact Statement (NIS) accompanied this application)

17/714: Permission granted (ten year) for development on site of c. 7 hectares located adjoining the existing Aughinish Alumina Ltd plant for the provision of a Borrow Pit with an extraction area of c. 4.5 hectares to extract c. 374.000 m³ of rock over a 10 year period. The extraction area is sought up to a maximum depth of c. 8.5 m O.D., with extraction to occur between April and September each year. The proposed development includes the demolition of a contractors shed and all ancillary site development, areas of stockpiling, landscaping and boundary treatment works above and below ground, including restoration of the extraction area. Aughinish Alumina Limited carries out an activity requiring an Industrial Pollution Prevention and Control Licence (now replaced by an Industrial

Emissions Licence – Licence Register No. P0035-06). The development and operation of the proposed Borrow Pit is not a licensable activity. An Environmental Impact Statement (EIS) was submitted to the Planning Authority with the application.

16/418. Permission granted (ten year) for development on a site of c. 0.225 ha located within the existing Aughinish Alumina plant consisting of the installation of 2 no. deep thickeners (steel vessels with a diameter of c. 22m and maximum overall height of c.21.9m) and ancillary elements, including stairs, access platforms and walkways linking to adjacent vessels, pumps, cabling and pipework. The development will also consist of the provision of a hardstanding, an internal road (c. 6.1m wide and c. 40.6m long) to the east of the thickeners and all other site development works above and below ground (the application relates to development which comprises or is for the purposes of an activity requiring an Industrial Pollution & Control Licence, now replaced by an Industrial Emissions Licence)

5.0 Submissions:

The application was referred to various departments within the Local Authority and reports were received from the following section/ individuals.

- Operations & Central Services:
- Heritage Officer
- Planning, Environment and Place Making (Flood Section)
- Planning, Environment and Place Making (Noise Section)
- Archaeology
- Planning, Environment and Place Making (Waste Management)
- Water Services/Irish Water

Copies of the reports received are contained in Appendix 1

6.0 Workshop

A briefing workshop was held on 11th January 2021 at 11.30am online to brief the Members of the Adare Rathkeale Electoral Area on the contents of the proposed development.

7.0 Summary of key planning issues and assessment:

The stated aim of the proposed development works is to facilitate an expansion of capacity within the existing disposal areas accommodating residues arising from the adjoining alumina refinery facility. Proposed works also include an extension to the permitted borrow pit on the subject site providing for an additional 380,000 m³ of rock fill material which is needed to satisfy the requirements of the construction and operation of the BRDA. Additional works include the use of portions of the site to accommodate rock and soil stockpiles and upgrades to the existing water infrastructure.

The objective of this SID application is to provide for expansion of capacity at Aughinish Alumina to facilitate the use of the plant beyond 2030 for an additional another 9 years. The application provides for:

Bauxite Residue Disposal Area (BRDA) - The permitted BRDA has capacity to provide a disposal area for bauxite residue until c.2030, for the current rate of alumina production. As currently permitted, the BRDA will have a final perimeter elevation of 24m OD and a maximum dome crown elevation of 32m OD. It is proposed that the existing BRDA can facilitate an increase in height to Stage 16 (currently permitted to Stage 10). It is proposed that the permitted height of the overall BRDA (Phase

1 and 2 BRDA) be increased to provide a perimeter elevation of 36mOD and a maximum dome crown elevation of 44m OD. This would extend the lifetime of the currently permitted BRDA up to c.2039

The proposed increase in height is 12m which will comprise 6 x 2m high stage raises (Stages 11 to 16). The BRDA is built upwards in a series of upstream raised 2m high berms known as 'stage raises'. The proposed method of raising the BRDA from Stage 10 to Stage 16 will be the upstream method. The stage raises are offset internally and founded on the previously deposited and farmed bauxite residue, in 2m high vertical lifts. The lifts are constructed of processed limestone rock fill which is separated from the underlying bauxite residue by a layer of separation geotextile. Since 2009, the deposited bauxite residue has been 'farmed' and includes the bauxite residue in the Phase 1 BRDA from above Stage 6 (16 mOD) and all of the Phase 2 BRDA. The farming process consists of ploughing and aerating bauxite residue for a prolonged period (the process typically takes 5 to 6 months) to reduce the pH < 11.5, prior to placing the next layer. This process also reduces the moisture content, increases the density and the strength parameters for the material.

Salt Cake Disposal Cell Expansion (SCDC) - An extension to the SCDC is proposed as part of this application to provide headroom disposal. The total current volume of the SCDC is estimated to be 72,800m³ at the crest level. The remaining capacity of the SCDC is expected to expire during 2023. The existing crest height of the SCDC is 29.00m OD. The proposed development comprises the vertical extension of the existing SCDC to a crest height of c. 31.25m OD, which will have a maximum overall height of c. 35.50mOD when capped at cell closure. The extension of the SCDC will accommodate disposal for an additional c. 22,500 m³ of salt cake in total. The construction of the SCDC extension will be undertaken in one step. Approximately 27,000m³ of processed rock fill material will be required to construct the perimeter wall of the SCDC raise. It is proposed that this rock material will be sourced from the adjoining borrow pit. The composite lining, which will be placed inside the raised SCDC, will comprise 4,500m² of a mixture of geosynthetic materials. Additional ancillary materials which will be used in the construction of the SCDC include a non-calcareous drainage and gabion rock fill, a decant tower consisting of a high density polyethylene (HDPE) structured wall pipe, a crash barrier, concrete for posts, plinths and paths, and a conveyor belt. The additional storage will provide capacity in the short term prior to the plant coming online to remove salt cake from the waste stream and to provide back-up in the longer term when this plant is under maintenance.

Borrow Pit - The permitted borrow pit area is located at the north east of the application site and its extraction area is c.4.5ha in size (LCCC Reg. Ref. 17/714; ABP Ref. 301011-18). It will serve the construction and operation of the permitted BRDA. The permitted borrow pit area has a depth of c.8.5m OD. The permitted borrow pit area is expected to provide 375,000 m³ of rock fill material which is considered to be sufficient to construct the existing BRDA to Stage 10, to implement the closure design and miscellaneous rock fill (50,000 m³).

Adjacent to the permitted borrow pit area to the east is an area which is currently covered in vegetation. It is proposed that the borrow pit will extend eastwards into this area to facilitate the expansion and raising of the BRDA. The total extraction area of this planned extension to the borrow pit amounts to c.3.9ha

Water Management - The current BRDA water management infrastructure was designed to accommodate the BRDA development to Stage 10 and for an inflow design flood (IDF) with a return period of 1 in 200 years.

A number of improvements to the water management system for the proposed BRDA development are proposed to allow for the existing water management system to accommodate an Inflow Design Flood (IDF) of a greater return period, in accordance with Canadian Dam Association (CDA) guidelines. At

present the IDF allows for a 1 in 200 year flood event; the proposed modifications will allow for a revised IDF which will be 1/3 between the 1,000-year and the probable maximum flood (PMF) 7 event.

The application is accompanied by an Environmental Impact Assessment Report and a Habitats Directive Assessment. These have been considered in the assessment of this application.

The application site is zoned for ‘*Marine Related Industry*’ use in the Shannon Integrated Framework Plan 2014 and in the County Development Plan 2010-2016 (as extended) and the proposed use is acceptable within this zoning.

8.0 Natura Impact Assessment:

This NIS was prepared by Dr. Gavin Fennessy of Ecology Ireland Ltd., with the support of specialist environmental scientists and ecotoxicologists from RSK Environment Ltd and their associates.

The table below outlines the sites considered to be in the zone of influence for the project.

Table 1: European Designated Sites located in the 15km Hinterland of the application site

Site Name	Site Code	Minimum Distance (km)
Natura 2000 sites		
Lower River Shannon SAC	002165	0.01
River Shannon & River Fergus Estuaries SPA	004077	0.01
Barrigone SAC	000432	0.45
Stack's to Mullaghareirk Mts., West Limerick Hills & Mt. Eagle Bog SPA	004161	6.61
Askeaton Fen Complex SAC	002279	8.13
Curraghchase Woods SAC	000174	11.05

A preliminary Screening for Appropriate Assessment (AA) found that it could not be excluded, on the basis of objective scientific information that the proposed works, individually or in combination with other plans or projects, would have a significant effect on three Natura 2000 sites:

- Lower River Shannon SAC;
- River Shannon & River Fergus Estuaries SPA; and
- Barrigone SAC.

Therefore, a NIS was required to ascertain whether the proposed works would have an adverse effect on the integrity of the Natura 2000 sites. This NIS considers the emissions to air, water, noise and vibration and light associated with the proposed development operation and potential impacts of these emissions on Natura 2000 sites and their conservation objectives in the potential Zone of Influence (ZoI) of the proposed development. The potential impacts include those associated with sources of emission from the development site (e.g., noise, dust etc). The AA process considers whether a proposed development, in view of best scientific knowledge and in light of the conservation objectives of any relevant European sites, when considered as an individual project, or in combination with other plans and projects, will have an adverse effect on the integrity of any European Site. At the NIS stage, all mitigation measures necessary to avoid, reduce or offset negative effects are considered. The conservation objectives of Natura 2000 sites have been compiled by the National Parks & Wildlife

Service (NPWS) in relation to the habitats and species (i.e., qualifying interests) for which the sites are selected. These conservation objectives are referred to when carrying out appropriate assessments for plans and projects that might impact on these sites. The NIS considers the emissions to air, water, noise and vibration and light associated with the proposed development operation and the potential impacts of these emissions on Natura 2000 sites and their conservation objectives. In addition, the potential for cumulative and in-combination impacts are considered from the operation of the overall refinery plant and in relation to other projects and plans in the wider area. It has been objectively concluded that the proposed project will not adversely affect the integrity of any Natura 2000 site, and there is no reasonable scientific doubt in relation to this conclusion.

Conclusion: The information submitted was assessed by LCCC Heritage Officer who recommends that conditions should be attached to any permission regarding the proposed upgrades to the water management system, operation and management of the borrow pit and implementation of a sampling regime should be put in place to monitor the levels of metals, to inform any future mitigation measures that may be required. 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 Lower River Shannon SAC (002165) and River Shannon and River Fergus Estuaries SPA (004077) Barrigone SAC (00432) or any other European site, in view of the sites' Conservation Objectives.

9.0 Environmental Impact Assessment Report

In order to ensure that all potential impacts associated with the proposed development are identified and addressed an Environmental Impact Assessment Report (EIAR) has been prepared (submitted with this planning application). The submitted EIAR provides a systematic and integrated evaluation of the direct, indirect and secondary effects (positive and negative) of the project on the natural and socio-economic environment. The proposed development is covered by the following classes of development in the EIA Directive. - Schedule 5, Part 2 Class 11(b) of the Planning and Development Regulations, 2001 (as amended), an EIAR is a mandatory requirement for "Installations for the disposal of waste with an annual intake greater than 25,000 tonnes not included in Part 1 of this Schedule". The proposal seeks the disposal of c. 1.57 million tonnes of bauxite residue per annum which would exceed this threshold. - Schedule 5, Part 2, 2(b) of the Planning and Development Regulations, 2001 (as amended), an EIAR is a mandatory requirement for the "Extraction of stone, gravel, sand or clay, where the area of extraction would be greater than 5 hectares". The proposal seeks to extend the permitted borrow pit by c. 3.9 hectares which would create an overall borrow pit of c. 8.4 hectares and thus exceed the threshold. Consultation was undertaken with An Bord Pleanála in respect of the proposed development and correspondence was subsequently issued by the Board confirming that the development fell within the scope of paragraphs 37A(2) of the Acts and thus constituted Strategic Infrastructure Development. As such, the subject application is an SID application submitted directly to the Board and must therefore be accompanied by an EIAR. A Non-Technical Summary of the EIAR has also been submitted.

The following is a summary of the EIAR which was submitted and considered as part of the planning application.

Chapter 3 Description of the Proposed Development

This Environmental Impact Assessment Report (EIAR) relates to a Planning Application by Aughinish Alumina Limited¹ [AAL] (the Applicant) for development at an existing alumina facility located in

the townlands of Aughinish East, Aughinish West, Island Mac Teige, Glenbane West, and Fawnamore at or adjacent to Aughinish Island, Askeaton, Co. Limerick. The alumina facility is operated in accordance with the Conditions of the Industrial Emissions Licence (IEL) P0035-07 issued by the Environmental Protection Agency (EPA).

The project site for the purpose of this EIAR as defined by the red line planning application site boundary area which measures c. 222 ha and currently accommodate processes associated with the operation of the adjoining refinery plant located to the north west of the subject site. The overall landholding of the Applicant including the subject site, the refinery plant, nature trails and ancillary areas extends to c. 601 ha.

The proposed development comprises of:

- An expansion of the Bauxite Residue Disposal Area (BRDA) to increase its disposal capacity in order to accommodate additional bauxite residue resulting in a proposed increase in height of c.12m (to c. 44m OD) above the currently permitted levels. No increase to the existing footprint of the BRDA is proposed.
- An extension to the existing Salt Cake Disposal Cell (SCDC) to accommodate further disposal of salt cake resulting in an increase in height of the cell by c.2.25m. The SCDC is located within the BRDA area.
- An extension of the permitted borrow pit, located to the east of the BRDA, is also proposed. This extension proposes to increase the footprint of the borrow pit from c.4.5ha to c.8.4ha. This extension will provide an additional 380,000m³ of rock fill material, which is needed to satisfy the requirements of the construction and operation of the BRDA.
- The continued use of an existing stockpile area at the south east of the subject site to store topsoil in order to satisfy the additional restoration requirements of the extended BRDA. - Upgrades to the existing water management infrastructure to accommodate the BRDA development to Stage 16, which will also allow for greater Inflow Design Flood (IDF) capacity for the entirety of the BRDA.

The production of alumina is critical to facilitating the production of renewable technologies and thereby ensuring that a low carbon and green economy centred on renewable energy production and electric transport modes can be delivered.

Alumina plants are capital intensive because of the nature and size of equipment employed in the process of refining bauxite. Such major start-up capital investments invariably present significant challenges for development at new greenfield locations. As a result, the efficient operation and expansion of existing facilities is of critical importance in ensuring that alumina supply is maintained to satisfy worldwide demand.

The maximum production level permitted at the refinery plant is and will remain at c.1.95 million tonnes of alumina per annum. This represents 30% of the alumina produced in Europe. In order to protect such production levels, future disposal capacity for bauxite residue is required. This application seeks to ensure that such disposal capacity is appropriately accommodated on site to secure the continued operation of the alumina facility.

Comments: The information submitted in the EIAR has been considered and the Planning Authority has no further comment.

Chapter 4 Examination of Alternatives

The Applicant has already provided significant capital investment in the operation of the alumina refinery facility at Aughinish Island. The location of the BRDA and SCDC at the south-west of the facility minimises transit requirements of residue and therefore maximises the efficiency of the overall operation. Given the existing infrastructure in place and the advantages of locating storage capacity adjacent to the refinery facility, an alternative location removed from the AAL landholding was considered to be inappropriate and unfeasible given the large capital investments it would require.

A horizontal expansion of the existing BRDA and the development of a new BRDA area (including a new SCDC) on the overall AAL landholding were considered. Such a horizontal expansion would necessitate additional infrastructure to be constructed rather than the utilisation of existing infrastructure in the case of a vertical expansion.

There are at present no alternative methods which would eliminate the existence of bauxite residue as a by-product from the alumina refinery process.

With regard to the expansion of the Salt Cake Disposal Cell, ongoing investigations into the alternative treatment of Salt Cake have determined that a Wet Air Oxidation (WAO) System would eliminate the need for Salt Cake storage within the SCDC. Arising from this, a project schedule relating to the installation of this system has been developed with commissioning to be completed in 2023.

The 'Do Nothing Scenario' outlines that in the event that the proposed capacity expansion is not carried out the wider alumina refinery facility would cease operations in c.2030 based on current production levels. Bauxite residue deposition would cease at the subject site and the restoration plan (permitted under ABP Ref. PL13.217976; LCC Reg. Ref. 05/1836) would be implemented. This would result in a loss of skilled employment opportunities and would have a significant negative impact on the local economy and also negatively impact on the diversification of the state's economic base. As the demand for alumina would remain any additional alumina production capacity will likely be delivered at existing alternative alumina refinery facilities worldwide.

The location and design of the proposed development represents the most appropriate option to ensure the ongoing operation of the alumina refinery facility adjoining the application site. The proposed development will ensure that high levels of demand for alumina for use in products such as renewable energy technologies is secured and satisfied within Europe into the future beyond 2030

Comments: The information submitted in the EIAR has been considered and the Planning Authority has no further comment.

Chapter 5 Archaeological, Architectural & Cultural Heritage.

There is a recorded enclosure located within undisturbed ground c.50m to the southeast of the proposed development (LI010-018). There are no structures of built heritage merit within 500m of the proposed borrow pit. The EIAR concludes that due to the disturbed nature of the existing landscape environment no adverse impacts are predicted upon the archaeological architectural or cultural heritage resource during the construction or operation of the proposed development.

Comments: The Planning Authority note the submission in relation to Archaeological and Cultural Heritage and following assessment by the LCCC Archaeologist, the proposal has been deemed acceptable subject to monitoring of groundworks by an archaeologist.

Chapter 6 Biodiversity

The assessment considers the potential impacts of the proposed development on the local flora, habitats and fauna and it provides an evaluation of the potential impacts on the existing ecology arising from

the proposed development. The BRDA surface is of negligible ecological value. Habitats represented include Dry meadow and Grassy Verges (GS2) and Scrub (WS1). There are habitats of importance in the wider receiving environment, including areas of Annex I grassland within the AAL landholding and the estuarine habitats of importance for a wide range of species.

Areas within the development site were not found to be important for waterbirds such as the special conservation interest species of the nearby SPA. The terrestrial farmland and scrub habitats had a typical farmland/woodland edge bird community. The nearby estuaries including Poulaweala Creek, Robertstown Estuary and the River Shannon Estuary are all important sites for wintering bird species. No breeding or resting places of rare or protected mammal species were recorded within the proposed development site. Both Badger and Otter were recorded in the wider area. A diverse bat community is present on Aughinish Island, associated particularly with the woodland and nature trails that have been established as part of the plant operation. No bat roosts were present within the proposed development site. Marsh Fritillary was not recorded in the vicinity of the proposed development during the walkover surveys from 2019-2021. A formal Biodiversity Management Plan has been implemented by AAL for their lands and they are also developing a new Nature Trail Amenity on the island.

A range of environmental controls and mitigation measures are proposed so that it is concluded that the residual impacts of the proposed project on habitats, birds, mammals (including bats) and other fauna will be at most slight neutral in the medium to longer term. In addition, the landscaping works proposed are likely to see a moderate to significant positive effect on local biodiversity, particularly in the BRDA area.

Comments: The Planning Authority note the submission received with respect to Flora and Fauna and following assessment by the LCCC Heritage Officer further information is required to clarify the status of the Meadow Barley in the area. Report received is contained in Appendix 1 below.

Chapter 7 Population, Human Health & Agriculture

This chapter provides an assessment of the impact of the proposed development on population, human health and agriculture and animal health.

In terms of population, the loss of employment would reduce the attractiveness of the area as a place for people to live and could lead to a decline in population. If the development proceeds the current levels of employment provided by the facility would be maintained and would likely ensure that current population trends would remain stable.

In terms of employment if the facility were to operate to existing levels until 2030 the capacity of the permitted BRDA would be reached and in the absence of further capacity the facility would have to close. This would lead to a reduction in the number of people employed in the area. This would have a direct adverse impact on the local economy and the loss of employment, wages and investment would negatively impact upon businesses in the area which rely upon workers at the facility to purchase their goods and services. If the proposed development were to proceed the current levels of employment would be maintained into the longer term.

The likely significant direct and indirect effects of the proposed development on human health have been assessed. As "Human Health Assessment for Bauxite Residue and Salt Cake" which focused on a 10km square study area has been prepared by Theresa Rapaso-Subang, Senior Technical Lead, Toxicology and Risk Assessment, WSP Canada Inc. (WSP). A copy of this report is included in the EIAR Appendices. The chapter assesses the likely potential pathways for human health impacts from the construction and operation of the BRDA are: Dust generation and transmission through the air;

Noise and Vibration; and Water Environment. 'Based on the findings of this HHA based on the use of maximum predicted exposure concentrations of PM10 and PM2.5, and in combination with the use of overly conservative exposure assumptions applied in the risk analysis, bauxite residue and salt cake do not pose a health concern to human receptors in the nearby primary school and nearby residences.' Measures Mitigation measures to control dust are presented in the EIAR Air Quality Chapter 11. Mitigation measures to control noise, vibration and blasting are presented in EIAR Chapter 12. Mitigation measures to manage impacts to groundwater and surface water are presented in EIAR Chapter 10. No additional mitigation measures are required over and above these to protect human health.

The assessment of Agriculture And Animal Health considered the existing baseline of agricultural resources and the agricultural environment in the area. The assessment considered the potential for impacts such as loss of agricultural land and the potential for any noise, dust, odour and discharges associated with the proposed development to reach and to impact adversely on agricultural resources, in particular farm animals As extraction activity proceeds within the borrow pit extension area, the availability of this land as an occasional hay meadow will correspondingly decrease. There will be no other loss of agricultural land. The extension to the BRDA and to the SCDC is located within the footprint of the existing BRDA. The assessment concludes that that there will be no effects on agriculture or on animal health arising from noise emissions, dust emissions and water quality and, furthermore, that if permission is granted it would facilitate continued Alumina Plant operations) compliance with the limit values that govern such Plant emissions serves to protect animal health as well as human health as does the separation distance to the nearest farm activity. The Mitigation measures to control impacts on groundwater and surface water; dust, noise vibration and blasting are presented in the EIAR Chapters 10,11 and 12. No additional mitigation measures are required over and above these to protect agriculture or animal health.

Comments: The information submitted in the EIAR has been considered and the Planning Authority. It is considered reasonable that the operator of the facility should contribute towards the cost of environmental, recreational or community facilities which would be of benefit to the community of the area. A condition requiring the establishment of a community gain fund should be attached.

Chapter 8 Soils and Geology

This section considers the potential direct and indirect significant effects, and the significance of these effects, of the Proposed Development on soils, land and geology receptors located in the vicinity of the Application Site. The Study Area extends 2 km from the Application Site boundary. It provides an assessment of the impact of the proposed development on the geological and hydrogeological setting of the area.

Since 2009, the deposited bauxite residue has been 'farmed' and includes the bauxite residue in the Phase 1 BRDA from above Stage 6 (16 mOD) and all of the Phase 2 BRDA. The farming process consists of ploughing and aerating bauxite residue for a prolonged period (the process typically takes 5 to 6 months) to reduce the pH < 11.5, prior to placing the next layer. This process also reduces the moisture content, increases the density and the strength parameters for the material. The bauxite residue for the Proposed Development will be farmed.

The principle soil types underlying the site are identified as resinas and loithosols, which have originated from limestone glacial till with bare rock outcropping at frequent intervals. The EIAR outlines that much of the soil cover has been removed due to previous activities including the handling and temporary storage of overburden and aggregate materials previously extracted from the Borrow Area for use in the construction of the BRDA. Subsoils underlying the Application Site are either absent or consist of glacial till of Carboniferous origin. Large area of made ground occur to the west

and north-east, with estuarine sediments also occurring to the west. The depth of overburden where it has not been stripped or re-worked ranges from c.0.5 to 3m)

In terms of Bedrock Geology the bedrock underlying most of the site is described as mainly clean massive light grey, fine grained, micritic limestone (Waulsortian Limestones). The extraction of the limestone unit on the site is an important aggregate resources but not an unusual geological unit and no geological importance or heritage value is attributed to this unit at the site. Blasting and rock removal may cause unstable rock faces, however this would be a temporary impacts at the Site. Mitigation measures proposed include:

Mobile plant will refuel at the Site's designated refuelling area

Static plant or tracked excavators will refuel over a drip tray with an adsorbent mat

All p[re]cessing/mobile plant will be regularly maintained and repaired when necessary

Removal of topsoil and overburden will only be carried out in favourable environmental conditions.

Rehandling of topsoil will be kept to a minimum

Regular monitoring of groundwater and regular sampling of boreholes

No excavation below 8.5mOD

Regular geotechnical assessment of face conditions

Compliance with relevant safety and statutory legislations

The EIAR outlines that the Proposed Development would not lead to significant effects on soils, land and geology during its operational and closure phases.

Comments: The information submitted in the EIAR has been considered and the Planning Authority have no further comment.

Chapter 9 Landscape and Visual Impact

This chapter identifies that the AAL site is one of the more significant built features on the southern estuary of the River Shannon. The built structures of the plant are the primary built visual feature in the wider landscape setting whereas the red-brown colouring of the bauxite residue is locally prominent. The illumination required for safe operation and maintenance of the plant and buildings, together with similar installations at Foynes Port, makes the site readily visible at night from the County Clare side of the Estuary. The main anticipated effect on the landscape are outlined as the increase in the vertical height of the BRDA and the visible extent of the side slopes and also the red-brown colour of the bauxite residue material which contrasts with the green landscape setting.

The landscape is located within the Shannon Integrated Coastal Zone Management Landscape Character Area. The chapter examines the impact of the development on the relevant landscape character area on the Limerick and Care side of the estuary. It finds the Impacts on landscape context will depend on the sensitivity and relative proximity of different parts of the landscape such as the Shannon Estuary, the Agricultural Lowlands and the Western Uplands and will vary from imperceptible to moderate, negative and long term.

The chapter includes 22 Accurate Visual Representations (AVRs) that are representative of the range from publicly accessible locations and representative of the range of views available from the surrounding landscape towards the AAL facility. These illustrate the progressive establishment of the BRDA of its operational lifetime and at final closure and restoration.

The proposed development will substantially the same site area as the existing permitted development but rising to a greater overall height than is currently permitted. It would increase landscape and visual impacts and the proposed increase in height will result in increased impacts in the longer term. The progressive restoration proposals will ensure that landscape mitigation is implemented throughout the

operation of the facility and the proposals are considered to provide a better landscape and visual solution to those that have been implemented to date. Restoration proposals will result in the longer term BRDA having a substantially greener and more natural appearance and character that is more consistent with the surrounding landscape context. The proposal includes the provision of additional trees and vegetation along the proposed perimeter berm and also within the Borrow Pit upon restoration.

The assessment concludes that the scale of the proposed development site in the context of the existing Aughinish Alumina facility on Aughinish Island is unlikely to give rise to any significant landscape and visual impacts within the existing landscape context either during construction or operations stages, or upon restoration.

Comments: The Planning Authority note the submission in relation to Landscape and has no further comments

Chapter 10 Hydrology and Hydrogeology

This chapter considers the potential direct and indirect significant effects, and the significance of these effects, of the proposed development on surface water and the groundwater receptors located in a study area that extends 2 km from the Application Site boundary. The chapter describes the geology of the site; land use, bedrock geology, hydrology, flooding, BRDA Management, Surface Water Managements at the BRDA, Hydrogeology, Regulated Discharges and Emissions, Local Water Users and Wastewater systems the systems being actions being incorporated into the proposed development to minimise the impacts on these receptors.

The Site is hydrologically connected to internationally designated areas i.e., Special Areas of Conservation (SAC) and Special Protection Areas (SPA). The status of the nearby transitional waterbody (Lower Shannon Estuary) during the 2013 – 2018 monitoring period is given as ‘good’ by the EPA (2021). Water quality results for surface water features around the Site show parameters are within threshold values between 2008 and 2021. Activities, systems and monitoring installations are already in place to manage and limit the potential impact from refuelling, seepage from the BRDA, and leaks and spills from stored and used substances.

Soils - Prior to the construction of the BRDA site, the area was a green field site, and the natural topography of the area was low lying. The BRDA is comprised of made ground, which are derived from the bauxite residue Process sand Scales and sludges and Salt cake The BRDA falls within the scope of Directive 2006/21/EC on the management of waste from the extractive industries. The BRDA is a Category A waste facility. The proposed development will not have an effect on existing soil conditions.

Bedrock Geology - The mapped bedrock geology (GSI, 2021) comprises Waulsortian Formation limestones beneath the eastern sector of the BRDA and Borrow Pit areas and the Plant. The Rathkeale Formation limestones and mudstones underlie the central and western sectors of the BRDA. Structurally no major faults have been identified by the GSI at the Application Site. The Rathkeale Formation is present under the bulk of the BRDA and is not susceptible to karstification. The Waulsortian Formation is susceptible to karstification. No karstification features are identified by the GSI in the footprint of the BRDA (GSI, 2021) or were identified during the construction of the basins for the Phase 1 BRDA Extension and the Phase 2 BRDA.

Land Use - The existing industrial use of the site will remain unchanged and surrounding land uses will not be affected by the proposal.

Flooding - In terms of flooding the BRDA and the surrounding catchment is located on lands which are defended by flood protection works - the OPW constructed flood protection works on the north bank (Shannon Estuary) and west bank (Robertstown River) of the Island, where a flood tidal defence berm (FTDB) is present. The proposed development will not impact of the flood risk of the site.

BRDA Water Management System - Surface water runoff, bleed water, sprinkler water and seepage from the bauxite residue percolates through the rock fill stage raises and discharge into the encompassing perimeter interceptor channel (PIC). The PIC is composite lined and conveys the free water by gravity and pumping to either to the Effluent Clarifier System (ECS) or to the Storm Water Pond (SWP). The SWP is where leachate and storm water is stored prior to treatment. The ECS discharges treated water to Liquid Waste Pond (LWP) where it is conditioned (for cooling and settlement) prior to its discharge in accordance with the IE Licence or reused on site (in the Plant process or in the sprinkler system).

Surface water monitoring is carried out routinely for surface water bodies in the vicinity of the BRDA site. The waters inside the SCDC comprise dissolved salt cake (caustic liquor leachate) which are diluted by the rainfall catchment of the cell. Waters from the cell drain via the perforated decant tower located in the north-east corner of the existing SCDC to the storage tank installation located to the north. The waters are then pumped to the Plant for caustic recovery. The closure design for the BRDA will include spillways to channel flows from the dome directly to the PIC and spillways at the two breach locations for the perimeter interceptor channel (PIC).

Hydrogeology -The Application Site is underlain by two separate aquifer units, one is a Locally Important Bedrock Aquifer (Rathkeale Formation) and the other is a Regionally Important Karstified Bedrock Aquifer (Waulsortian Formation). It is outlined that the groundwater present beneath the Application Site generally comprises a freshwater lens that is both down gradient and isolated laterally from the mainland by being laterally hydraulically isolated by Poulaweala Creek and the Roberstown River and the underlying saline groundwater. Groundwater levels measured in groundwater monitoring boreholes across the overall Aughinish site indicates that groundwater flow is outwards from the central part of the 'Island' towards the coastline via springs (the Estuarine Streams) to the Shannon Estuary, Robertstown River and the Poulaweala Creek. The groundwater contours for the site are outlined in Figure 10.9 and they indicated that a groundwater divide exists within or in close proximity to the Borrow Pit areas. The maximum proposed excavation of the Borrow Pit areas is to 8.5 mOD. Routine groundwater monitoring comprising monitoring wells is carried out in line with the requirements of Industrial Emissions Licence (Reg. No. P0035-07). The principal contaminant of concern arising from the alumina production process is dilute sodium aluminate. Fluoride, a common element in bauxite ore and so is a potential contaminant of concern. Monitoring results are generally below the relevant groundwater regulation threshold values. Where exceedance have been recorded, they typical occur in isolation to other parameters i.e., just a single metal exceeding a threshold value in a round of readings and then are not present for future rounds and hence are considered to be natural or the result of saline intrusion.

In relation to Regulated Discharges and Emissions there are two licensed discharges of treated effluent to the Shannon Estuary from the Plant. These are W1-1 (for treated industrial process effluent) and Sanitary Effluent discharge points. The Proposed Development does not comprise any change to the two current licenced discharges.

No groundwater is abstracted for domestic purposes within the Application Site or at the Plant Area. There are no source protection zones or preliminary source protection zones within the Application Site or the Study Area. The nearest source protection area to the Proposed Development is located c. 11 km away. A Group Water Scheme is located approx. 2 km to the south-east of the Study Area, but is up-gradient of the Application Site groundwater. Fourteen (14) wells have been identified within the Study Area; only two (2) have a listed use, one as only domestic and the other is both agricultural and

domestic use. These fourteen (14) wells are not identified to be part of the same regional hydrogeological system.

The assessment of potential effects (taking into account the Proposed Development design) has not identified any significant adverse effects. In order to mitigate the initial effects associated with natural resources and built structures, the following additional mitigation procedures will take place:

- Adoption of the existing AAL Environmental Management System (EMS) and other procedures (including Health and Safety) for the Aughinish Site;
- Enforcement of the final CEMP and licence requirements will minimise potential for impact on the surface or groundwater environment;
- The management of construction works in line and in accordance with all monitoring provisions identified in the final CEMP, with the IEL requirements, with the AAL Environmental Manual for Contractors (AAL, October 2016), and with any Conditions imposed by the planning authorities;
- Mobile plant and semi-static plant will be refuelled by an AAL operated mobile double skinned fuel bowser which drives around the BRDA. Drip trays with absorbent mats are utilized.
- Regular maintenance of mobile plant and immediate repair or replacements of damaged or leaking plant.
- Haul roads will be wetted down using a water bowser (using water sourced from the onsite LWP) regularly to reduce the deposition of dust material
- All waste generated is the responsibility of AAL as the originator in accordance with the licence. All transport of waste off-site is undertaken by AAL via licenced waste contractors and AAL is responsible for waste document control;
- Stockpiles will be managed and monitored by the Main Contractor to minimise erosion and input of suspended solids to the water environment;
- The Main Contractor (and sub-contractor) must obtain AAL approval for all chemicals used in advance of bringing the materials on site. The unloading and loading of materials shall be carried out in areas protected against spillage and runoff;
- An emergency spill kit (including absorbers) will be used in the event of an accidental spill;
- No storage of hydrocarbons will take place on the Application Site;
- Testing of the lining system for the SCDC will take place after construction to ensure the potential for leakages is reduced and good housekeeping during operations will mitigate potential impacts on surrounding environment.

• Post passive aftercare phase licensee and subsequent occupiers of the Proposed Development will be responsible for managing their activities and applying for (and working within the constraints of) any environment authorisations or consents required for their operations. If the requirements of relevant regulations, licenses and permits, e.g., Industrial Emissions Licences, under The Environmental Protection Agency Act 1992 and the Protection of the Environment Act 2003) are adhered to, then it is considered that the magnitude of impact and likelihood will be reduced to acceptable levels.

The future monitoring programme at the Site will include:

- regular monitoring of water levels within the proposed BRDA, SCDC and Borrow Pit areas;
- regular visual inspections of the dam wall integrity for both the Proposed Development and regular
- visual inspections of the faces in the proposed Borrow Pit Extension site;
- regular monitoring of water pressure levels in the bauxite residue stack; and
- regular water quality sampling in perimeter observation wells (OWs) and at the designated surface water locations.

A number of *Additional Mitigation / Management* measures are outlined in section 10.10.2 and a range of the *Monitoring* measures outlined in section 10.11 are proposed to be implemented during the construction, operation and management of the proposed development in order to prevent any damage

to the hydrology and hydrogeology of the area. If these measures are implemented it is proposed that any impacts associated with the proposed activities will not contribute to cumulative impacts in association with the activities located in the vicinity. The chapter concludes that the residual effect on the hydrology and hydrogeology of the site and the study area is 'Not Significant and not greater than Slight'.

Comments: The Planning Authority note the submission made and the information submitted has been assessed by the relevant Environment Sections within LCCC, who recommend conditions/clarifications where appropriate. Further information is required to clarify status of groundwater vulnerability at the Proposed Borrow Pit. Applicant to take into consideration the impact of water strikes at 7.32mOD and 8.03mOD with the proposed 2.5m buffer zone between groundwater table and base of proposed Borrow Pit (8.5mOD). Reports received are contained in Appendix 1 below.

Chapter 11 Air Quality

An assessment into the likely impact on air quality and climate associated with the proposed developed was prepared by AWN Consulting Ltd and has been submitted as part of the EIS. This report includes detail of Air Dispersion Modelling carried out using the United States Environmental Protection Agency's regulatory model AERMOD, to assess the contribution of operational emissions of dust, PM10 and PM2.5 and dust deposition were found to be below the ambient air quality standards and guidelines for the protection of human health.

In relation to climate the report outline there is a potential for a number of greenhouse gas emissions to atmosphere from vehicles and generators used at the borrow pit which give rise to CO₂ and N₂O emissions, however, due to the size and nature of the borrow pit these emission have a negligible impact on climate.

A number of mitigation measures are proposed to minimise the generation/migration of fugitive dust and to ensure that the site development, extraction processing and restoration operations comply with the recommended emissions limit value. The mitigation measures include

- A network of sprinklers in the BRDA site
- Placement of residue berms on the residue surface
- Farming of the BRDA surface
- Speed restriction on all site roads- paved and unpaved
- Use of water during crushing/screening to increase moisture content
- Internal haul roads to be watered twice daily on dry days

The bauxite residue, saltcake and the activities associated with the borrow pit are not odorous. The main source of odour complaints has been identified as the Liquid Waste Pond (LWP). A range of mitigation measures are in place to minimise odours occurring. These include;

- An odour treatment agent and antifoam are dosed to the 35m clarifier overflow launder, which discharges into the LWP. An odour prevention agent is added to the feedwell of the clarifier, which contains sulphide consuming bacteria.
- The LWP is cleaned out at regular intervals.
- The LWP level is managed to ensure that there is no potential to expose any solids at the base of the LWP.
- Additional biological odour control is added at regular intervals to the LWP

The chapter concludes that no significant air quality impacts are anticipated as a result of the construction and operational phases of the development and mitigation measures for dust generation and odour management are set out in this chapter.

Comments: The Planning Authority note the submission made and the information submitted has been assessed by the relevant Environment Sections within LCCC, who recommend conditions where appropriate. Reports received are contained in Appendix 1 below.

Chapter 12 Noise and Vibration

The likely noise and vibration impacts associated with the proposed BRDA raise and Borrow Pit extension at Aughinish Alumina has been assessed by AWN Consulting Ltd

The noise impact assessment has focused on the potential outward noise and vibration impacts associated with the construction and operational phases of the proposed development on its surrounding environment. For a development of this nature the construction and operational phases are considered together.

The baseline noise environment was derived from the Annual Noise surveys carried out by OES Consulting in 2017, 2018, 2019 and 2020.

Operational noise levels were captured at the five nearby noise sensitive receptors close to the site. Measurements were conducted at each location for daytime, evening and night-time periods. The nearest noise sensitive location to the site boundary is NSL1, located approximately 600m from the facility. The assessment concludes that the calculated noise level at all locations for all scenario is considered is below the daytime criterion of 55Db $L_{Aeq, and}$ and that the proposed BRDA raise will result in a reduction in noise level at some locations.

A schedule of noise and vibration mitigation measures including construction working hours, noise limits and screening will all be employed to ensure any noise and vibration impacts during this phase will be kept to a minimum. During the operation phase the potential noise sources are those associated with rock removal as well as vehicular movement to, from and within the site.

In relation to vibration the EIAR sets out that for general day-to-day activity within the Borrow Pit, excluding blasting, it is recommended that a vibration limit is set in relation to human response to vibration in buildings. It is estimated that general operational phase vibration (excluding blasting) will be less than 1.0mm/s (PPV) at nearby sensitive receptors. The EIAR outlines that following discussions between the applicant and Gas Networks Ireland a vibration limit of 50mm/s should not be exceeded at the pipeline during blasting.

It is stated that there will be no more than one blast per week. Due to uncertainties with meteorological conditions and specific charge variations it is not possible to predict with certainty the maximum air overpressure values that will be experienced at nearby sensitive locations. It is proposed to implement a scheme to reduce pressure levels at the source and monitor air overpressure at receivers. Similarly in relation to vibration from blasting the specific charge variations and uncertainties in relation to ground conditions mean that vibration levels from blasting cannot be predicted with certainty. It is proposed to implement a scheme to reduce vibration levels at the source and monitor vibration at receivers.

A range of noise and vibration mitigation measures are proposed in order to ensure appropriate noise and vibration limits are not exceeded. Such measures include restrictions on operating hours, recommendations for good practice blast design including trail blasting, public information circulars, regular timing of blasts where possible and ongoing noise, vibration and air overpressure monitoring during blasting by an independent body. The EIAR concludes that once consideration is given to the range of mitigation measures outlined in the noise and vibration impact assessment the associated noise and vibration impact of the proposed development is not significant.

Comments: The Planning Authority note the submission made and the information submitted has been assessed by the relevant Environment Sections within LCCC, who recommend conditions where appropriate. It is considered that blasting should be carried out at the site a maximum of 6-7 times per year in line with the provisions of planning permission 17/714. Reports received are contained in Appendix 1 below.

Chapter 13- Material Assets- Waste Management

This chapter considers the likely direct and indirect significant impacts and effects the preparatory, construction, operational and closure phases of the Proposed Development may have on external waste management infrastructure capacity. The objective is to ensure that these external waste management infrastructure assets are used in a sustainable manner. An assessment is included of the likely impact of the waste produced, and mitigation measures are identified which minimise the levels of waste generated in the first place and also reduce the impact of the waste generated by the Proposed Development.

The bauxite residue waste streams and salt cake waste streams that arise from the processing of bauxite to form alumina and are discharged to the facility's own waste management infrastructure, namely the BRDA. The BRDA waste infrastructure is itself excluded from the assessment as the Proposed Development seeks to increase the capacity of the BRDA.

Soils to be removed at the proposed Borrow Extension Pit site are considered to be a material asset. The overburden consisting of the topsoil and subsoil at shallow depths and will be used for the creation of screening berms for the Borrow Pit Extension. Any surplus soil materials will be hauled to the stockpile yard and will be available for future landscaping and/or restoration works.

Potential hazardous and non-hazardous waste streams expected to be generated from the proposed development and needing to be disposed of offsite have been identified. Annual tonnages of the construction and demolition (C&D) waste streams that are anticipated to be exported from the Site have been estimated. All wastes will be managed off site under the principles of the waste management hierarchy by reuse, recycling, recovery and disposal to inert, non-hazardous and hazardous waste facilities, as appropriate.

The estimated waste tonnages have been compared to the quantity of construction and demolition waste collected in Ireland in 2018. Taking these conservative assumptions of anticipated quantities, it is estimated that the annual amounts generated are approximately 0.0002% of the total national construction and demolition waste arising (EPA 2018). Due to the nature and minor quantities of the waste generated and the use of the AAL existing waste management procedures, the potential impacts associated with the waste management of the Proposed Development are expected to be imperceptible, therefore no additional mitigation measures above those systems already in place at the facility are required.

Comments: The information submitted in the EIAR has been considered and the Planning Authority have no further comment.

Chapter 14 Traffic and Transportation

The proposed development will have no material impact on the operation of the local road network during construction or operations phases, consequently, no mitigation measures are proposed and no construction or operational phase impacts are predicted as a result of the proposed development.

Comments: The Planning Authority note the submission in relation to Traffic and Transportation and has considered the comments contained in the report received from the Operation and Maintenance Section (LCCC) and considered the issues arising can be dealt with by way of condition.

Chapter 15 Material Assets –Site Services

The chapter outlines the likely direct and indirect impacts of the preparatory, construction, operational and closure phases of the Proposed Development may have on Material Assets – Site Services, located in the vicinity of the Application Site. These services would include electricity, gas, telecommunications, water supply infrastructure, surface water drainage and sewerage. The Proposed Development does not require any connection to the site services identified or any increase in the current connections. There is adequate separation distance between the application site and underground service pipes that have been identified. The required offset distances from the proposed borrow pit extension have been agreed with the appropriate service providers as part of the design process. In conclusion no additional mitigation measures are required.

Comments: The information submitted in the EIAR has been considered and the Planning Authority have no further comment.

Chapter 16 Major Accidents & Disasters

The Chapter assesses the vulnerability of the Proposed Development to major accidents and / or disasters, and the potential for the Proposed Development, if any, to cause major accidents and/or disasters as a result of unplanned events or extreme natural events exceeding the design criteria.

It outlines the control and/or emergency preparedness measures which are in place, or that may need to be implemented, to prevent or reduce the likely significant effects of such events on the environment are identified.

The Proposed Development design has been developed to include the appropriate project design principles and standards to avoid or prevent adverse safety and environmental effects. A risk assessment is included which considers the likelihood of major accidents or disasters occurring combined with the severity of their associated impacts. The general risk assessment methods are based on the DoEHLG, (2010), Guide to Risk Assessment in Major Emergency Management, which have been supplemented to include the highly improbable scenarios to which tailings facilities and the AAL BRDA has been designed.

Natural hazards assessed included the potential for a: seismic event; storm event; tidal surge or wave event, including the climate change effects on such events; and, significant karst features i.e., sinkholes or caves, resulting in structural failure of the BRDA, the SCDC or both, breach of the BRDA and liquefaction of the bauxite residue leading to discharge externally or structural failure of the pit face of the borrow pit, leading to pit wall collapse.

Industrial Hazards assessed included the potential of incidents at proximal industrial sites resulting in structural failure of the BRDA, breach of the BRDA and liquefaction of the bauxite residue leading to discharge externally, fire or explosion; failure of bauxite residue pipeline transfer; contamination of underlying soils and groundwater from fuelling activities; collapse of the borrow pit faces; and, damage or rupture of proximal gas transmission pipeline.

It is outlined that the BRDA is designed and operated in accordance with the Best Available Techniques (BAT) Reference Document for the Management of Waste from Extractive Industries in accordance with Directive 2006/21/EC (MWEI BREF 2018). In accordance with MWEI BREF 2018

and in the absence of a national or EN standard, AAL have selected to classify the BRDA and ancillary infrastructure in accordance with the Canadian Dam Association (CDA) Guidelines (CDA 2013, CDA 2014) and to adopt the target level criteria for design parameters (inflow design flood, seismic event and factors of safety for static, pseudo-static and post-seismic stability) which are dependent on the consequence of failure and hence the dam classification. The Proposed Development will be similarly designed and operated in accordance with the relevant best international current practice and, as such, has a low vulnerability to the hazards of major accidents and disasters. Monitoring instrumentation on the side slopes of the BRDA measure settlement, lateral and downslope movement and piezometric elevation. These instruments are read, interpreted and audited at frequencies in accordance with the conditions of IE Licence P0035-07 and with the Physical Stability Monitoring Plan for the AAL BRDA (Golder 2021).

Existing geotechnical monitoring and design preventative measures are assessed to be sufficient for the control of major accidents and disasters related to the BRDA and SCDC.

The stability analyses for the Phase 1 BRDA and the Phase 2 BRDA have returned FoS in compliance with the target FoS criteria for the permitted BRDA constructed to Stage 10 and for the proposed BRDA Raise to Stage 16. These target FoS criteria are consistent with the current international guidelines for tailings dam safety management and best practice.

To manage and to mitigate the effects associated with major accidents on Site, AAL maintain existing environmental and health and safety management protocols, best practice measures, relevant preventative measures, emergency preparedness provision which include response procedures in place to manage emergency scenarios within the AAL facility. Emergency scenarios which entail a breach in the BRDA have been identified and planned for in Limerick City and County Council External Emergency Plan for the Bauxite Residue Disposal Area (2019), and it is concluded that further mitigation is not required for such scenarios.

Risks associated with the failure of a face in the Borrow Pit Extension have been reduced by the Proposed Development design and the existing and proposed comprehensive management practices that will govern works in the area.

It is considered that no further mitigation and additional 'planning and preparedness' is required for these scenarios. From the assessment it is considered that the prevention and Proposed Development design measures already included are sufficient and that the risk of a major accident and/or disaster during the construction, operation, closure and aftercare of the Proposed Development is considered 'low' in accordance with the risk assessment methodology. As such, no additional mitigation measures are considered to be required.

Comments: The information submitted in the EIAR has been considered and the Planning Authority have no further comment.

Chapter 17 Climatic Factors

In relation to climate the report outlines appropriate flood risk measures and extreme weather events have been considered as part of the construction planning phase. In the planning phase the likelihood of extreme weather and flooding is assessed to be of either very low or low likelihood and with a moderate adverse effect leading to a finding of low risk and thus a non-significant impact.

With regard to flooding in the operational phase the study found that the likelihood of extreme weather and flooding leading to a containment breach or red mud release was assessed to be of very low likelihood and with a moderate to high adverse effect leading to a finding of low risk and thus a non-significant impact.

In relation to the impact of climate on the proposed development, if appropriate, additional measures, such as an increase in berms in the BRDA, to ensure the resilience of the Proposed Development to impacts during extreme weather events will be implemented for the construction phase.

The climate impact assessment has focused on the potential Green House Gas (GHG) emissions associated with the construction and operational phases of the proposed development on its surrounding environment. The overall combined operational phase GHG emissions, prior to mitigation, due to the combined Construction and Operational Phase of the Proposed Development will be negative, long-term and not significant. The annual GHG emissions due to the combined Construction and Operational Phase are equivalent to the construction of 23 3-bedroom houses or four transatlantic return flights. The combined Construction and Operational Phase GHG emissions are equivalent to the annual carbon footprint of 93 individuals.

Aughinish Alumina Limited are obliged in the context of the EU-wide ETS which has set defined targets which are being met due to the structure of the Cap-and-Trade mechanism which places a price on carbon to ensure that GHG emissions are reduced at least cost. In relation to indirect emissions, AAL operates under the ETS based on Permit Register Number IE-GHG038-10361-3 with verified emissions of 1,224,809 tonnes CO₂eq in 2020. If the BRDA raise does proceed the facility will continue to operate beyond 2030. This would lead to indirect GHG emissions from the Alumina Plant continuing beyond 2030. However, the ETS market will have to meet a target of a 61% reduction by 2030 based on annual reductions of 4.2% compared to the previous annual reduction level of 2.2% per year and thus it is likely that there will be a gradual reduction in GHG emissions from the facility under the facility's ETS Permit. Under the EU ETS, AAL will continue to be regulated and will continue to pay gradually increasing carbon cost.

Vehicle traffic is expected to be the dominant source of greenhouse gas emissions as a result of the combined construction and operational phases of the Proposed Development. Vehicles, generators etc., may give rise to some CO₂ and N₂O emissions. A series of mitigation measures will be implemented which will mitigate GHG emissions including

- requiring all vehicles to switch off engines when stationary
- all vehicles will be serviced and maintained to ensure emissions are minimised and
- limestone will be sourced from the onsite borrow pit thus minimising transportation distances for the construction phase of project.

The chapter concludes the overall combined construction and operational phase GHG emissions, after mitigation, due to the direct and indirect operational phase of the Proposed Development will be negative, long-term and not significant.

Comments: The information submitted in the EIAR has been considered and the Planning Authority have no further comment.

Chapter 18 Interaction between factors and Cumulative Impacts

This chapter outlines the likely interactions between effects predicted as a result of the proposed development. These are set out in a Matrix of Interactions Between Environmental Factors arising from the proposed development, where the interactions are considered to be of a scale which may be potentially significant. None of the factors were found to have a significant potential cumulative impact.

Comments: The information submitted in the EIAR has been considered and the Planning Authority have no further comment.

Chapter 19 Mitigation and Monitoring

The chapters summarises all mitigation measures proposed in order to provide a comprehensive overview of the full range of mitigation measures discussed within each chapter.

Comments: The information submitted in the EIAR has been considered and the Planning Authority have no further comment.

Chapter 20 Difficulties Encountered

Difficulties encountered are noted within three of the EIAR chapters. In relation to Archaeology a small area of the planning application site was unavailable during field inspection due to the dense vegetation occupying the north-eastern portion of the planning application site. In relation to waste the actual amount of construction waste generated is dependent on the methodologies of the Main Contractor on the project. To address this the calculations used in the EIAR are estimates based on professional experience of similar projects and a review of waste streams generated at the exiting AAL Facility.

Due to ongoing COVID-19 restrictions, traffic levels on the N69 national secondary road were understood to be lower than those that would have been present under pre-COVID circumstances. As a result, publicly available traffic data for the year 2019 from a local TII counter located on the N69 was used in determining typical traffic volumes and factored up to future year levels using TII growth factors.

Notwithstanding the above, no significant difficulties, in terms of technical deficiencies or lack of sources of information, were encountered in compiling the specified information contained in the Statement.

Comments: The information submitted in the EIAR has been considered and the Planning Authority have no further comment.

Reasoned Conclusion on Significant Effects

Having regard to the examination of environmental information contained above, and in particular to the EIAR, and the internal reports received in the course of the application, it is considered that the potential main significant direct and indirect effects of the proposed development on the environment are as follows:

- Water quality and the potential for deterioration of same as a direct impact will be mitigated by control measures including pollution prevention measures, treatment of waters and maintenance of a buffer zone between groundwater table and base of proposed Borrow Pit and site management practices including spill kits to be retained on site to ensure that all spillages or leakages are dealt with immediately and staff trained in their proper use.
- Human health and potential for significant negative effects including the effects of noise and vibration on site employees, existing nearby residents and future residents can be mitigated by the implementation of noise reduction measures. Details setting out acceptable noise levels

during construction and operation has been included to mitigate any adverse impact and reduced magnitude of the impact.

- Air Quality - Any potential dust impacts can be mitigated through the use of best practice and minimisation measures (water suppression) which are outlined in air quality chapter.
- Noise and Vibration - Any potential noise and vibration impacts can be mitigated through the use of best practice and minimisation measures which are outlined in noise and vibration chapter.
- Landscape- the potential for adverse impacts through the increase in the height of the BRDA are mitigated through the landscaping programme in place for the walls of the residue storage area
- A significant positive and direct impact for the wider community will be in terms of maintaining employment levels and the investment by the company in the local region through the purchasing of goods and services.

10. Community Gain Fund

The Planning Authority acknowledge the contribution that the developer has already made to the wider area in terms of the provision of recreation facilities and amenities including the proposed upgrade of the existing nature trail as permitted under planning reference 20/1325. However, given the scale of the proposed development, which would extend the lifetime of the plant to 2039, the Planning Authority consider that a formal community gain scheme should be put in place to provide continued and additional support to the local community and to assist the community in becoming more sustainable through the support of positive local initiatives and activities. Consequently, it is considered reasonable that a community gain fund be established by the operator of the facility. This fund should contribute towards the cost of environmental, recreational or community facilities that would be of benefit to the local community and wider region.

11. Overall conclusion

The application as submitted to An Bord Pleanála has been well prepared with a comprehensive list of supporting documentation to ensure that the effects of the proposed development are addressed and minimised. Having regard to the information submitted with the application Limerick City and County Council recommends that the following points should be clarified:

- a. Applicant to provide further information to clarify status of groundwater vulnerability at the Proposed Borrow Pit. Applicant to take into consideration the impact of water strikes at 7.32mOD and 8.03mOD with the proposed 2.5m buffer zone between groundwater table and base of proposed Borrow Pit (8.5mOD).
- b. The non-technical summary mentions that no Flora Protection Order species are in the application area. The main EIA (p.6-26) mentions a record within the 10km grid square within which the application is located. Reynolds (2012, p.489) mentions that Meadow Barley plants were translocated within the AAL property in 2007. The EIAR (6-27) mentions that such species are “unlikely to occur”. The status of another FPO species (Great Burnet) is confirmed in the EIAR and is the subject of a conservation plan prepared by AAL. Clarification in relation to the status of the Meadow Barley is required.

Should point's a and b above be clarified to the satisfaction of An Bord Pleanála Limerick City and County Council recommends that the conditions set out below be attached to any grant of permission.

12. Contributions:

A Development Contribution will be applied in accordance with the Limerick City and County Council Development Contribution Scheme

The use of land for the deposit of refuse or waste is charged at €1,000 per hectare.

The use of land for quarrying of rock, sand and gravel. €6,000 per hectare

13. Proposed Conditions:

In the event that An Bord Pleanála considers a grant of permission, it is recommended that the following conditions are considered:

1. The development shall be carried out in accordance with the plans and particulars lodged with the application on 8th day of December 2021, except as may otherwise be required in order to comply with the following conditions.

Reason - In order to clarify the development to which this permission applies

2. The developer shall pay to Limerick County Council a financial contribution in respect of public infrastructure and facilities benefiting development in the area of the Planning Authority that is provided or intended to be provided by or on behalf of the Authority in accordance with the terms of the Development Contribution Scheme made under Section 48 of the Planning & Development Act 2000 (as amended). The contribution shall be paid prior to the commencement of development or in such phased payments as the Planning Authority may facilitate and shall be subject to any applicable indexation provisions of the Scheme at the time of payment.

Reason: It is a requirement of the Planning & Development Act 2000 (as amended) that a condition requiring a contribution in accordance with the Development Contribution Scheme made under Section 48 of the Act be applied to the permission.

3. All mitigation measures proposed in the EIAR, received on 8th day of December 2022, shall be implemented in full.

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

4. All mitigation measures proposed in the Natura Impact Statement, received on 8th day of December 2022, shall be implemented in full.

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

5. A community gain fund shall be established to support facilities and services, which would be of benefit to the community in the general area. Details of the specific contribution amount, the management and operation of the community gain fund, which shall be lodged in a special community fund account, shall be submitted for the written agreement of the planning authority prior to commencement of development.

Reason: It is considered reasonable that the operator of the facility should contribute towards the cost of environmental, recreational or community facilities which would be of benefit to the community of the area.

6. The developer shall preserve, protect or otherwise record archaeological materials or features that may exist within the site by ensuring that all ground disturbance associated with the site

development is archaeologically monitored under licence from the National Monuments Service. In this regard, the developer shall –

- a.
 - i. Notify the Planning Authority in writing at least four weeks prior to the commencement of any site operation (including hydrological and geotechnical investigations) relating to the proposed development.
 - ii. Employ a suitably qualified archaeologist who shall apply for a licence to monitor all site investigations, excavation works and all ground disturbance associated with the development.
 - iii. Submit the name of the suitably qualified archaeologist to the Planning Authority four weeks in advance of the commencement of any site works (including site investigations).

- b.
 - i. Submit on completion of the ground works a report detailing the results of the licensed archaeological monitoring works to the Department of Housing, Local Government & Heritage and the Planning Authority. The report shall contain a drawing showing the exact extent of the area that was archaeologically monitored certified by the archaeologist. In the event that the development is phased, interim reports shall be submitted at each stage showing the area monitored and giving preliminary results.
 - ii. Should archaeological material be found during the course of monitoring, the archaeologist may have work on the site stopped, pending a decision as to how best to deal with the archaeology. The Development Applications Unit, National Monuments Service, Department of Housing, Local Government & Heritage and the Planning Authority Archaeologist shall be informed immediately. The developer shall be prepared to be advised by the National Monuments Service, Department of Housing, Local Government & Heritage and the Planning Authority with regard to any necessary mitigating action.
 - iii. Should an archaeological excavation be required then the following shall apply: the developer shall provide satisfactory arrangements for the recording and excavation of any archaeological material that may be considered appropriate to excavate and shall undertake to complete all post excavation analysis up to and including final report stage. Within twelve months of the completion of the excavation a final report (in the format recommended in the Guidelines for Authors of Reports on Archaeological Excavations 2006 National Monuments Service) shall be submitted to the Planning Authority

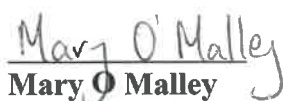
Reason - In order to conserve the archaeological heritage of the site and to secure the preservation of any remains which may exist within the site.

7. All vegetation removal shall take place outside the bird nesting period, preferably between mid-September and mid-October, to minimise disturbance both to nesting birds and wintering wildfowl.

Reason: In the interests of biodiversity

8. Blasting shall be restricted to a maximum of 7 number occurrences and shall be between the months of April and September only.

Reason: In the interest of clarity and to limit the extraction and blasting to the periods specified in the application.



Mary O Malley
Executive Planner

Date: 17-01-22



Donogh O Donoghue
Senior Executive Planner

Date: 17/01/22



Nuala O Connell
Senior Planner

Date: 17-01-2022

Appendix 1- Internal reports

- Operations & Central Services:
- Heritage Officer- Comments on the EIAR
- Heritage Officer- Comments on the AA Screening and NIS
- Planning, Environment and Place Making (Flood Section)
- Planning, Environment and Place Making (Noise Section)
- Archaeology
- Planning, Environment and Place Making (Waste Management)
- Irish Water

O'Malley, Mary

From: Carmody, Tony
Sent: 07 January 2022 18:01
To: O'Malley, Mary
Subject: RE: SID 312146-21 Aughinish Island, Askeaton

Importance: High

Hi Mary

All the works appear to be internal and the extracted rock will not be transported outside of the Applicant's landholding and will be used solely for construction projects within the applicant's holding.

Similarly, access to the BRDA area will be possible through the existing internal road system.

There is no proposed increase in size to the existing footprint of BRDA, therefore, the Road Section has no comments to add.

Regards

Tony

From: O'Malley, Mary <mary.omalley@limerick.ie>
Sent: Thursday, January 6, 2022 4:55 PM
To: O'Neill, Thomas <thomas.oneill@limerick.ie>; Cassidy, Tom <tom.cassidy@limerick.ie>; McCutcheon, Sarah <sarah.mccutcheon@limerick.ie>; Flanagan, Tara <tara.flanagan@limerick.ie>; Lambe, Dermot <dermot.lambe@limerick.ie>; O'Connor, Gerard (Eng) <gerard.oconnor@limerick.ie>; O'Keeffe, John <john.okeeffe@limerick.ie>; Gallagher, Robert <robert.gallagher@limerick.ie>; McGrath, Hugh <hugh.mcgrath@limerick.ie>; Seamas O'Reilly <seamas.oreilly@limerick.ie>; Carmody, Tony <tony.carmody@limerick.ie>; O'Leary, John <John.OLeary@limerick.ie>; Jennings, Simon <simon.jennings@limerick.ie>; Faughnan, Andrew <andrew.faughnan@limerick.ie>; Fitzgerald, Patrick <patrick.fitzgerald@limerick.ie>; Peters, Anne <anne.peters@limerick.ie>; Kennedy, Sinead <sinead.kennedy@limerick.ie>; Ryan Darragh J <darraghj.ryan@limerick.ie>; Fitzgerald, Tim <tfitzgerald@limerickcouncil.onmicrosoft.com>
Cc: O'Donoghue, Donogh <donogh.odonoghue@limerick.ie>; O'Connell, Nuala <nuala.oconnell@limerick.ie>; McGuigan, Dara <Dara.McGuigan@limerick.ie>
Subject: FW: SID 312146-21 Aughinish Island, Askeaton

Dear All,

This is a reminder about the application for a Strategic Infrastructure Development at Aughinish Alumina Ltd. Could I have your comments by 10th January.

Regards,

Mary O'Malley

Mary O'Malley
Executive Planner

O'Malley, Mary

From: O'Neill, Thomas
Sent: 07 January 2022 12:45
To: O'Malley, Mary
Subject: RE: SID 312146-21 Aughinish Island, Askeaton comments on NIS and AA screening..

Hello Mary,

Comments on AA screening and NIS below. Comments on ecological aspects of the EIAR to follow:

1 Noted that the footprint of the BRDA will not increase but that the Borrow pit to the east of the BRDA is to be extended by 3.9ha. The non-expansion of the footprint of the BRDA is welcomed.

While not strictly part of the NIS/AA screening the expansion of the Borrow pit should take place only after extensive survey, of local vegetation in particular.

The Flora Protection Order Species Meadow Barley (*Hordeum secalinum*) occurs within the lands owned by AAL and a survey should establish the presence or absence of this species and suggest mitigation measures. This may not be an issue as plants of this species were relocated from Island McTeigue to the north west of AAL lands in 2007 (Reynolds 2012, p489), but clarification would be welcomed in relation to the presence of this species within the application boundaries. This may well be dealt with in the EIAR and should this be the case it will be mentioned in my report on that document.

2 It is also noted that there will be upgrades to the water management system (p.12) to take into account the expansion of the BRDA. This is an important mitigation measure and should be included in any grant of permission.

3 The previously granted borrow pit operated between the months of April and September (p.12 and p.73 and p.110). It is also intended to use the same operating period for the expanded borrow pit. This had been included as a mitigation measure in the 2017 permission to avoid disturbance to nearby wintering wildfowl (part of the Qualifying Interests of the SPA) and its continuance is welcomed and should be included as a planning condition.

Blasting should also be limited by condition to 7 blasts per year which is mentioned as being the required amount. In addition the borrow pity should not be lit at night. This would reduce possible disturbance to the nearby SPA.

4 Give the importance of the estuary as a feeding area for wildfowl it is noted that the levels of metals within the sediment in the marine sampling area are generally below levels of concern with the exception of zinc (pp. 88-89). It is asserted that this might be a one off, but a sampling regime should be put in place in order to ensure that this is the case and to inform any future mitigation measures that may be required. This could be included as a condition requiring sampling for all relevant metals not just zinc.

5 I would agree with the findings of the NIS (s6, pp-130-133) and with inclusion of the suggested conditions mentioned above, would consider that the possibility of significant effects on both nearby Natura 2000 sites from the proposed development is greatly reduced.

If you have any questions do let me know.

All the best,

Tom.

From: O'Malley, Mary <mary.omalley@limerick.ie>
Sent: Thursday, January 6, 2022 4:55 PM
To: O'Neill, Thomas <thomas.oneill@limerick.ie>; Cassidy, Tom <tom.cassidy@limerick.ie>; McCutcheon, Sarah

O'Malley, Mary

From: O'Neill, Thomas
Sent: 10 January 2022 16:00
To: O'Malley, Mary
Subject: RE: SID 312146-21 Aughinish Island, Askeaton EIAR comments

Hello Mary,

Comments on the EIAR below:

1 The main effects on the SAC site would come from direct encroachment or indirect effects through pollution leakage. Since there are no plans for encroachment into the site this can be discounted but it would be important during the construction phase that limits for construction traffic be clearly defined to limit the possibility of inadvertent encroachment into SAC or SPA sites. To avoid possible pollution it is recommended that the mitigation measures in S10.10 of the EIAR be implemented in full and that the water management system of the BRDA be scaled up to accommodate the loadings that will be associated with the expanded BRDA. This should also apply to particulate and dust emissions from the larger BRDA.

2 Similar to the comments on the NIS, it is considered that the main risk from the expansion of the borrow pit is through noise and activity that might cause disturbance for species that are of conservation interest within the SPA. The large number of species of wildfowl and waders (s6.3.4 and p 6-38) makes the inclusion of mitigation measures of huge importance. The continuance of the measures of the 2017 permission is welcomed in that the quarry activities and blasting period be restricted to the period between April and September. These are outside the wintering wildfowl periods. These months are largely drier to the possibility of sediment laden run off is also reduced.

3 The non-technical summary mentions that no Flora Protection Order species are in the application area. The main EIA (p.6-26) mentions a record within the 10km grid square within which the application is located. Reynolds (2012, p.489) mentions that Meadow Barley plants were translocated within the AAL property in 2007. The EIAR (6-27) mentions that such species are "unlikely to occur". The status of another FPO species (Great Burnet) is confirmed in the EIAR and is the subject of a conservation plan prepared by AAL. Clarification in relation to the status of the Meadow Barley is required.

4 Recommend no additional lighting in the area of the borrow pit extension to minimise animal and bird disturbance (p6-70).

5 Recommend: that the mitigation measures mentioned in S6.5 Mitigation Measures be implemented in full. The inclusion of the night roost boxes for the Lesser Horseshoe Bats in the mitigation measures is welcomed as are the nest boxes for the Barn Owl. Both species have been mentioned in the new draft Limerick DP and the emphases on these species is strongly welcomed.

6 I would agree with the statement that the habitats that will be cleared to facilitate the expansion of the quarry are widespread in the locality. The footprint of the BRDA is not be extended to there are no implications for the loss of habitats in this area. As part of the mitigation measures and as stated in the EIAR it is requested that all vegetation removal takes place outside the bird nesting period preferably between mid September mid October to minimise disturbance both to nesting birds and wintering wildfowl.

Any questions let me know,

All the best,

Tom.

O'Malley, Mary

From: Ryan Darragh J
Sent: 10 January 2022 15:31
To: O'Malley, Mary
Cc: Kennedy, Sinead
Subject: RE: SID 312146-21 Aughinish Island, Askeaton

Mary,

PEPM have reviewed application SID 312146-21 at Aughinish Island with regard to flood risk and wish to make the following observations;

- The site is largely unmapped by CFRAMs with the closest map tile located to the west (https://s3-eu-west-1.amazonaws.com/docs.floodinfo.opw/pdf/shannon/uom_24/afa/foynes/01_ex/current/coastal/s24fos_exccd_f1_04.pdf).
- The ICWWS 2018 mapping (node S19 which is closest to the site) suggests the 0.5% and 0.1% present day AEP water level is 3.53mOD and 3.72mOD respectively.
- It is noted that the site is defined as OPW Benefitting Lands and this is considered reasonable noting the level of the embankment and ground surrounding the site.
- The top/crest level of the existing ground or embankments to the outer perimeter of the site is ~5mOD according to the non-technical EIAR summary (schematic below). The ground inside this is proposed to be raised to approx. 20mOD and higher (according to Section A-A, B-B and C-C). This is noted to be well above the S19 predicted 0.1% AEP level of 3.72mOD (or 4.22 mOD MRFS) therefore the risk of inundation of the site during an extreme flood event is considered to be very low.

Based on the above, PEPM consider that flood risk is not increased to the development or surrounding area and therefore do not raise any objections on the grounds of flooding.

Regards,
Darragh

From: O'Malley, Mary <mary.omalley@limerick.ie>
Sent: Thursday, January 6, 2022 4:55 PM
To: O'Neill, Thomas <thomas.oneill@limerick.ie>; Cassidy, Tom <tom.cassidy@limerick.ie>; McCutcheon, Sarah <sarah.mccutcheon@limerick.ie>; Flanagan, Tara <tara.flanagan@limerick.ie>; Lambe, Dermot <dermot.lambe@limerick.ie>; O'Connor, Gerard (Eng) <gerard.oconnor@limerick.ie>; O'Keeffe, John <john.okeeffe@limerick.ie>; Gallagher, Robert <robert.gallagher@limerick.ie>; McGrath, Hugh <hugh.mcgrath@limerick.ie>; Seamas O'Reilly <seamas.oreilly@limerick.ie>; Carmody, Tony <tony.carmody@limerick.ie>; O'Leary, John <John.OLeary@limerick.ie>; Jennings, Simon <simon.jennings@limerick.ie>; Faughnan, Andrew <andrew.faughnan@limerick.ie>; Fitzgerald, Patrick <patrick.fitzgerald@limerick.ie>; Peters, Anne <anne.peters@limerick.ie>; Kennedy, Sinead <sinead.kennedy@limerick.ie>; Ryan Darragh J <darraghj.ryan@limerick.ie>; Fitzgerald, Tim <tfitzgerald@limerickcouncil.onmicrosoft.com>
Cc: O'Donoghue, Donogh <donogh.odonoghue@limerick.ie>; O'Connell, Nuala <nuala.oconnell@limerick.ie>; McGuigan, Dara <Dara.McGuigan@limerick.ie>
Subject: FW: SID 312146-21 Aughinish Island, Askeaton

Dear All,

This is a reminder about the application for a Strategic Infrastructure Development at Aughinish Alumina Ltd. Could I have your comments by 10th January.

O'Malley, Mary

From: Jennings, Simon
Sent: 20 December 2021 17:37
To: O'Malley, Mary
Cc: O'Connell, Nuala
Subject: RE: SID 312146-21 Aughinish Island, Askeaton

Mary,

Please find comments on the proposed SID at Aughinish Alumina Limited.

The proposed development will increase the disposal capacity of the existing bauxite residue storage area (BDRA) with an increase in height by 12 metres above the current permitted stage 11 (32 metres OD) to a final stage 16 (44 metres OD). The proposed method of raising the BDRA will involve the construction of rock fill embankments in stages, offset internally and built on the previous stage of deposited bauxite residue, in 2 metres high vertical lifts. It is also proposed to extend the existing borrow pit eastwards, by 3.9 HA to 8.4 HA. There is 380,000 m³ of material proposed to be extracted.

Monitoring of air overpressure levels from blasting should be agreed with the EPA and should not exceed emission limit values at monitoring locations and sensitive residential properties, as well as a vibration limit of 50 mm/s (PPV) at the nearby Gas Networks Ireland pipeline.

It is not considered in the EIAR that the higher elevation of salt cake, as part of the phasing of the proposed BDRA raise over time, will be a significant source of dust due to its high moisture content. The greatest potential for dust is during the proposed construction phase and blasting. Monitoring of dust should be carried out using Berghoff dust samplers, at locations to be agreed with the EPA to protect nearby residents, ecological habitats and fauna.

Surface water from the BDRA is collected into a lined Perimeter Interceptor Channel (PIC) and diverted to the Effluent Clarification System (ECS) or the Storm Water Pond (SWP), depending on water level. Excess water from the SWP and PIC is pumped to the ECS. A Liquid Waste Pond receives the treated water from the ECS and conditions this water (cooling and settling), from which there is either a controlled discharge to the River Shannon, sprinkled onto the BDRA during dry, windy weather or back to the SWP if the effluent doesn't meet its required standard. There will be no interaction of effluent in the BDRA with groundwater. There is the potential that the increased height of the BDRA and increased hydraulic head could cause a risk of seepage through the BDRA. However, a report by Golder suggests that there will be negligible seepage due to the depth of the underlying bauxite, the characteristics of the underlying soils and the basal lining system. The EPA should ensure groundwater quality monitoring is carried out to ensure no adverse impact on the receiving groundwater body.

The elevation of the groundwater table is also believed to be below the level of the depth of the proposed borrow pit extension, although there could be isolated discharges of perched groundwater. No water management system is proposed for the borrow pit extension site although a system should be put in place to prevent potential groundwater contamination by sources such as mobile plant machinery.

Regards,

Simon Jennings
A/Senior Executive Scientist
Planning, Environment & Place-Making | Limerick City & County Council
Merchants Quay
Limerick

Tel: 061 557550

Strategic Infrastructure Development lodged with An Bord Pleanála for
Expansion of the Bauxite Residue Disposal Area at
Aughinish Alumina Limited.

Date of referral: 16.12.21

I have read the Cultural Heritage Section of the EIAR. This report includes a Geophysical Survey. The next recommended phase of works is a programme of targeted archaeological testing under licence from the National Monuments Service.

I am concerned about the lack of information in regard to the northern section of the extension to the borrow pit. This area is currently covered in vegetation, so it was not subject to geophysical survey or a walk over. Vegetation clearance in this area should be planned with archaeological input to limit ground disturbance and advance testing of a representative sample should be carried out in this area also.

No other site investigations or preparation works should be carried out in this area without the presence of a an archaeologist.

Notwithstanding the outcome of the advance test trenching, all ground disturbance should be archaeologically monitored under licence.

Attached is the preferred condition for monitoring:

Sarah McCutcheon

Local Authority Archaeologist

Limerick City & County Archaeologist

Conditions for Archaeological Monitoring

The developer shall preserve, protect or otherwise record archaeological materials or features that may exist within the site by ensuring that all ground disturbance associated with the site development is archaeologically monitored under licence from the National Monuments Service. In this regard, the developer shall –

Condition 1:

- a. Notify the Planning Authority in writing at least four weeks prior to the commencement of any site operation (including hydrological and geotechnical investigations) relating to the proposed development.
- b. Employ a suitably qualified archaeologist who shall apply for a licence to monitor all site investigations, excavation works and all ground disturbance associated with the development.

- c. Submit the name of the suitably qualified archaeologist to the Planning Authority four weeks in advance of the commencement of any site works (including site investigations).

Condition 2:

- a. Submit on completion of the ground works a report detailing the results of the licensed archaeological monitoring works to the Department of Housing, Local Government & Heritage and the Planning Authority. The report shall contain a drawing showing the exact extent of the area that was archaeologically monitored certified by the archaeologist. In the event that the development is phased, interim reports shall be submitted at each stage showing the area monitored and giving preliminary results.
- b. Should archaeological material be found during the course of monitoring, the archaeologist may have work on the site stopped, pending a decision as to how best to deal with the archaeology. The Development Applications Unit, National Monuments Service, Department of Housing, Local Government & Heritage and the Planning Authority Archaeologist shall be informed immediately. The developer shall be prepared to be advised by the National Monuments Service, Department of Housing, Local Government & Heritage and the Planning Authority with regard to any necessary mitigating action.
- c. Should an archaeological excavation be required then the following shall apply: the developer shall provide satisfactory arrangements for the recording and excavation of any archaeological material that may be considered appropriate to excavate and shall undertake to complete all post excavation analysis up to and including final report stage. Within twelve months of the completion of the excavation a final report (in the format recommended in the Guidelines for Authors of Reports on Archaeological Excavations 2006 National Monuments Service) shall be submitted to the Planning Authority

Reason - In order to conserve the archaeological heritage of the site and to secure the preservation of any remains which may exist within the site.

O'Malley, Mary

From: Lambe, Dermot
Sent: 14 January 2022 17:54
To: O'Malley, Mary
Cc: Flanagan, Tara
Subject: RE: SID 312146-21 Aughinish Island, Askeaton

Mary

Regarding the above I wish to make the following observations.

Blasting at Borrow Pit

There is a discrepancy regarding frequency of blasting required. Please see extracts below:

- a) Under Chapter 6 of the EIAR Main Text (6.5 Mitigation Measures, Page 6_95). It states blasting will be permitted between April – September and that blasting will be relatively infrequent with c. 7 blasts per year.
- b) Under Chapter 12 of the EIAR Main Text (Page 12_16). It states that up to 7 blasts will be required per year.
- c) Under Chapter 12 of EIAR Main Text (12.5.2 Noise, Air Overpressure & Vibration from Blasting, Page 12_21). Under practical methods it states there shall be no more than one blast per week at the Borrow Pit.

It is recommend that blasting is restricted to a maximum of 7 number between the months of April and September.

Groundwater at Proposed Borrow Pit

Difference in groundwater levels at Proposed Borrow Pit and buffer zone to extraction level need clarification. Please see extracts below.

- a) Under Chapter 7 of EIAR Main Text (7.3.4.1 Construction and Operation Phase impact, Page 7_26) It states that the Borrow Pit's maximum depth of extraction is 8.5mOD (Circa 2.5m above groundwater table).
- b) Under Chapter 10 of EIAR Main Text (, Page 10_95). Additional site investigation was carried out at, and in the vicinity of the proposed Borrow Pit Extension footprint. All boreholes were subsequently utilized as monitoring wells, see Figure 10.21, and indicate groundwater elevations varying between 2 mOD and 6 mOD.
- c) Under Chapter 10 of EIAR Main Text (10.6.10.6 Karst Features, Page 10_63). Boreholes were carried out to identify whether the presence of karstic features could also include groundwater at a piezometric level that is above the proposed base of the excavation level (8.5 mOD) and in quantities that could be problematic to the excavation. Water strikes during drilling were noted in BH1 and BH2 at elevations of 3.82 mOD rising to 7.32 mOD, and at 8.03 mOD respectively.

Applicant to provide further information to clarify status of groundwater vulnerability at the Proposed Borrow Pit. Applicant to take into consideration the impact of water strikes at 7.32mOD and 8.03mOD with the proposed 2.5m buffer zone between groundwater table and base of proposed Borrow Pit (8.5mOD).

Regards
Dermot Lambe

*Dermot Lambe
Executive Engineer
Waste Management
Environment, Recreation & Climate Change
Limerick City and County Council
Dooradoyle
Co. Limerick.
Tel: 061 556277*



Planning Observation Report

Version 8		
Section 1 General Information		
1.1 Planning Application No:	SID 912146-21	
1.2 Description of the development: (Copy description provided in notification letter/planning list)		
Expansion of the Bauxite Residue Disposal Area at Aughinish Alumina Limited		
1.3 Location: (Copy/Paste from description provided in notification letter/planning list. Include coordinates where available)		
Aughinish Island, Askeaton		
1.4 Planning Authority	Limerick City & County	
1.5 Type of Planning Permission	Strategic Infrastructure Development	
1.6 Date Application Lodged with Planning Authority	ABP 9/12/2021	
Section 2 Water Connection Planning Assessment (NOTE Observations should be aligned with COF where available)		
2.1 Does the proposed development require a WATER service connection from Irish Water?	No	
2.2 Please provide PCE number for this development if PCE has been submitted.	IW New Connections Viewer	
2.3 Please provide COF number for this development if COF has been Issued.		
2.4 Water Plant Name	sewss	
2.5 Scheme Code	1900PUB1027	
2.6 Is water connection feasible		
2.7 Is the development in close proximity to, or propose to Build Over an IW Asset		
Section 3 Waste Water Connection Planning Assessment (NOTE Observations should be aligned with COF where available)		
3.1 Does the proposed development require a WASTE service connection from Irish Water?	No	
3.2 Please provide PCE number for this development if PCE has been submitted.	IW New Connections Viewer	
3.3 Please provide COF number for this development if COF has been issued.		
3.4 Waste Water Scheme Name		
3.5 Agglomeration Code		
3.6 Is waste water connection feasible		
3.7 Is the development in close proximity to, or propose to Build Over an IW Asset	No	
Section 4 Impact on Wastewater Treatment Plant		
4.1 Is the development likely to cause overloading potentially impacting receiving waters	No	
4.2 Is a Section 16 licence required	No	
4.3 Is the proposed development within the buffer zone of a waste water treatment plant	No	
Section 5 Impact to Drinking Water Source		
5.1 Is the development located within an Inner or Outer Source Protection Zone	Neither	
5.2 Is the development proposal likely to impact an IW drinking water source during construction and/or operation?	No	
Section 5 Please provide observations here Link to Standard Planning Responses		
Comment: The SEWSS WTP site is adjacent to the disposal site. The plant is in operation since 1982 and delivers over 3 million gallons of treated water per day to the processing plant who were founding partners in the scheme. The plant is staffed full time on a shift basis. An ISO 9001/2000 accreditation operated from 2003 for several years. The recorded procedures noted that an open water channel, which ran from the WTP site to the foreshore, was inspected annually and is of high importance. This channel takes washings from the plant and therefore needs to be protected and maintained. Irish Water has the following observations in respect of the proposed development: 1.The open channel from the WTP site to the foreshore shall be protected and maintained.		
No Objection		
Completed by Water Section Waste Water Section Approved by	Name Pat Fitzgerald Pat Fitzgerald Maria O'Dwyer	Organisation Local Authority Local Authority Irish Water

