Attachment E

Revised Non-Technical Summary (Application Form)

(Attachment A.1 - Revision 03)

Attachment A.1.

Non-Technical Summary

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, as amended.

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

Clashford Recovery Facilities Ltd., Ring Commons, Grouga, Balbriggan, County Dublin intend to apply to the Environmental Protection Agency for a waste licence for the continued operation of its existing waste recovery facility on lands at Naul, Naul Townland, Co. Meath (National Grid Reference 313399E 261545N) (Refer to Figure A.1.0, Rev. A).

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 40,000 to 70,000 cubic metres per annum of inert materials will be accepted to site to complete the restoration of the lands to beneficial after use. It is estimated that c. 20,000 tonnes per annum of inert construction and demolition waste is to be recovered at the facility.

The principal activity is Class R 5 of the Fourth Schedule of the Waste Management Act 1996, as amended (recycling/reclamation of other inorganic materials, which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials). Other activities include Class R 13 of the Fourth Schedule (Storage of waste pending any of the operations numbered R 1 to R 12 (excluding temporary storage (being preliminary storage according to the definition of 'collection' in section 5(1)), pending collection, on the site where the waste is produced)).

In Compliance with Article 12 (1) (u) of the Waste Management (Licensing) Regulations, S.I. 395 of 2004, as amended 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*:	CLASHFORD RECOVERY FACILITIES LTD.
Address:	NAUL TOWNLAND,
	NAUL,
	CO. MEATH
Tel:	01/ 841 1826
Fax:	None
e-mail:	info@clashford.com

Name and Address for Correspondence

Name:	J SHEILS PLANNING & ENVIRONMENTAL LTD
Address:	31 ATHLUMNEY CASTLE,
	NAVAN,
	Co. MEATH
Tel:	046/ 9073997
Fax:	None
e-mail:	johnsheils@jspe.ie

Address of registered or principal office of Body Corporate

Address:	CLASHFORD RECOVERY FACILITY LTD
	RING COMMONS,
	BALBRIGGAN,
	CO. DUBLIN
Tel:	01/ 841 1826
Fax:	None
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,
	BUVINDA HOUSE, DUBLIN 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:	CLASHFORD RECOVERY FACILITIES LTD.
Address*:	NAUL TOWNLAND,
	NAUL,
	CO. MEATH
Tel:	01/ 841 1826
Fax:	None
e-mail:	info@clashford.com

National Grid Reference (8 digit 4E,4N)	**O 1334 6155**

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 40,000 to 70,000 cubic metres per annum of inert materials will be accepted to site to complete the restoration of the lands to beneficial after use. It is estimated that c. 20,000 tonnes per annum of inert construction and demolition waste is to be recovered at the facility.

The lands have been progressively restored subject to successive WMP's dating back to 2001. The phased scheme for final restoration of the area is shown by Figure B.2.4 – Rev C.

Volume of Void Space at Clashford Recovery Facility, The Naul, Co. Meath

Phase	Void Space						Life Span *Remaining*
	Filled		Remaining		Totals		
	m³	***tonnes***	***m³***	***tonnes***	***m³***	***tonnes***	
Restored Lands	*380,000*	*760,000*	*None*	*None*	*380,000*	*760,000*	Completed 2009
1	*210,000*	*420,000*	*None*	*None*	*210,000*	*420,000*	Completed 2011
2	*452,000*	*904,000*	*None*	*None*	*452,000*	*904,000*	*Restoration 6 to 12 months*
3	*93,000*	*186,000*	*174,000*	*348,000*	*267,000*	*534,000*	*3 to 5 Years*
Final Restoration	-	-	-	-	-	-	*1 year*
Totals	*1,135,000*	***2,270,000***	*174,000*	*348,000*	*1,309,000*	***2,618,000***	

Notes:

1. * Assumes 70,000 m^3 recovered per annum (subject to market conditions).
2. Assumes density of imported soil and stone as 2 tonnes/m^3

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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 R 5 of the Fourth Schedule of the Waste Management Act 1996, as amended (recycling/reclamation of other inorganic materials, which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials). Other activities include Class R 13 of the Fourth Schedule (Storage of waste pending any of the operations numbered R 1 to R 12 (excluding temporary storage (being preliminary storage according to the definition of 'collection' in section 5(1)), pending collection, on the site where the waste is produced)).

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 Tonnes / annum	On-site recovery (Method & Location)
Concrete	17 01 01	20,000	Will be used to construct haul roads and hardstanding areas on site and/or processed for secondary aggregates
Bricks	17 01 02		As Above
Tiles & Ceramics	17 01 03		As Above
Mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06	17 01 07		As Above
Mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03	17 09 04		As Above
Soil and stones other than those mentioned in 17 05 04	17 05 04	80,000 to 140,000	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^3 per day.

The only raw materials used on site are diesel, hydraulic oil and engine oil which will used to operate diesel powered plant on site. The overall fuel use will amount to about 30,000 litres/annum. Diesel Plant on site will be refuelled using a mobile fuel bowser or double skinned road tanker

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.

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 Plans (Refer to Figures D.1.1 – Rev. C & D.1.2 – Rev. C) indicate 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 are given a preliminary visual inspection at the site office. If the material is not considered acceptable the haulier is refused entry and directed to an appropriate Waste Management 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, and/or hardstanding. 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; and/or the material will be stored in the quarantine area awaiting removal 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 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.

The lands have been progressively restored subject to successive WMP's dating back to 2001. The phased scheme for final restoration of the area is shown by Figure B.2.4 – Rev. C.

The lands are to be restored to agricultural use by importation and recovery of inert materials in accordance with a phased restoration scheme. It is the intention to develop them for amenity/equestrian use.

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 – Rev. C and B.2.5 – Rev. C).

Once the topsoil is re-instated it will be seeded with a suitable mix of grasses suitable for pasture in order to quickly stabilise the topsoil. Once the grass sward has become established the restored farmland can be kept either as pasture, hay meadow or arable land. Part of the area has already been restored to pasture.

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

Clean construction and demolition waste will be placed in temporarily storage awaiting recovery. Recovery and re-cycling activities at the application site involves tipping of previously stockpiled 'unprocessed' material into a crushing & processing plant using a front-end loader (Refer to EIAR Figures D.1.1 & D.1.2 – Rev C). The processing is undertaken periodically as materials are required using semi mobile crushing and screening plant on site. Material produced by the plant is then transported by front-end loader from production stockpiles around the plant to 'processed' stockpiles. Recovered material is to be used for internal haul roads and/or will be dispatched offsite as secondary aggregates

Dust Abatement

A number of measures have been adopted to minimise dust emissions to the atmosphere from general site activity, internal haulage and tipping operations as follows:

- 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.
- A sprinkler system has been installed on the site access road and is in operation during periods of dry weather.
- Main site haulage routes within the site shall be maintained with a good temporary surface, as is the case at present.
- All internal roadways will be adequately drained, to prevent ponding.
- A road sweeper is available for use on site and adjacent sections of the R108 at least on a weekly basis and/or if a spillage occurs onto the public roadway.
- Suitable vegetation is to be provided on restored areas at the earliest opportunity

Surface Water and Groundwater 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. The reclamation scheme has been designed so that surface water will drain to the stream at the north eastern boundary.

To mitigate against the risk of pollution to groundwater and surface water occurring during operation of the site, the following management measures will be included:

- All plant will be regularly maintained and inspected daily for leaks of fuels, lubricating oil or other contaminating liquids/liquors;
- Diesel Plant on site will be refuelled using a mobile fuel bowser or double skinned road tanker.
- Refuelling will take place on the hard standing area to be provided at the C&D Recovery area with drainage to oil interceptor.
- Oil and Waste oil products are stored under cover. All oil barrels and lubricants are 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 from the wheel-wash is recycled through a system of silt lagoons with overflow to a surface water outlet. The lagoons are periodically cleaned and the silt is used within the restoration of the site.
- A temporary settlement facility has been provided at the northeast boundary for the collection and settlement of suspended solids prior to the water entering the surface drainage course. (Refer to Figure D.1.2 – Rev C,).
- The existing welfare facilities will be replaced including provision of septic tank and percolation area. The installation and of the septic tank and percolation area will be in compliance with the EPA (2010), COP: Wastewater Treatment and Disposal Systems Serving Single Houses (p.e. < 10).
- A surface water and groundwater monitoring programme has been put in place to ensure that there is no impact on water quality because of the recovery operations.

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-N7) in the vicinity of the nearest noise sensitive properties (Refer to Figure F 1.0 – Rev. C) 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. Noise emissions and their management will be addressed in the 'Environmental Management System' (EMS) for the Clashford site.

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 (g)] of the Waste Management Act 1996, as amended 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, surface 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 (Clashford Recovery Facilities Ltd) or other relevant person have not been convicted under the Waste Management Act 1996, as amended, the EPA Act 1992 and

2003, the Local Government (Water Pollution) Acts 1977 and 1990 or the Air Pollution Act 1987.

Clashford Recovery Facilities Ltd is an established small family run business based in Naul, Co Meath. Mr Larry 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 40 years' experience including 17 years in operating & Managing the existing Waste Recovery Management Facility.

Clean closure is envisaged such that all plant is safely removed for reuse or recycling and all wastes are removed off site at the time of closure for appropriate recovery or disposal.

A Closure Plan & Environmental Liability Risk Assessment has been prepared for the proposed Inert Waste Recovery Facility at Clashford. Details with respect to Financial Provisions are addressed through this submission.

The Company are in position 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.

It is acknowledged that as a typical condition of any waste licence that the Agency may amend the licence at any time in certain circumstances in accordance with section 42B of the Waste Management Act 1996 as amended, to require, or not require as the case may be, the putting in place of a financial provision to incorporate costings for CRAMP and/or Environmental Liabilities Risk Assessment. This amendment may be implemented by the Agency in the event of an incident that creates a significant residual environmental liability or where the environmental risk profile changes on site.

Clashford Recovery Facilities Ltd has estimated the closure and restoration/ aftercare requirements (€75,141). Clashford Recovery Facility if deemed necessary will put in place a secure fund, and/or on demand performance bond.

The form and value of the financial provision being subject to agreement with the EPA. 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 and Groundwater

The main sources of potential contamination identified included leakage and spillage of fuels and chemicals, leaching to groundwater from the infill deposition areas and material with pollution potential on site surfaces such as loose sediment. The pathways by which the contamination could reach potential receptors include surface water runoff and on-site drainage pathways and lateral and vertical migration via groundwater flow paths. The potential receptors included local surface water courses, the underlying bedrock aquifers and the County Council/Irish Water groundwater supply wells.

The potential on-site sources of contamination identified are not significant and the environmental risk posed to the identified receptors by these sources is considered to be low. Controls such as appropriate bunding and an effective environmental management plan, typically conditioned under a waste licence, will effectively manage the risks posed to groundwater and surface at the site.

While there are several small water quality issues with the existing groundwater quality dataset, overall the available data (soils, leachate, groundwater and surface water data) indicates that there is no apparent significant indictor that identifies the existing Clashford site as a major source of groundwater contamination locally.

A Local Authority/Irish Water groundwater abstraction well is located to the east of the Clashford site, although the site is not mapped within the OPZ of the source. There is no risk posed to this OPZ from the Clashford WRF facility, as they are hydraulically disconnected on opposites side of the Delvin River.

Based on the available environmental data, there has been no significant impact on the environment from the imported fill within Phase 2 Restoration Area, or from the overall Clashford WRF site. Similarly, the expansion of the site through the importation of stone and sand based fill material will not have a significant effect as they are composed of inert material that will not produce a contaminant leachate.

There is a considerable distance between the Clashford WRF site and any of the Natura 2000 sites. For all Natura 2000 sites sediment or surface water has to travel in the river and then the sea to get to any of the Natura 2000 sites. The shortest flowpath is to the River Nanny Estuary and Shore SPA (Site Code: 004158), and this is some 10.5kms (including 1.5kms of open sea water). The distances involved and the dilution available imply that any discharges from the Clashford WRF cannot conceivably impact on these downstream designated sites.

Based on all available environmental data, the overall risk to groundwater and surface water from the fill is low and the will not affect the status of the local surface water bodies (Delvin River and tributary) and groundwater bodies (Duleek GWB and Lusk GWB).

Sewer

On site activities will not discharge to any sewerage system. The existing welfare facilities will be replaced including provision of septic tank and percolation area. The installation and of the septic tank and percolation area will be in compliance with the EPA (2010), COP: Wastewater Treatment and Disposal Systems Serving Single Houses (p.e. < 10).

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

In general the future restoration works will be further removed from the nearest noise sensitive residences in the area. 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.

Routine dust deposition monitoring is carried out in compliance with condition No. 8 of planning permission P.A. Reg. Ref. QY/36 (17.QC.2085) which states that the total dust deposition (soluble and insoluble) arising from the onsite operations associated with the development shall not exceed 350 milligrams per square metre per day averaged over a continuous period of 30 days.

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 Act 1996, as amended 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

The nature of the development is the continued phased restoration of a sand and gravel pit using imported inert soils, stone and the import of inert Construction and Demolition (C&D) waste to produce secondary aggregates.

It is proposed that the existing site office including welfare facilities will be replaced including provision of septic tank and percolation area. The washwater from the wheel

wash facility is recycled through a system of two silt lagoons which overflow to a surface water outlet. The lagoons are cleaned periodically, and the settled silt is used as part of the site restoration. The wheelwash will be upgraded and relocated towards the site entrance.

The only other discharge from the site area is surface water run-off. The reclamation scheme has been designed to drain surface water run-off to the northern boundary area of the site. Currently all surface water runoff from the pit/recovery area of the site passes through two settlement lagoons prior to discharge to the tributary of the Delvin River. Surface water drainage from the restored farmland to the south of the site is discharged to the Delvin River through a land drain at three locations as shown on Site Infrastructure – Surface Water Management Plan Figure D 1.2 Rev C.

2018 laboratory analysis of surface water did not detect any significant levels of pollutants in the samples besides high coliform and orthophosphate concentrations. However, these are not unexpected in an area of agricultural land use and with the presence of the Naul WWTP in close proximity to the site.

The pathways by which the contamination could reach potential receptors include surface water runoff and on-site drainage pathways and lateral and vertical migration via groundwater flow paths. The potential receptors included local surface water courses, the underlying bedrock aquifers and the County Council/Irish Water groundwater supply wells.

The potential on-site sources of contamination identified are not significant and the environmental risk posed to the identified receptors by these sources is considered to be low. Controls such as appropriate bunding and an effective environmental management plan, typically conditioned under a waste licence, will effectively manage the risks posed to groundwater and surface at the site.

There is a considerable distance between the Clashford WRF site and any of the Natura 2000 sites. For all Natura 2000 sites sediment or surface water has to travel in the river and then the sea to get to any of the Natura 2000 sites. The shortest flowpath is to the River Nanny Estuary and Shore SPA (Site Code: 004158), and this is some 10.5kms (including 1.5kms of open sea water). The distances involved and the dilution available imply that any discharges from the Clashford WRF cannot conceivably impact on these downstream designated sites.

Based on all available environmental data, the overall risk to groundwater and surface water from the fill is low and the will not affect the status of the local surface water bodies (Delvin River and tributary) and groundwater bodies (Duleek GWB and Lusk GWB).

The impact of releasing non-attenuated suspended solids from surface run-off at the Clashford Facility development site has the potential to be a negative short-term moderate to significant impact on Tributary No 1 that drains the north of the site and the Delvin River that flows along the southern boundary of the site. Any drainage not captured in this system will infiltrate into the ground and recharge to the underlying aquifer. The implementation of mitigation measures specified below will reduce the overall risk of surface water contamination in Tributary 1 and the Delvin River during operation of the quarry restoration works.

The most effective means by which to implement the proposed measures is to condition the mitigation measures as part of a permission for the waste licence at the site. The most effective mitigations measures for the site are:

It is proposed that Tributary 1 and the Delvin River should be monitored frequently during the on-going site works in Phase 2 and future site works planned in Phase 3 to ensure that the water quality is not adversely affected by on-site activities.

Discharge monitoring will continue to be undertaken at the discharge monitoring point to Tributary 1 on a quarterly basis for the following parameters: BOD, COD, Suspended Solids, Total Petroleum Hydrocarbons and Fats, Oils and Grease in order to ensure that the quarry discharge is not impacting negatively on the Tributary 1 and the Delvin River.

The drainage pipe provided along the northern extent of the restoration works in the P2 area will ensure that Tributary 1 is protected from untreated surface water run-off during the backfilling of the restoration area. Surface water runoff from this area should be directed into the settlement lagoons before discharging to Tributary 1.

It is proposed to install perimeter drains where required around the restoration area to capture and divert runoff to the current closed system for treatment.

Slurry spreading and organic fertiliser spreading on-site should adhere strictly to the Good Agricultural Regulations S.I. No. 31 of 2014. Appropriate buffer zones should be maintained from all watercourses as stipulated in the Regulations when applying fertiliser and other chemicals to the land.

A temporary settlement facility has been provided at the northeast boundary for the collection and settlement of suspended solids prior to the water entering the surface drainage course.

The operator has put in place a programme of surface water monitoring (for suspended solids) so as to ensure the effectiveness of the settlement ponds in removing suspended solids. It is proposed to continue to carryout monitoring upstream and downstream of the discharge point in accordance with any monitoring programme agreed with the EPA.

Ground/groundwater emissions

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.

Various historic phases of site investigation (2009, 2014 and 2017) have been completed at the site.

Detailed geological and hydrogeological assessments were prepared as part of the Waste Licence application (Refer to Waste Licence Application Sections I.2 to I.5) and the 2018 Environmental Impact Assessment Report (EIAR) for the site

An Environmental Assessment and Risk Assessment report (HES Report Ref. P1317-2) has also been prepared by Hydro Environmental Services (HES) in response to a notice issued by the EPA on 18th December 2017 under Article 16(1) of the Waste Management (Licencing) Regulations 2004, which required an environmental liabilities risk assessment (ELRA) to be prepared in accordance with Guidance on assessing and costing environmental liabilities (EPA 2014). This (characterisation) report identifies the environmental risks associated with the Clashford site to allow the ELRA to be undertaken. The HES report brings together historical monitoring data together with recent site investigation data completed by HES on 13th March 2018 and 23rd April through to 1st May 2018.

Site investigations in 2018, undertaken by HES, has identified soils and subsoils consistent with those encountered during the 2009, 2014 and 2017 investigations. Imported soils/subsoils are generally dry, grey brown, and comprise mainly stiff boulder clays and glacial tills. Natural (underlying) ground was encountered below the fill material in boreholes BH03, and BH04, and BH05. The imported fill material is similar in nature to glacial deposits found in County Meath and north County Dublin.

There is a small percentage of C&D material in the imported fill, and this mainly comprises concrete and plastic, and some builders' materials. Broken concrete gravels and gravel fill were generally found close to on site access roads. This type of material appears to have been used to make up the site roads as fill progressed.

2018 laboratory analysis of groundwater did not detect any significant levels of pollutants in the groundwater samples taken at the Clashford WRF site. However, elevated levels of iron, manganese, arsenic, barium, chloride, potassium and ammonium were recorded. The detections of iron, manganese, and ammonia are attributed to natural background conditions underlying the site. A likely source of elevated nitrogen, potassium and chloride is land spreading of organic fertilizer to aid in the revegetation process at the

site. The other detections (arsenic and barium) are considered to be minor exceedances.

The main sources of potential contamination identified included leakage and spillage of fuels and chemicals, leaching to groundwater from the infill deposition areas and material with pollution potential on site surfaces such as loose sediment. The pathways by which the contamination could reach potential receptors include surface water runoff and on-site drainage pathways and lateral and vertical migration via groundwater flow paths. The potential receptors included local surface water courses, the underlying bedrock aquifers and the County Council/Irish Water groundwater supply wells.

The potential on-site sources of contamination identified are not significant and the environmental risk posed to the identified receptors by these sources is considered to be low. Controls such as appropriate bunding and an effective environmental management plan, typically conditioned under a waste licence, will effectively manage the risks posed to groundwater and surface at the site.

While there are several small water quality issues with the existing groundwater quality dataset, overall the available data (soils, leachate, groundwater and surface water data) indicates that there is no apparent significant indictor that identifies the existing Clashford site as a major source of groundwater contamination locally.

A Local Authority/Irish Water groundwater abstraction well is located to the east of the Clashford site, although the site is not mapped within the OPZ of the source. There is no risk posed to this OPZ from the Clashford WRF facility, as they are hydraulically disconnected on opposites side of the Delvin River.

Based on the available environmental data, there has been no significant impact on the environment from the imported fill within Phase 2 Restoration Area or from the overall Clashford WRF site. Similarly, the expansion of the site through the importation of stone and soil-based fill material will not have a significant effect as they are composed of inert material that will not produce a contaminant leachate.

Based on all available environmental data, the overall risk to groundwater and surface water from the fill is low and the will not affect the status of the local surface water bodies (Delvin River and tributary) and groundwater bodies (Duleek GWB and Lusk GWB).

The continued operation of the recovery facility has the potential to impact on groundwater in terms of both the groundwater quality and the groundwater flow regime. The implementation of mitigations measures specified will reduce the overall risk of groundwater contamination beneath, and downgradient of, the quarry in addition to reducing the risk of altering the groundwater recharge beneath the site during the restoration works at the quarry.

It is considered that following restoration and the mitigation measures incorporated in the design that there will be no significant effects in terms of Land, Soils and Geology. Due to the inert nature of the fill material, no significant residual impacts on the water environment are anticipated.

A number of measures have been proposed to minimise ground/groundwater emissions from general site activity, internal haulage, processing and tipping operations (Refer to Section A.1.(i) above).

There are no significant residual impacts with respect to groundwater and/or surface water provided the appropriate mitigation measures are implemented. It is therefore considered that the siting of an inert recovery facility in this location is acceptable and that there will be no significant short term or long term impacts on groundwater and/or surface water.

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 – Rev. C and B.2.5 – Rev. C). There is also intermittent noise associated with the Construction and Demolition 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 – Rev. C. As shown the nearest noise sensitive locations are along the R108 Regional road to the west of the existing site.

The main noise sources in the area are from the R108 Regional Road and an adjacent concrete batching plant. The area of restored lands completed to date adjoins the north western boundary of the site. In general the future restoration works will be further removed from the nearest noise sensitive residences in the area. 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

The existing waste management permit (WMP 2005/25) states that "*dust deposition shall not exceed 350mg/sq.m/day, average over 30 days, when measured at site boundaries. The developer shall carryout twice-yearly dust monitoring at the locations indicated in the application*".

In order to comply with this condition, the operator 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 1.0 – Rev. C). Following discussion with the Environmental Protection Agency (EPA) it has been agreed to include a further two monitoring locations so as to account for prevailing winds.

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

It is proposed that Tributary 1 and the Delvin River should be monitored frequently during the on-going site works in Phase 2 and future site works planned in Phase 3 to ensure that the water quality is not adversely affected by on-site activities.

Discharge monitoring will continue to be undertaken at the discharge monitoring point to Tributary 1 on a quarterly basis for the following parameters: BOD, COD, Suspended Solids, Total Petroleum Hydrocarbons and Fats, Oils and Grease in order to ensure that the quarry discharge is not impacting negatively on the Tributary 1 and the Delvin River.

The location of Environmental Monitoring locations are shown on Environmental Monitoring Plan F 1.0 – Rev C. The future monitoring programme will be revised accordingly, subject to compliance with any conditions attached to any decision to grant a Waste Management Licence.

It is not considered that the surface water discharge from the site will result in any significant effect on the quality of the receiving waters.

Groundwater

There are a number of water wells located within the site boundary. Well GW1, located near the site entrance from the R108, is intended as a water supply source for the office, canteen and toilet facilities within the site.

Well GW2, located in the south of the Clashford WRF site is used as a water source for the site sprinkler system and farmland area.

The other wells on site (GW3, GW4, and GW5) are groundwater monitoring wells, and are not used for groundwater abstraction. (Refer to Environmental Monitoring Plan Figure F 1.0 – Rev. C).

It is proposed that groundwater monitoring be carried out biannually. This is recommended to ensure that the restoration of the site is not impacting on the groundwater beneath the site and to establish on-going trends in the groundwater monitoring boreholes.

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.

Following discussion with the EPA it has been agreed to include a further two monitoring locations (N6, N7). In total the four noise monitoring stations correspond with the dust monitoring locations and include the nearest noise sensitive locations (Refer to Figure F.1.0 – Rev. C). It is proposed to carryout noise monitoring on a bi-annual basis.

The EPA Guidance Note (NG4) addresses a number of specific activities including Quarrying and Mining Operations. Detailed guidance in relation to noise and vibration associated with these activities is provided in the Agency publication Environmental Management in the Extractive Industry (EPA, 2006).

In relation to quarry developments and ancillary activities, it is recommended that noise from the activities on site shall not exceed the following noise ELVs at the nearest noise-sensitive receptor:

Daytime	(08:00 — 20:00)	L_{Aeq} (1 hour)	55 dB (A)
Nighttime	(20:00 — 08:00)	L_{Aeq} (1 hour)	45 dB (A)

(Note: 95% of all noise levels shall comply with the specified limit value(s). No noise level shall exceed the limit value by more than 2 dBA).

These same *"appropriate Emission Limit Values (ELV's)*" for quarry developments are also set out in the 2nd Edition of the Irish Concrete Federation Environmental Code (ICF, 2005).

These levels are also consistent with guidance issued by the Department of the Environment: "Quarries and Ancillary Activities – Guidelines for Planning Authorities (2004) DOEHLG".

The noise levels measured on site must be in compliance with P.A Reg. Ref. QY/36 (17.QC.2085) i.e. Condition No.6 - *"the noise levels associated with day to day activity, when measured from any house in the vicinity of the quarry, shall not exceed 55 dB (a) leq over a measured time interval of one hour by day time and shall not exceed 45 dB (A) leq over a measured time of 15 minutes by night time. These levels may be exceeded to allow temporary but exceptionally noisy phases in the extraction process or for short term construction activity which is required to bring long-term environmental benefits following written consent by Meath County Council".*

It is considered that the noise limit imposed at the WRF should be in accordance with existing condition No. 6 of P.A. Reg. Ref. QY/36 (17.QC.2085) being consistent with both the EPA (2006a) and DoEHLG(2004b) guidelines as detailed above.

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. Noise emissions and their management will be addressed in the 'Environmental Management System' (EMS) for the Clashford site.

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, metal, wood and paper). These items are removed on inspection by a site operative and stored in a designated quarantine area pending removal offsite by a licensed waste disposal contractor to an appropriate recovery/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. Spill kits are also 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.

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 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 is 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.

- Diesel Plant on site will be refuelled using a mobile fuel bowser or double skinned road tanker.
- Refuelling will take place on the hard standing area to be provided at the C&D Recovery area with drainage to oil interceptor.
- Supervision of all fuel refilling works by the Manager or other authorised member of staff;
- The placement of a clean drum/bucket under the refuelling point, during refuelling operation, to collect any spillages that may occur;
- The storage of 'Spill Kits' close to the refuelling point to soak up any spillages which may occur immediately.
- All plant/machinery will be inspected regularly to ensure that there are no leakages of fuel or hydraulic fluid and all plant/machinery will be serviced regularly.
- Oil and Waste oil products are stored under cover. All oil barrels and lubricants are stored on spill pallets/ spill trays.
- Spill kits are also 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.
- Waste oils are disposed of by a licensed waste contractor and removed off site.
- Any inappropriate materials discovered (e.g. glass, plastic, timber, steel, etc) will be stored within 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,

Clean closure is envisaged such that all plant is safely removed for reuse or recycling and all wastes are removed off site at the time of closure for appropriate recovery or disposal.

A Closure Plan & Environmental Liability Risk Assessment has been prepared for the proposed Inert Waste Recovery Facility at Clashford.

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, 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 – Rev. C and Cross Sections B.2.5 – Rev. C.

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,

A Closure Plan & Environmental Liability Risk Assessment has been prepared for the proposed Inert Waste Recovery Facility at Clashford. Details with respect to Financial Provisions are addressed through this submission.

The Company are in position 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.

It is acknowledged that as a typical condition of any waste licence that the Agency may amend the licence at any time in certain circumstances in accordance with section 42B of the Waste Management Act 1996 as amended, to require, or not require as the case may be, the putting in place of a financial provision to incorporate costings for CRAMP and/or Environmental Liabilities Risk Assessment. This amendment may be implemented by the Agency in the event of an incident that creates a significant residual environmental liability or where the environmental risk profile changes on site.

Clashford Recovery Facilities Ltd has estimated the closure and restoration/ aftercare requirements (€75,141). Clashford Recovery Facility if deemed necessary will put in place a secure fund, and/or on demand performance bond. The form and value of the financial provision being subject to agreement with the EPA.

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,

In this case only inert soils and stone, and inert construction and demolition waste is to be accepted at the facility for recovery and phased restoration of a sand and gravel pit to a contoured landform that will be in keeping with the surrounding landscape.

Based on all available environmental data, the overall risk to groundwater and surface water from the fill is low and the will not affect the status of the local surface water bodies (Delvin River and tributary) and groundwater bodies (Duleek GWB and Lusk GWB).

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

Environmental Impact Assessment Report (EIAR)

An Environmental Impact Assessment Report (EIAR) has been submitted in support of the licence application. The likely significant effects of the activity are summarised in the following Table.

Table A.1.1 EIAR Summary Table

Environmental Factor	Likely effects identified	Brief description of effect	Mitigation measures proposed to control effect
Population & Human Health	The most likely effects are due to dust, noise and traffic.	They are more fully described in their respective EIAR Sections (See below). The impact of the restoration works to date has had a positive impact on the environment in returning these lands to beneficial use including establishing new woodland habitat along the Delvin River valley.	Mitigation measures are described in the respective EIAR sections (See below). An EMS including EMP and Environmental monitoring will be put in place. The site will be reinstated in accordance with the phased restoration scheme for the quarry, and thus integrated back into the surrounding landscape with the attendant improvement to the visual amenity of the area.
Biodiversity	The impact of inert waste recovery on this site will be considerable in local terms but will not result in any loss of heritage values in the locality. The changes will be both positive (gain of woodland) and negative (loss of open habitats).	The surrounding habitat has a low level of ecological interest except in the valley of the Delvin River and the continuance of infill and re-afforestation will have a significant positive impact on it. Sediment control measures will prevent any impact on the nearby river. The site will be reinstated in accordance with the approved quarry restoration scheme, and thus integrated back into the surrounding landscape.	The site will be reinstated in accordance with the approved quarry restoration scheme, and thus integrated back into the surrounding landscape. A programme of eradication of Japanese knotweed is to be implemented on site. The applicant as part of their Site Pre-Approval Procedure will only accept material from pre-approved sites where an appropriate invasive species risk assessment has been carried out by a qualified person. Restoration will include the removal of all machinery and structures and the smoothing of the contours to facilitate the establishment of grassland and grazing animals. The proposed development will be subject to an EPA Waste Management Licence. As such a Closure and Restoration/After Care Management Plan (CRAMP) may be required as a condition of the Waste Licence.
Land, Soils & Geology	The potential impact to groundwater quality due to the deposition of inert infill material is an indirect, negative, imperceptible, long term, low probability impact before appropriate mitigation measures are considered.	The groundwater vulnerability rating after the fill will be improved as the additional fill will provide additional aquifer protection at the site. The worst-case scenario would be an impact on groundwater quality resulting from importation of contaminated soil and stones were waste acceptance procedures not to be followed. Worst case impacts are only likely to be a slightly alteration of the groundwater quality locally. These minor local effects are not expected to compromise groundwater quality with respect to groundwater or drinking water regulations.	The WRF will have designated areas for the quarantine of any inappropriate materials which may be found within loads accepted at the site. Materials to be recovered will only be accepted from approved contractors. Only hauliers with the appropriate Waste Collection Permits will be accepted. All material arriving on site will be subject to inspection on site prior to and during unloading; Environmental monitoring, including local groundwater and surface water monitoring.

Environmental Factor	Likely effects identified	Brief description of effect	Mitigation measures proposed to control effect
Water	Surface & Groundwater Quality	The main sources of potential contamination identified included leakage and spillage of fuels and chemicals, leaching to groundwater from the infill deposition areas and material with pollution potential on site surfaces such as loose sediment. The pathways by which the contamination could reach potential receptors include surface water runoff and on-site drainage pathways and lateral and vertical migration via groundwater flow paths. The potential receptors included local surface water courses, the underlying bedrock aquifers and the County Council/Irish Water groundwater supply wells. The potential on-site sources of contamination identified are not significant and the environmental risk posed to the identified receptors by these sources is considered to be low. The groundwater vulnerability rating after the fill will be improved as the additional fill will provide additional aquifer protection at the site. The potential impact to groundwater quality due to the deposition of inert infill material is an indirect, negative, imperceptible, long term, low probability impact before appropriate mitigation measures are considered. There is the potential for sediment and/or chemical loss to surface waters, but this will be minimised by the existing and planned control measures, by the local drainage gradient and by the distance to surface waters. The restoration of the site will result in a moderate positive effect in the medium term	Adequate containment of site fuels and oils, to prevent any accidental spillages which may migrate to the subsoils and underlying groundwater; Diesel Plant on site is refuelled from a double skinned fuel tanker that is mobilised to site on a needs basis. Spill trays and spill kits should be provided at all times; Adequate drainage network for the interception and treatment of runoff prior to entry into surface water drains, i.e., a drainage network that is not overwhelmed by runoff; Strict control measures to ensure only suitable material is allowed onto the site, i.e., thorough inspection of waste loads entering the site to confirm inert nature prior to deposition on-site; Only granular wastes should be deposited into areas immediately above the groundwater table to prevent the influx of suspended solids into groundwater; A Drainage pipe has been provided along the Northwestern boundary of the P2 restored area, to intercept any surface run-off and direct it into the settlement lagoons before discharge to Tributary 1; and Continuance of Surface & Groundwater Monitoring.
Climate	The development is not expected to affect the local climate or microclimate of the area,	It is considered that following completion of the backfilling works there will be a slight to imperceptible positive impact with respect to climate due to restoration to agriculture and forested lands.	There is no requirement for mitigation or monitoring within this development proposal in respect of climatic issues
Air Quality	The operational phase is likely to produce emissions of dust. However, the site and associated vegetation should be sufficient to reduce any impacts of dust deposition upon sensitive receptors.	The impacts of any dust deposition from the operations will be direct, of short duration, temporary and largely confined to the site area. It is expected that there will be imperceptible neutral impact with respect to local amenity and residential receptors as a result of the development	Use of dust suppression measures including wheelwash facilities to prevent material being transferred to external roads. Static and mobile wet dust suppression systems. Road sweeper. Use of a bowser & sprinkler system to distribute water on haul roads. Dust monitoring. In the long term the development will result in reduced potential for emissions of dust because the site will be restored and revegated.

Environmental Factor	Likely effects identified	Brief description of effect	Mitigation measures proposed to control effect
Noise & Vibration	Impact of Noise from site activity and traffic on sensitive receptors	Noise levels due to site activity are within acceptable thresholds. Given that site activity will in general be further removed from the nearest noise sensitive locations the overall impact with respect to noise will be further reduced with respect to the continuance of operations.	The provision of temporary peripheral screen banks. General site activity will be within the existing pit and below the level of the nearest residences. The use of designated haul roads. All machinery used will be CE certified for compliance with EU noise control limits. Regular maintenance of all plant and machinery All plant and machinery is switched off when not in use. A noise management programme will be defined as part of the EMS.
Landscape	Existing partly unrestored, degraded quarry site	The restoration of the site to beneficial after-use will result in a permanent significant positive effect in the medium term.	The restoration plan involves the progressive backfilling of the quarry void on a phased basis, with natural inert soil and stone sourced externally and imported. Topsoil will be seeded and the area returned to useable agricultural grassland for livestock grazing with substantial wooded habitat
Cultural Heritage	None	As the proposed development is within the worked-out area of a sand and gravel pit no mitigation measures are required and there will be impact on the archaeological, architectural or cultural heritage resource.	None required.
Material Assets	The most likely effects are due to dust, noise and traffic.	They are more fully described in their respective EIAR Sections (See above & below). The impact of the restoration works to date has had a positive impact on the environment in returning these lands to beneficial use including establishing new woodland habitat along the Delvin River valley. The restoration of the site to beneficial after-use will result in a permanent significant positive effect in the medium term.	Mitigation measures are described in the respective EIAR sections (See above & below). An EMS including EMP and Environmental monitoring will be put in place. The site will be reinstated in accordance with the phased restoration scheme for the quarry, and thus integrated back into the surrounding landscape with the attendant improvement to the visual amenity of the area.
Traffic	Impact on roads, road users and nearest sensitive receptors	The traffic impact of the quarry is at present considerably less than it was at full production in the period prior to 2008. During that period the traffic generated by the quarry had no adverse effect on traffic movement on the surrounding road networks. The traffic arising from the proposal to continue operating the WRF and importing soil and stone into the quarry will not increase traffic above the 2008 levels. The traffic impact of the WRF and quarry on the surrounding road network, including the R108 and R122, is considered minimal.	The wheelwash will be upgraded and relocated towards the site entrance. In the unlikely event that a spillage occurs, the applicant will ensure that spilled material is removed from the road surface in a safe and timely manner, as soon as they become aware of it, or are notified that a spillage has arisen. Traffic direction signs, warning signs, speed limit signs are established throughout the site. A weighbridge will be provided. The existing palisade fence at the entrance is to be replaced with a stone wall and separate entrance gate provided for access to the site office. A dedicated car-park for employees and visitors is to be provided adjoining the new site office.