

# Attachment A.1.

## Non-Technical Summary

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## A.1. Introduction

The following Non-Technical summary has been provided in accordance with the requirements of Article 12 (1) (u) of the Waste Management (Licensing) Regulations, S.I. 395 of 2004.

All figures referred to within the Non-Technical Summary are included in Attachment N of the Waste Management Licence Application Document.

Kiernan Sand and Gravel Ltd, Foxtown Townland, Summerhill, County Meath intends to apply to the Environmental Protection Agency for a waste licence for the continued operation of a waste recovery facility on lands at Foxtown Townland, Summerhill, County Meath (National Grid Reference 285633E 253005N) (Refer to Figure A.1).

The nature of the development is the continued phased restoration of a sand and gravel pit using imported inert soils, stone, and recovery of inert construction and demolition waste. It is proposed that circa 77,000 cubic metres per annum of inert materials will be accepted to site.

The principal activity is Class 4 (recycling or reclamation of inorganic materials) of the Fourth Schedule of the Waste Management Act, 1996 to 2008. Other activities include Class 13 of the Fourth Schedule (temporary storage pending recycling or reclamation).

In Compliance with Article 12 (1) (u) of the Waste Management (Licensing) Regulations, S.I. 395 of 2004 we have presented below a non-technical summary of the information provided in accordance with paragraphs (a) to (t) of sub-article 12(1) of the said regulations.

**A.1.(a) give the name, address and, where applicable, any telephone number and telefax number of the applicant (and, if different, the operator of the facility concerned), the address to which correspondence relating to the application should be sent and, if the applicant or operator is a body corporate, the address of its registered office or principal office,**

### *Applicant's Details*

**Name\*:** KIERNAN SAND & GRAVEL LTD

**Address:** FOXTOWN ,  
SUMMERHILL,  
CO. MEATH

**Tel:** 046 9557924

**Fax:** Not Applicable

**e-mail:** Not Applicable

**Name and Address for Correspondence****Name:** J SHEILS PLANNING & ENVIRONMENTAL LTD**Address:** 31 ATHLUMNEY CASTLE,  
NAVAN,  
Co. MEATH**Tel:** 046/ 9073997**Fax:** 046/ 9020618**e-mail:** johnsheils@jspe.ie**Address of registered or principal office of Body Corporate****Address:** KIERNAN SAND & GRAVEL LTD  
FOXTOWN ,  
SUMMERHILL,  
CO. MEATH**Tel:** 046 9557924**Fax:** Not Applicable**e-mail:** Not Applicable

**A.1.(b) give the name of the planning authority in whose functional area the relevant activity is or will be carried on,**

**Name:** MEATH COUNTY COUNCIL**Address:** PLANNING DEPARTMENT,  
ABBAY MALE, ABBAY ROAD  
NAVAN  
Co. MEATH**Tel:** 046/ 909 7000**Fax:** 046/ 909 7001

**A.1.(c) in the case of a discharge of any trade effluent or other matter (other than domestic sewage or storm water) to a sewer of a sanitary authority, give the name of the sanitary authority in which the sewer is vested or by which it is controlled,**

Not Applicable (Surface water run-off only)

**A.1.(d) give the location or postal address (including, where appropriate, the name of the townland or townlands) and the National Grid reference of the facility or premises to which the application relates,**

**Name:** KIERNAN SAND & GRAVEL LTD

**Address\*:** FOXTOWN ,  
SUMMERHILL,  
CO. MEATH

**Tel:** 046 9557924

**Fax:** Not Applicable

**e-mail:** Not Applicable

<b>National Grid Reference (8 digit 4E,4N)</b>	285633E, 253005N
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**A.1.(e) describe the nature of the facility or premises concerned, including the proposed capacity of the facility or premises and, in the case of an application in respect of the landfill of waste, the requirements specified in Annex 1 of the Landfill Directive,**

The nature of the development is the continued phased restoration of a sand and gravel pit using imported inert soils, stone, and recovery of inert construction and demolition waste. It is proposed that circa 77,000 cubic metres per annum of inert materials will be accepted to site.

Restoration of the active pit workings is at present subject to compliance with the existing WMP 2007/22.

The volume of material required to be imported to the site to complete the proposed restoration scheme has been calculated (using the Digital Terrain Modelling Software Package LSS) and is shown below.

**Volume of Void Space Remaining at Kiernan Sand & Gravel Ltd, Foxtown, Co. Meath**

Phase	Void Space m <sup>3</sup>	*Compacted Volume m <sup>3</sup>	**tonnes	Life Span
1	67,000	73,700	147,400	1
	67,000	73,700	147,400	2
	67,000	73,700	147,400	3
2	67,000	73,700	147,400	4
	67,000	73,700	147,400	5
	67,000	73,700	147,400	6
3	67,000	73,700	147,400	7
	33,500	36,850	73,700	7.5
<b>Totals</b>	<b>502,500</b>	<b>552,750</b>	<b>1,105,500</b>	<b>7.5</b>

**Notes:**

\* An approximate settlement factor of 10% has been assumed following placement of materials.

\* Assumes 67,000 m<sup>3</sup> recovered per annum (subject to market conditions).

\*\* Assumes density of imported soils as 2 tonnes/m<sup>3</sup>

The lands are to be restored to Forestry by importation and recovery of inert materials in accordance with a phased restoration scheme. It is the intention to restore the lands to woodland. Each phase will be for a duration of about 2-3 years (Refer to Figures B.2.1 & B.2.4).

The nature of the development is the continued phased restoration of a sand and gravel pit using imported inert soils, stone and recovery of clean construction and demolition waste. It is estimated that c. 20,000 tonnes per annum of inert construction and demolition waste will be recovered at the facility. Recovered material will be used for internal haul roads and/or dispatched offsite.

**A.1.(f) specify the class or classes of activity concerned, in accordance with the Third and Fourth Schedules of the Act and, in the case of an application in respect of the landfill of waste, specify the class of landfill in accordance with Article 4 of the Landfill Directive,**

The principal activity is Class 4 (recycling or reclamation of inorganic materials) of the Fourth Schedule of the Waste Management Act, 1996 to 2008. Other activities include Class 13 of the Fourth Schedule (temporary storage pending recycling or reclamation).

**A.1.(g) specify, by reference to the relevant European Waste Catalogue codes as presented by Commission Decision 2000/532/EC of 3 May 2000 11 , the quantity and nature of the waste or wastes which will be treated, recovered or disposed of,**

Waste material	EWC Code	Quantity		On-site recovery/disposal <sup>2</sup> (Method & Location)
		Tonnes / month	m <sup>3</sup> / month	
Concrete	17 01 01	1,674	835	Will be used to construct haul roads and hardstanding areas on site and/or processed for secondary aggregates As Above As Above As Above As Above As Above
Bricks	17 01 02			
Tiles & Ceramics	17 01 03			
Mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06	17 01 07			
Track ballast other than those mentioned in 17 05 07	17 05 08			
Mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03	17 09 04			
Soil and stones other than those mentioned in 17 05 03	17 05 04	12,285	6,140	Used to restore sand & gravel pit workings
Dredging spoil other than those mentioned in 17 05 05	17 05 06			Used to restore sand & gravel pit workings

**A.1.(h) specify the raw and ancillary materials, substances, preparations, fuels and energy which will be utilised in or produced by the activity,**

The only waste to be accepted at the facility for recovery comprises inert soils and stone, and inert construction and demolition waste. As such the material does not undergo any form of processing involving the use of chemicals or additives.

The water supply for the site office and wheelwash is met by an existing borehole on site. On days requiring dust suppression water usage would amount to 5 to 10 m<sup>3</sup> per day.

The only raw materials used on site are diesel, hydraulic oil and engine oil which will be used to operate diesel powered plant on site. The mobile double skinned (integrated bunding) fuel bowser will have a capacity of c.1360 litres and will be refueled weekly..

**A.1.(i) describe the plant, methods, processes, ancillary processes, abatement, recovery and treatment systems and operating procedures for the activity,**

The attached Site Infrastructure Plan (Refer to Figures D.1.1) indicates the location of all activities and identifies all buildings and facilities at the Recovery Facility.

Materials to be recovered will only be accepted from approved Contractors who are aware of the need for and who undertake strict segregation and sorting of waste prior to transporting it to the application site.

All truck loads entering the site will be given a preliminary visual inspection on entering the site. If the material is not considered acceptable the haulier will be refused entry and directed to an appropriate Waste Management Facility. Any Contractor who persistently carries unacceptable waste to the application site will be denied further use of the facility. Details of all truckloads entering the site are entered into a logbook maintained by the operator.

Accepted materials will be subject to a Second inspection after each load is tipped at the restoration infill area within the site. Should a load of material indicate contamination of non inert material on inspection, the material is reloaded and the driver instructed to remove the load offsite to an approved facility.

Occasionally a load will contain minor contaminants (e.g. plastics, rebar, wood and paper). These items are removed on inspection by a site operative and stored in skips in a designated quarantine area pending removal offsite by a licensed waste disposal contractor to an appropriate disposal facility.

Following the second inspection the material will be accepted and placed within the restoration (placement by bulldozer) area or in the case of topsoil placed in temporary storage awaiting final placement.

Restoration of the active pit workings is at present subject to compliance with the existing WMP 2007/22. The lands are to be restored to Forestry by importation and recovery of inert materials in accordance with a phased restoration scheme. It is the intention to restore the lands to woodland. Each phase will be for a duration of about 2-3 years (Refer to Figures B.2.1 & B.2.4).

A bulldozer is used to appropriately grade and compact the material to the desired profile as shown by the detailed plans and sections (Refer to Figures B.2.4 and B.2.5).

The final landform will comprise a ridge running northwest to southeast which will be similar in profile to the original esker ridge that ran through the lands (Refer to Figure B.2.4).

Redundant structures, plant equipment and stockpiles will be removed from site on cessation of pit activity.

Clean construction and demolition waste will either be placed directly on haul roads or temporarily placed in storage awaiting recovery.

### **Dust Abatement**

- During dry weather the haul roads and stockpiles are sprayed with water to dampen any likely dust blows. A water bowser is maintained on site for this purpose.
- Consideration will be given to location of mobile plant so as to ensure that any principle dust sources cannot adversely affect sensitive off-site locations.
- Static and mobile wet dust suppression systems will be located at strategic points in the process if required.
- Drop heights are kept to a minimum by using short conveyors and maintaining stocks under the head drum load out points.
- A wheel wash facility has been installed on site and all vehicles are required to pass through the wheel wash on exiting the site.



- Main site haulage routes within the site shall be maintained with a good temporary surface.
- All internal roadways will be adequately drained, to prevent ponding.
- The operator has purchased a road sweeper and ensures that the site entrance and adjoining public roadway is regularly cleaned. The sweeper is readily available at short notice to sweep up any materials which may accidentally fall onto the public roadway.
- Suitable vegetation is to be provided on restored areas at the earliest opportunity.

### **Surface Water Abatement**

As the only material to be imported to site is "Soil and stone" and inert construction and demolition waste there will be no source of possible contamination of surface and/or ground waters.

There are no surface water courses adjoining the site. Surface water-off within the site percolates to ground through the floor of the sand and gravel pit into the underlying limestone bedrock. There is no discharge of surface water run-off from the site.

As the only material to be imported to site is "Soil and stone" and inert construction and demolition waste there will be no source of possible contamination of surface and/or ground waters.

There is no discharge of surface water run-off from the site. A Buffer zone of 30 metres has been provided to the nearest surface water course to the site. A further 30m strip has either been restored and/or used to store indigenous soils for final restoration along the eastern site boundary.

Our client is proposing to replace the existing bunded fuel storage tank on site with a mobile double skinned (integrated bunding) fuel bowser to refuel mobile plant on site. The bowser will be provided with a Spill tray and spill kit.

Oil and Waste oil products are stored under cover. All oil barrels and lubricants will be stored on spill pallets/ spill trays. Waste oils are disposed of by a licensed waste contractor and removed off site.

Spill kits will also be maintained on site and the Company will put in place an emergency response procedure for hydrocarbon spills and appropriate training of site staff in its implementation.

The wash-water is recycled through a system of containment tanks. The tanks will be periodically cleaned and the silt will be used within the restoration of the site.

### **Noise Abatement**

A number of noise containment measures are proposed:

- The provision of temporary peripheral screen banks to screen site activities from outside views.
- General site activity will be within the existing pit and below the level of the nearest residences.
- The use of designated haul roads to ensure that site traffic is removed from nearest noise sensitive receptors.
- Regular maintenance of all plant and machinery is an integral part of site management and is important in helping to minimise noise impact.
- All plant and equipment will conform to noise emission limits set out in Statutory Instrument No. 320 of 1998 European Communities Construction Plant and Equipment- Permissible Noise Levels (Regulations, 1998) and amendment set out in Statutory Instrument No. 359 of 1996.
- Noise monitoring can be carried out at four noise monitoring stations (N4-N6) in the vicinity of the nearest noise sensitive properties (Refer to Figure F 1) in accordance with any monitoring programme agreed with the EPA.

The results of monitoring to date shows that the development can comply with the noise level threshold as specified and as a consequence the development will have no significant effects regards noise levels in the area.

**A.1.(j) provide information for the purpose of enabling the Agency to make a determination in relation to the matters specified in paragraphs (a) to (g) of section 40(4) of the Act,**

Due consideration has been given to the requirements of Section 40(4)[(a) to (i)] of the Waste Management Acts 1996-2008 through preparation of the Waste Management Licence Application as follows.

An Environmental Management System is proposed to be put in place with continued environmental monitoring of noise, dust and groundwater on site. Details with respect to

control and abatement, accepted emission limit values and monitoring requirements are provided in the Waste Management Application (in particular refer to Attachment F). The measures proposed will ensure that emissions from the recovery activities will not result in the contravention of any relevant standard, including any standard for an environmental medium, or any relevant emission limit value.

Details with respect to the nature, scale, operation, impact, control and abatement, monitoring, closure and aftercare have been provided through preparation of the Waste Management Licence application. The measures proposed are considered adequate to ensure that the facility will continue to be operated in accordance with any conditions attached to the licence and the landfill directive so as not to cause environmental pollution.

The only waste to be accepted at the facility for restoration of the lands will comprise inert soils and stone, and inert construction and demolition waste. As such the material does not undergo any complicated process other than inspection prior to recovery and placement. As such there is little or no requirement to apply Best Available Technology (BAT) with respect to the recovery operations.

The continued operation of an inert waste recovery operation will significantly reduce the quantities of such waste currently being sent to landfill sites in the Region. As such, the proposed development is entirely consistent with the aims and objectives of both National Regional and Local government policy.

The applicant (Kiernan Sand & Gravel Ltd) or other relevant person have not been convicted under the Waste Management Acts 1996 to 2003, the EPA Act 1992 and 2003, the Local Government (Water Pollution) Acts 1977 and 1990 or the Air Pollution Act 1987.

Kiernan Sand & Gravel Ltd is an established small family run business based in Foxtown, Co Meath. Mr James V Kiernan – Facility Manager will be responsible for the overall management of the facility including implementation of the proposed Environmental Management System. The facility manager has over 27 years experience in the extractive industry including 1 year operating & managing the existing Waste Recovery Management Facility.

In accordance with condition No. 19 of planning permission P.A. Reg. Ref. QY 48 (QC. 17.QC 2113) the developer is required to lodge with the planning authority an approved insurance company bond in the sum of €50,000 to secure the satisfactory completion and restoration of the site, coupled with an agreement empowering the planning authority to apply such security or part thereof to the satisfactory completion and restoration, including all necessary demolition and removal.

The applicants will ensure an insurance company bond is in place to ensure satisfactory completion and restoration of the site in accordance with the landscaping and restoration programme proposed.

Kiernan Sand & Gravel Ltd are an established family run business. The Company are in position to to meet any financial commitments or liabilities that may have been or will be entered into or incurred in carrying on the activity to which the Waste Licence Application relates, or in consequence of ceasing to carry out that activity.

The only raw materials used on site are diesel, hydraulic oil and engine oil which will used to operate diesel powered plant on site. Electricity will be used on site to power the office, site office, on site lighting and security camera. Energy requirements are low equivalent to a small domestic property. Energy efficiencies will be achieved by using modern plant and equipment and servicing the equipment on a scheduled basis.

Noise emissions generated from the site activity will continue to be monitored and controlled to an acceptable standard as conditioned under the existing planning permissions and any further conditions under an EPA waste licence for the proposed restoration of the site.

**A.1.(k) give particulars of the source, location, nature, composition, quantity, level and rate of emissions arising from the activity and, where relevant, the period or periods during which such emissions are made or are to be made,**

### **Air**

The materials to be recovered are principally “soils and stone” and inert construction and demolition waste. Any dust generated by the operation will comprise inert particulate matter. Dust emanates from the placement of materials, the movement of vehicles on internal roads and loading and processing operations. However the effect of wind is also an important factor in dust generation and problems may arise at reclamation workings when both factors arise simultaneously. The impact of fugitive dust will be direct, temporary and non-cumulative and largely confined to the application site.

### **Surface Water**

As the only material to be imported to site is “Soil and stone” and inert construction and demolition waste there will be no source of possible contamination of surface waters. The natural drainage pattern existing on site means that rain water falling on the site percolates through the existing soil strata (sand and gravel) to the underlying bedrock. The existing

drainage pattern is expected to remain unaltered following cessation of the reclamation operations.

There are no surface water courses adjoining the site. Surface water-off within the site percolates to ground through the floor of the sand and gravel pit into the underlying limestone bedrock. There is no discharge of surface water run-off from the site.

### **Sewer**

On site activities will not discharge to any sewerage system. The applicants propose to use the existing toilet facility within the sand and gravel pit. This facility is adequate to meet the continued requirements of the existing development given that the facility will be operated by the existing staff of two to three.

### **Groundwater**

As the only material to be imported to site is "Soil and stone" and inert construction and demolition waste there will be no source of possible contamination of groundwater waters. The natural drainage pattern existing on site means that rain water falling on the site percolates through the existing soil strata (sand and gravel) to the underlying bedrock. The existing drainage pattern is expected to remain unaltered following cessation of the reclamation operations.

Due to the nature of material to be deposited the potential for pollution to the underlying aquifer will be limited.

### **Noise**

The main source of noise and vibration on site is from:

- Movement of trucks on internal haul roads and tipping of material
- Bulldozer placing and grading the infill material
- Processing Plant

Noise monitoring to date has shown that site activity at the existing facility are within accepted thresholds for this type of development.

**A.1.(l) give details, and an assessment of the effects, of any existing or proposed emissions on the environment, including any environmental medium other than that into which the emissions are, or are to be, made, and of proposed measures to prevent or eliminate or, where that is not practicable, to limit or abate such emissions,**

## **Air**

The materials to be recovered are principally “soils and stone” and inert construction and demolition waste. Any dust generated by the operation will comprise inert particulate matter.

Dust emanates from the placement of materials, the movement of vehicles on internal roads loading and processing operations. However the effect of wind is also an important factor in dust generation and problems may arise at reclamation workings when both factors arise simultaneously. The impact of fugitive dust will be direct, temporary and non-cumulative and largely confined to the application site.

The relatively high rainfall of the area, and experience of similar environments elsewhere in Ireland, suggests that baseline dust levels of approximately 40 mg/m<sup>2</sup>/day to 60 mg/m<sup>2</sup>/day would be expected for an open pastoral landscape during drier periods of the year (May to September).

In accordance with condition No. 9 of planning permission P.A. Reg. Ref. QY 48 (QC. 17.QC 2113) “total dust deposition (soluble and insoluble) from the site operations associated with the development shall not exceed 350mg/sq.m/day, averaged over a continuous period of 30 days.”.

In order to comply with this condition the operator has set up a dust monitoring programme using Bergerhoff Dust Gauges. Two dust monitoring stations (A2-4, A2-5) were established at the site boundary (Refer to Environmental Monitoring Plan Figure F 1). It is proposed to commence dust monitoring during the summer months.

A number of measures have been adopted to minimise dust emissions to the atmosphere from general site activity, internal haulage, processing and tipping operations (Refer to Section A.1.(i) above).

It is considered given the nature of the activity, control and abatement measures and management of the existing recovery facility that emissions of pollutants (as defined in Waste Management Acts 1996 to 2003 and Air Pollution Acts 1992 and 1987 respectively) to the atmosphere are not likely to impair the environment (i.e. be injurious to public health, or have a deleterious effect on flora or fauna or damage property, or impair or interfere with amenities or with the environment).

### **Surface Water**

As the only material to be imported to site is "Soil and stone" and inert construction and demolition waste there will be no source of possible contamination of surface waters.

The nearest watercourse to the application site is the Boycetown River which is approximately 750m from the boundary of the site.

There are no surface water courses adjoining the site. Surface water-off within the site percolates to ground through the floor of the sand and gravel pit into the underlying limestone bedrock. There is no discharge of surface water run-off from the site. It is not considered necessary to monitor surface water in the area.

### **Ground/groundwater emissions**

It is considered that the inert materials used for the restoration of the site will not cause a pollution risk to the ground/groundwater in the area of the site.

A detailed ground investigation study of both the lands restored and currently under restoration has been carried out. This report provides a description of the geological character of the already-infilled subsoils on the site. Trial pits and a visual assessment of the site were completed in the field.

The overlying sand and gravel deposits have largely been extracted from within the area comprising the application area for the waste management licence down to a depth of c.1 m above the water table. Bedrock was known to outcrop on the pit floor but is now largely obscured by the backfilling operations. Backfilling of the pit subject to the existing waste management permit has been taking place since 2007. The pit floor has been filled to a depth of c, 2m above the water table in Phase 1 (Refer to Figure B.2.1). The backfill material is reasonably consistent comprising clean Brown Silts / Clays with gravels that have mostly originated from Dublin. Inert construction and demolition waste only accounts for <5% of the fill material.

The aquifer classification for the bedrock in the area is classified as a locally important aquifer - Bedrock which is generally unproductive except for local zones. The vulnerability rating within the site is high given the nature of the sand and gravel deposits (which have largely been removed) directly overlying bedrock. As the only material to be imported to site is "Soil and stone" and inert construction and demolition waste there will be no source of possible contamination of groundwater waters.

The groundwater flows in a north to north-easterly direction towards the Boycetown River which is c. 750m distant.

No source protection areas were identified within c. 2 km of the site (Refer to Figure I.4.4). Therefore the site is not subject to the restrictions or requirements of a groundwater source protection zone.

A groundwater monitoring programme will also be put in place to ensure that there is no impact on water quality as a result of the recovery operations.

It is envisaged that the inert materials used for the restoration of the site will not cause a pollution risk to the ground/groundwater in the area of the site

## Noise

The lands are being restored to agricultural use by importation and recovery of inert materials in accordance with a phased restoration scheme. Designated internal haul roads are used to direct site traffic to the current tipping area. A bulldozer is used to appropriately grade and compact the material to the desired profile as shown by the detailed plans and sections (Refer to Figures B.2.4 and B.2.5). There is also intermittent noise associated with the processing operations.

The principle concern in respect of potential noise emissions from the development is the effect on residential amenity. Properties within the vicinity of the development are shown on Figure B.2.2. Noise monitoring to date has shown that site activity at the existing facility are within accepted thresholds for this type of development.

Noise resulting from the operations can be kept to acceptable levels by the implementation of good design, effective operation and management and by the adoption of 'best practices'. Reducing noise at source wherever possible is the most effective way of minimising the impact but barriers and screens between noise source and receptor can also



be used to very good effect. A number of noise containment measures are proposed (Refer to Section A.1.(i) above).

**A.1.(m) identify monitoring and sampling points and indicate proposed arrangements for the monitoring of emissions and the environmental consequences of any such emissions,**

**Air**

In accordance with condition No. 9 of planning permission P.A. Reg. Ref. QY 48 (QC. 17.QC 2113) “total dust deposition (soluble and insoluble) from the site operations associated with the development shall not exceed 350mg/sq.m/day, averaged over a continuous period of 30 days.”.

In order to comply with this condition the operator has set up a dust monitoring programme using Bergerhoff Dust Gauges. Two dust monitoring stations (A2-4, A2-5) were established at the site boundary (Refer to Environmental Monitoring Plan Figure F 1). It is proposed to commence dust monitoring during the summer months.

Dust fall is measured using the Bergerhoff method as set out in German Standard VDI 2119. The normal recommended standard for dust emissions for this type of development is that “dust deposition shall not exceed 350 mg/m<sup>2</sup>/day measured at the site boundaries and averaged over 30 days”. This limit refers to total dust (using DIN method).

The above standard is also in accordance with guidance issued by both the Department of the Environment and the EPA in relation to dust deposition monitoring for these types of developments and will continue to be applied.

This programme will allow on-going monitoring of fugitive dust emissions from the site, thereby assisting in ensuring compliance with any future requirements or regulations.

**Surface Water**

The nearest significant watercourse to the application site is the Boycetown River which is approximately 750m from the boundary of the site. There are no surface water courses adjoining the site.

There is no discharge of surface water run-off from the site. It is not considered necessary to monitor surface water in the area

**Groundwater**

There are three wells on site (Refer to Environmental Monitoring Plan Figure E 1.0).

It is proposed to monitor these wells in accordance with the conditions as attached to the waste licence for the facility. It is not considered that any discharge of surface water run-off to ground will result in any significant effect on the quality of the groundwater.

## Noise

The operator has established an environmental monitoring programme to include noise monitoring. Noise levels will continue to be monitored in accordance with ISO 1996/1 – 1982 (E) *“Acoustics – Description and measurement of environmental noise”*.

It is proposed to continue to carry out noise monitoring at the three locations (N4 to N6) and include the nearest noise sensitive locations (Refer to Figure F.1). It is proposed to carry out noise monitoring on a bi-annual basis.

In accordance with the Environmental Protection Agency Integrated Pollution Control Licensing Guidance note for Noise in relation to Scheduled Activities 2<sup>nd</sup> Edition (2006) *“the noise attributable to on-site activities should not generally exceed a free-field L<sub>A</sub>,T value of 55 dB by daytime (08:00 – 22:00), at any noise sensitive location. During night-time (22:00 – 08:00), the noise attributable to on-site activities should not exceed a free-field L<sub>A</sub>eq, T value of 45 dB”*.

It is therefore considered that the above EPA threshold should be applied for this development as this limit is a recognised standard within the industry and is a limit that is set by most of the Local Authorities. These levels are consistent with guidance issued by the Department of the Environment. *“Quarries and Ancillary Activities – Guidelines for Planning Authorities (2004) DOEHLG”* and the EPA *“Environmental Management in the Extractive Industry (Non-Scheduled Minerals) Environmental Management Guidelines (2006)”*.

The results of monitoring to date shows that the development can comply with the noise level threshold as specified and as a consequence the development will have no significant effects regards noise levels in the area.

This programme will allow on-going monitoring of noise emissions from the site, thereby assisting in ensuring compliance with any future requirements or regulations.

Through implementation of the proposed mitigation measures it is considered the development will continue to have no significant effects with regard to noise levels on the local residences, their property, livestock and amenity.

### **A.1. (n) describe any proposed arrangements for the prevention, minimisation and recovery of waste arising from the activity concerned,**

Occasionally a load will contain minor contaminants (e.g. plastics, rebar, wood and paper). These items are removed on inspection by a site operative and stored in skips in a designated quarantine area pending removal offsite by a licensed waste disposal contractor to an appropriate disposal facility.

Waste oil products are stored within the existing container on site. Waste oils are disposed of by a licensed waste contractor and removed off site. All oil barrels and lubricants are stored on spill pallets/ spill trays. The operator will put in place an emergency response procedure for hydrocarbon spills and appropriate training of site staff in its implementation.

**A.1.(o) describe any proposed arrangements for the off-site treatment or disposal of solid or liquid wastes,**

Occasionally a load will contain minor contaminants (e.g. plastics, rebar, wood and paper). These items are removed on inspection by a site operative and stored in skips in a designated quarantine area pending removal offsite by a licensed waste disposal contractor to an appropriate disposal facility.

**A.1.(p) describe the existing or proposed measures, including emergency procedures, to prevent unauthorised or unexpected emissions and minimise the impact on the environment of any such emissions**

The operator is to put in place an Environmental Management System (EMS) which will address such matters as Emergency Preparedness & Response in dealing with accident and emergency situations resulting in effects on the environment.

An emergency telephone contact list will be maintained at the site inspection office.

It is considered that accidents and emergency situations resulting in effects on the environment is confined to possible emissions to surface and/or groundwater in the event of a fuel spillage. As such the following Emergency/Spill Response Procedures will be put in place.

The main risk associated with oil or chemical spills is the potential for the spill to enter drains, watercourses, soils and the ground water system, causing contamination and / or fire or explosion risk.

It should be noted that significant emphasis has been placed on control and abatement measures to ensure there is no risk to surface and /or groundwater i.e.

- A mobile double skinned (integrated bunding) fuel bowser will be used to refuel mobile plant on site.
- Waste oil products are stored within the existing container on site. Waste oils are disposed of by a licensed waste contractor and removed off site.
- All oil barrels and lubricants will be stored on spill pallets/ spill trays.
- Spill kits will also maintained on site.
- Any inappropriate materials discovered (e.g. glass, plastic, timber, steel, etc) will be stored within skips provided in the designated quarantine area awaiting removal off site by an approved waste collection contractor to an approved facility.

**A.1.(q) describe the proposed measures for the closure, restoration, remediation or aftercare of the facility concerned, after the cessation of the activity in question,**

The lands are to be restored to agricultural use by importation and recovery of inert materials in accordance with a phased restoration scheme. On completion of each phase of development final restoration including grading, planting/seeding and landscaping will be carried out. The final contours and topography for the site is shown by the Final Landform Plan Figure B.2.4 and Cross Sections B.2.5.

Redundant structures, plant equipment and stockpiles will be removed from site on cessation of pit activity.

There will be no on-going requirement for environmental monitoring after extraction operations have ceased. A final site inspection 6 months after site closure will be carried out to ensure that the final site restoration scheme implemented is functioning and progressing as required.

**A.1.(r) in the case of an application in respect of the landfilling of waste, give particulars of –**

**(i) such financial provision as is proposed to be made by the applicant, having regard to the provisions of Articles (7)(i) and (8)(a)(iv) of the Landfill Directive and section 53(1) of the Act, and**

**(ii) such charges as are proposed or made, having regard to the requirements of section 53A of the Act,**

In accordance with condition No. 19 of planning permission P.A. Reg. Ref. QY 48 (QC. 17.QC 2113) the developer is required to lodge with the planning authority an approved

insurance company bond in the sum of €50,000 to secure the satisfactory completion and restoration of the site, coupled with an agreement empowering the planning authority to apply such security or part thereof to the satisfactory completion and restoration, including all necessary demolition and removal.

The applicants will ensure an insurance company bond is in place to ensure satisfactory completion and restoration of the site in accordance with the landscaping and restoration programme proposed.

Kiernan Sand & Gravel Ltd are an established family run business. The Company are in position to to meet any financial commitments or liabilities that may have been or will be entered into or incurred in carrying on the activity to which the Waste Licence Application relates, or in consequence of ceasing to carry out that activity.

**A.1.(s) state whether the activity is for the purposes of an establishment to which the European Communities (Control of Major Accident Hazards Involving Dangerous Substances) Regulations 2000 (S.I. No. 476 of 2000) apply,**

The European Communities (Control of Major Accident Hazards involving Dangerous substances) Regulations, 2000 (S.I. No. 476 of 2000) do not apply as the establishment only accepts inert material for recovery.

**A.1.(t) in the case of an activity which gives rise or could give rise to an emission into an aquifer containing the List I and II substances specified in the Annex to Council Directive 80/68/EEC of 17 December 1979, describe the existing or proposed arrangements necessary to give effect to Articles 3, 4, 5, 6, 7, 8, 9 and 10 of the aforementioned Council Directive,**

It is not anticipated that any List I and List II substances will be discharged to groundwater from the inert Waste Recovery Facility.