

Submission	
Submitter:	Mrs Joanna Troughton
Organisation Name:	H.S.E.
Submission Title:	Environmental Health Service submission
Submission Reference No.:	S011065
Submission Received:	06 April 2023

Application	
Applicant:	Kilsaran Concrete Unlimited Company
Reg. No.:	W0311-01

See below for Submission details.

Attachments are displayed on the following page(s).

Environmental Licensing Programme Office of Environmental Sustainability Environmental Protection Agency

**Date:** 06 April 2023

**Type of consultation**: Waste Management Licence

**EHIS Reference** 3063

Dear Sir/Madam

Please find enclosed the HSE consultation Report in relation to the above proposal. The following HSE departments were made aware of the consultation request for the proposed development on the 3<sup>rd</sup> March 2023

- Emergency Planning Brendan Lawlor
- Estates Helen Maher/Stephen Murphy
- Director of National Health Protection Eamonn O'Moore
- CHO Martina Queally

If you have any queries regarding this report please contact, Eugene Monahan principal Environmental Health Officer in the first instance.

**Yours Sincerely** 

Joanna Troughton

Joanna Troughton

A/Principal Environmental Health Officer

## **Environmental Health Service Consultation Report**

(as a Statutory Consultee under the Planning and Development Acts 2000 (as amended)& Regulations made thereunder)

**Report to**: Environmental Licensing Programme

Office of Environmental Sustainability Environmental Protection Agency

Johnstown Castle Estate

Co. Wexford

**Date:** 06/04/2023

**Type of consultation**: Waste Management License

Planning Authority: An Bord Pleanála

**EPA Reference Number:** W0311-01

**EHIS Reference number**: 3063

Applicant: Kilsaran Concrete Unlimited Company, Piercetown, Dunboyne, Meath

Location of development: Ballinclare Quarry, Kilbride, Wicklow, A67 HN12

#### **General Comments:**

The following HSE Departments were notified of the consultation request for the Planning on the 3<sup>rd</sup> March 2023

- Emergency Planning Brendan Lawlor
- Estates Helen Maher/Stephen Murphy
- Director of National Health Protection Eamonn O'Moore
- CHO Martina Queally

This report only comments on Environmental Health impacts of the license application. All commitments to future actions, including mitigation and further testing have been taken as read, and all data has been accepted as accurate. No additional investigations/measurements were undertaken in the review of the application.

In respect of this application, the areas reviewed were those of concern to Environmental Health and which are:

- Any potential contamination of surface water and ground water
- Emissions to air including noise and process emissions

## **Proposed Development:**

Kilsaran proposes to backfill the quarry at Ballinclare to surrounding ground level by importing and landfilling inert waste and restoring the backfilled lands thereafter to long-term / scrub habitat. It has been outlined that the inert wastes to be imported and landfilled will principally comprise naturally occurring soil, stone and broken rock excavated in the course of construction projects, with some of the unprocessed solid construction and demolition (C&D) waste being imported and used in the construction of internal haul roads across the backfill area. SLR has confirmed that all the imported waste accepted at the facility will comply with the waste acceptance criteria (WAC) for inert landfills set by Council Decision 2003/33/EC1. As part of the development, suitable uncontaminated natural, undisturbed non-waste soils (which may be classified as a by-product2) which conforms to an engineering specification will be imported for reuse in the construction of the basal and side clay liners required for the inert landfill or, where suitable, will undergo normal processing activity at the soil washing plant to produce an aggregate resource.

Uncontaminated topsoil waste and/or topsoil by-product will also be imported for the ongoing phased restoration and final restoration works and will be temporarily stockpiled at the landfill facility pending its re-use as cover material during restoration works. The proposed development also provides for the establishment and operation of a construction and demolition (C&D) waste recovery facility across the footprint of the existing concrete blockyard and soil washing at the former concrete / asphalt production yard to produce recycled aggregates. The principal wastes to be recycled / recovered (crushed and screened) at the C&D facility will include concrete (ready-mixed, reinforced, blocks and/or pavement slabs), bricks and bituminous mixtures (hardened asphalt returns and road planings). The principal wastes to be recovered at the soil washing plant will comprise naturally stony / granular clays and claybound C&D waste. The recovered (secondary) aggregates will be supplied by the Applicant to market or will be used in the production of construction materials (eg. recycled concrete aggregate, RCA) at its other operating locations. The backfilling and restoration of the quarry through importation and landfilling of inert waste is designated a waste activity under national and European waste management legislation.

The proposed waste activities are technically classified as 'deposit into or on to land', 'specially engineered landfill' and 'recycling / reclamation of other inorganic materials' under the regulations. The scale of the proposed landfilling operations and the planned annual rate of C&D waste and materials recovery are such as to require a waste license from the Environmental Protection Agency (EPA).

Ms. Joanna Troughton Senior Environmental Health Officer visited the location of the proposed development on 16<sup>th</sup> March 2023 to assist with the preparation of this report. This report only comments on Environmental Health impacts of the proposed development from the viewpoint of the Environmental Health Service (EHS).

The Environmental Health Service has made observations and submissions on the following specific Environmental Health areas:

### Assessment of principle and description of the project

SLR have outlined in the submitted report Reference no.501.00036.00080 and dated February 2023 that much of the infrastructure prerequisite to service the proposed waste management facility is already in situ inclusive of the weighbridge office, site, staff welfare facilities, wastewater treatment system, outbound weighbridge, garage / workshop,

wheelwash, hardstand areas, fuel and water storage tanks to service the proposed development.

The proposed development provides for the installation of a new (additional) weighbridge along the inbound lane of the access road, installation of a new wheelwash facility along the egress route leading off-site (north-east of the existing weighbridge) and re-use of an existing storage shed as a dedicated waste inspection and quarantine facility to store any suspect waste consignments which may be delivered to the facility. It also provides for construction of a dedicated shed to facilitate the crushing, screening of C&D waste to produce recycled (secondary) aggregates and the set-up of a soil washing plant to extract sand and gravel aggregate from claybound soils / construction wastes (and also through the conventional processing of non-wastes (including materials classified as by-products)).

# **Previous History**

Ballinclare Quarry is owned, and was previously operated by Kilsaran up to June 2016, when it was discovered that small quantities of naturally occurring asbestos (NOA) were present in the diorite bedrock that was being quarried. Following quarry closure, SLR Consulting Ireland was appointed to examined the feasibility of a range of backfilling and restoration options at the quarry, having regard to the availability of materials, available intake capacity at other waste facilities, market entry and establishment and water treatment costs.

Arising out of this review, Kilsaran elected to backfill the quarry by way of an inert waste landfill with the installation of a clay lining system at its base and sides in order to protect groundwater in the surrounding aquifer. The diorite bedrock at Ballinclare Quarry is classified by the Geological Survey of Ireland (GSI) as a 'poor aquifer (PI) which is unproductive except in local zones'. SRL has conveyed in their report that the Guidance published by the GSI suggests that this hydrogeological setting is suitable for landfill development.

## Assessment of Principle & Description of the Project:

**Principle:** The principle of the project is considered satisfactory.

**Description**: The description of the project is considered to be satisfactory.

## **Assessment of Public Consultation & Non-Technical Summary:**

The Non-Technical Summary which accompanies the Planning Application provides a concise summary of the EIA process, the construction and operation of the proposed development and its potential impacts on human health.

#### Assessment of Consideration of Alternatives:

There is detailed consideration given limit, abate or reduce an emission from the activity concerned where applicable. The Applicant / Facility Operator will (re-)establish an environmental management programme to monitor and manage environmental emissions arising from the proposed inert landfilling and materials recovery / recycling activities.

Environmental sampling, monitoring and testing will be undertaken by the Applicant on a regular basis. Records of environmental monitoring and testing will be held on-site and forwarded to the EPA and Wicklow County Council at regular intervals.

The Environmental Health Department would also recommend that Best Available Techniques (BAT) should be employed where necessary or given consideration to limit, abate or reduce emissions from the activity concerned where pertinent.

### **Assessment of Description of Physical Environment:**

A good description of the physical environment is provided in the application documentation.

## **Geology / Soils**

The application site principally comprises an existing quarry where soil cover and the underlying subsoil have previously been stripped and removed over a significant proportion of the area to facilitate the extraction of the underlying rock and its use in the production of construction materials. The proposed inert landfilling and material recovery / recycling activities at the application site will be largely confined within the existing development footprint. The proposed constructed wetland area which will be developed to treat surface water run-off from the inert landfill land and C&D waste / material recovery facilities will be located in an area in the south-western corner of the application site which currently hosts the existing settlement ponds and an adjoining area of wet and/or improved agricultural grassland.

The Irish Soil Information System (ISIS), identifies the soil association around the application site as the Clonroche Soil Association (ISIS Code 1100a), described as a fine, loamy drift with siliceous stones. These soils are naturally moderately draining and are considered to have good agricultural potential. Soils across much of the application site have previously been stripped and used to construct visual / environmental screening berms around the site perimeter. Teagasc soil mapping shows the soil, where present in the western part of quarry is classified as AminSW, shallow well drained minerals derived from mainly non-calcareous materials. Any thin soil in the eastern part of quarry is classified as AminSP, shallow poorly drained minerals also derived from mainly non-calcareous materials. Subsoil mapping at and around the application site indicates that where the underlying subsoils are undisturbed, principally in the south-western area, they comprise glacial till derived from lower Palaeozoic sandstone and shale. There is alluvium mapped along the channel of the Potters River to the north of the application site. As for soil, subsoils have previously been stripped across the quarry footprint and used to construct perimeter screening berms. The quarry at Ballinclare is entirely developed within a Silurian diorite. The diorite is massive, and contains veins associated with interpreted shear zones. A thin vein of asbestos has previously been exposed at the quarry. The vein exposure has been contained and risks to health have been deemed by the Health and Safety Authority to be acceptable.

Karstification does not occur in diorites and no karst features are recorded in the vicinity of the quarry. Kilmacurra Quarry, c 500m south of Ballinclare quarry is County Geological Site. It is not within the footprint of the proposed development and will not be affected by the development. A number of mitigation measures will be implemented for the duration of the landfilling and recovery activities to minimise any adverse effects on soils, subsoils and bedrock geology surrounding the application site. These measures will principally be

focussed on prevention of potential fuel / oil spills which could arise on site as a result of plant refuelling activities, inadequate plant inspection and/or maintenance, plant or vehicle collisions or poor storage arrangements for hazardous substances etc

Management systems will be introduced to establish the source of imported materials in advance and to confirm that they are inert. Once accepted at the site a multiple level soil testing regime will be implemented which will test the intake materials for compliance, in line with established EPA practice.

#### Air

Long term emissions from development with potential to adversely impact on air quality on their own and cumulatively include dust and vehicle exhaust gases. The only source of dust emissions are waste processing inside the building and vehicle movements on the yards during dry weather. The transport vehicles should not travel across any unpaved areas and the wheels do not have any debris that can be a source of dust in dry weather.

The primary generators of traffic in the construction stage will be contractor staff and the delivery of construction materials. At 4 No residential properties around the application site and an amenity forested area to the north of it, the unmitigated impact of dust emissions is assessed to be slight to moderate adverse.

SLR have outlined mitigation measures that will be implemented to control potential dust rise and dust emissions at the proposed waste facility, and the Environmental Health Department welcomes the following controls

- spraying of water from a tractor drawn bowser on unpaved haul roads and/or exposed soil surfaces and soil / C&D waste stockpiles, particularly during windy periods and/or dry spells;
- placing and compacting soils at the landfill facility immediately after being unloaded so as to minimise the amount of soil being stockpiled. If temporary stockpiling is required, stockpiles should be formed against quarry faces and as far as possible from nearby residences;
- planting the upper restored surface with grass as soon as possible after placing cover soil in order to minimise soil erosion and dust emissions.
- restricting the speed of HGVs / articulated trucks within the facility.
- routing all egressing traffic through a wheelwash facility and over the paved section of the access road thereby removing and/or dampening any dust / mud material attaching to the undercarriage and preventing transport of fine particulates off-site, onto the local public road network;
- periodic use of a road sweeper along the public road (if required)
- retaining existing perimeter screening berms and maintaining any planting thereon;

An air quality / dust monitoring programme will be implemented at the application site to confirm that waste activities operate within the dust deposition emission limit values set out in any EPA waste licence issued in respect of proposed waste facility. As a minimum these would typically be:

Dust deposition must be measured at the site boundary, using the Bergerhoff Method and must comply with the TA Luft Air Quality Standards, i.e:

Total dust deposition (soluble and insoluble) must not exceed 350mg/m²/day (when averaged over a 30 day period)

Preliminary monitoring locations are identified in Figure NTS-9.

<u>Odour</u> – could potentially impact on air quality from potential foul odour arising from the treatment process.

The Environmental health department would suggest that the CEMP must address air within this application and provide measures for good practice during the construction phase and these should be adhered to in full.

Examples of good practice during this phase are:

- Water spraying of exposed earthworks and site haul road during dry weather using mobile bowser units
- Provision of a power washing at the site access road to remove dirt from vehicles prior to exiting the site
- Control of vehicle speeds, and
- Material drop heights from plant to plant or from plant to stockpile will be minimised.

In the operational phase this facility should monitor emissions in accordance with the waste facility permit and licence if approved.

## Water /Hydrology/hydrogeology;

The quarry is located entirely within the Ovoca-Vartry Catchment, which is in the Eastern River Basin District. Potter's River flows to the north and east of the application site, approximately 300m from the application boundary at its closest point. The Kilmacurragh Stream flows to the south of the site. Surface water quality in both rivers are currently classified as being of moderate quality and at risk of deteriorating. Flood mapping published by the Office of Public Works indicates that there is no fluvial (river-related) flood risk arising at the application site from the Potters River. The published maps do however indicate that small areas in the vicinity of the application site may experience pluvial (rain related) flooding after intense rainfall events. However, SLR have stated that these areas are most likely closed depressions where there is impeded outflow of surface water run-off or areas with delayed recharge to ground. The diorite bedrock is classified as a poor aquifer (PI) which is unproductive except in local zones and, in the absence of any protective soil cover, the groundwater vulnerability across the site is classified as being extreme, given that rock occurs at or close to the surface.

The GSI National Groundwater Recharge Map suggests the maximum recharge capacity at the application site is of the order of 100mm/year. A site investigation carried out in 2014 provided for the installation of three groundwater monitoring boreholes around the application site. Water is supplied to existing toilet, hand washing and welfare facilities from an existing groundwater production well on-site. Drinking water is not sourced from this well however and bottled drinking water is delivered to the site on a regular basis, as required.

Wastewater from the site offices and staff welfare facilities is piped to an existing on-site effluent treatment system which previously approved and installed under the 2014 quarry planning permission.

The baseline study identified the following sensitive hydrological / hydrogeological (water) receptors within the receiving environment:

- Surface Water Potter's River;
- Groundwater good quality, poorly productive diorite bedrock aquifer; and
- Groundwater nearby domestic and agricultural local groundwater supply wells

The potential adverse impacts on the receiving environment (sensitive receptors) arising as a result of the proposed waste management facility were assessed and mitigation measures identified in relation to any potential adverse impacts on groundwater and surface water at the construction, operational and post operation stages of the project.

Protection is also provided to surface waters by design, through the construction of the passive wetland treatment area and provision of more active water treatment systems as and if required. As with the receiving geological environment, mitigation measures will principally focus on preventing potential fuel / oil spills which could arise on site as a result of leakages, spillages and site refuelling activities and minimising the risk of importing and introducing non-inert, potentially contaminated soil / subsoil and C&D materials to the application site. The one adverse impact which was identified as having a potentially likely, significant effect was on the surface water quality in the Potters River which may result from the presence of potential contaminants in rogue loads of imported material and / or C&D material, adversely impacting leachate / surface water quality. However, with identified mitigation measures in place at the site, it is considered that this potentially significant effect will be reduced to 'not significant'.

In terms of residual impacts, SLR have established that with mitigation measures in place at the proposed facility, there are no significant residual impacts with respect to groundwater and/or surface water during the construction, operational or post-construction stages and that the proposed development will not result in any likely, significant effect on groundwater and/or surface water. A groundwater monitoring programme will be implemented at the application site to confirm that there is no adverse impact on groundwater level or quality over time, as activities proceed. The scope and frequency of groundwater sampling and testing will be set by any EPA waste licence issued in respect of the proposed inert landfilling and material recovery / recycling activities.

#### **Noise and Vibration**

SLR conducted noise monitoring over several months in and around the existing quarry at Ballinclare, their results indicated that an average ambient noise levels around the application site typically range between 45dBA LAeq and 48dBA LAeq. These noise levels are consistent with daytime levels in rural areas. Noise predictions undertaken for impact assessment purposes were based on the conservative assumption that all waste activities at the application site are undertaken concurrently and continuously and at the closest point to the landfill footprint. These assessments take account of the noise screening effects of quarry walls, vegetation, perimeter screening mounds and the C&D recycling shed and determined that the cumulative long-term noise impact from the inert landfilling and material recovery / recycling operations in a worst-case scenario will be negligible at all

receptors with the exception of one property to the north-west where the potential impact is assessed as minor.

Due to the separation distance, the noise impact at Kilmacurragh Arboretum is assessed to be negligible and there will be no impacts on designated nature sites at Glenealy Woods pNHA and at Deputy's Pass Nature Reserve SAC. A number of further mitigation measures are proposed in line with standard practice at other extractive backfilling / inert landfilling sites to further reduce the potential noise impact of the on-site activities. These include retention and reinforcement of existing perimeter screening banks, maintenance of plant, maintenance of road surfaces, control of traffic speed and unloading activities within the waste facility and ensuring plant is not left running when not in use.

A noise monitoring programme will be implemented at the application site to confirm that activities operate within the limit values set out in any EPA waste licence if granted in respect of proposed inert landfill and material recovery / recycling activities.

The Environmental Health Service would request that the following should be included as conditions of planning permission, if granted.

Noise conditions as per Waste facility permits and EPA licences will need to be met. The EPA guidance note for noise: 'Licence applications, surveys and assessments in relation to scheduled activities' must be adhered. This document recommend noise limits of 55dB(A) Lar,T for daytime and 45Db(A) LAeq,T for night time at sensitive locations which include private residence's.

In relation to noise the measures will include, but are not limited to:

- Monitoring is also undertaken outside of 'daytime' hours.
- Noise monitoring will continue to be undertaken around the application site. Noise monitoring locations will be reviewed and revised where and as/when necessary.
- Corrective action should be included in the Environmental Management Plan if exceedances of permitted limits are recorded
- Selection of quiet plant/location of plant; plant which will have the least impact in term of noise will be selected and will be positioned as far away as practical from noise sensitive receptors i.e. private residences.
- Plant will only be left running during works and will be switched off at all other times. Plant will not be left idling. No maintenance or repair to plant or machinery will be permitted outside of the permitted construction works hours.
- Hours of work all construction related works, other than emergency works and security will be carried out during normal construction working hours
- Hours of Operation shall be permitted between 08:00 hours and 18:00 hours, Monday to Friday only.

#### Construction

There is potential for construction related sediments via surface runoff discharging into the stream. It has been evaluated that if a small quantity of pollutant substances were to be washed into the stream over a short period of time, due to the dilution factor of the stream

the substances would quickly be diluted to background levels by the time they reach the nearest designated site.

Construction of the proposed development will involve the use of plant machinery and storage of materials such as oils, fuels and chemicals. There is potential for accidental spillage or release of fuel, oil and other dangerous substances which could be washed into receiving waterbodies of the stream located at the northwest corner of the site.

### In addition to the CEMP plan the following measures should be carried out:

- Excavation and the stripping soil/made ground should not be undertaken until absolutely necessary to prevent sediment run off and leaching of nutrients from soils into drains.
- If groundwater is encountered during excavations then mechanical pumps will be required to remove the groundwater from sumps. Sumps should be carefully located and constructed to ensure that groundwater is efficiently removed from excavations and trenches

### **Operational Stage:**

There should be no direct or indirect discharge of sanitary and process wastewater to the surface water drainage system. All materials reception, processing and storage will be carried out inside the processing building. All storage and process tanks in the washing plant should be above ground. Fuel oil (diesel) will not be stored or used at the facility and lubricating and hydraulic oils used in plant maintenance will be stored in bunded pallets inside the building.

#### Waste

Where waste is generated at the installation or facility, describe how it will be, in order of priority in accordance with section 21A of the Waste Management Act 1996, as amended, prepared for re-use, recycling, recovery or where that is not technically or economically possible, disposed of in a manner which will prevent or minimise any impact on the environment. Section 29(2A) of the Waste Management Act 1996, as amended states that it shall be the duty of waste producers and holders to ensure that waste undergoes recovery operations in accordance with sections 21A and 32(1) of the Acts. For waste whose generation cannot be prevented, describe what measures will be in place to ensure that waste is collected separately (if technically, environmentally and economically practicable) and will not be mixed with other waste or other material with different properties.

### **Pest Control**

The applicant has implemented mitigation measures to control vermin and pests on the site.

#### **Conclusions**

The Waste Facility Permit/Waste Licence will specify the monitoring requirements in the operational stage, which may include:

- Surface water quality
- Groundwater quality
- Emissions to air,
- Noise

 Detailed construction noise mitigation measures should be implemented in full to minimise any risk to public health from noise during the construction phase of the proposed development. As no noise monitoring currently takes place it may be of consideration to reinstall monitoring during the construction phase.

In relation to noise the measures will include, but are not limited to:

- Monitoring is also undertaken outside of 'daytime' hours.
- Noise monitoring will continue to be undertaken around the application site. Noise monitoring locations will be reviewed and revised where and as/when necessary.
- Corrective action should be included in the Environmental Management Plan if exceedances of permitted limits are recorded
- Selection of quiet plant/location of plant; plant which will have the least impact in term of noise will be selected and will be positioned as far away as practical from noise sensitive receptors i.e. private residences.
- Plant will only be left running during works and will be switched off at all other times.
   Plant will not be left idling. No maintenance or repair to plant or machinery will be permitted outside of the permitted construction works hours
- The Environmental Health Service recommends that Operators must comply with best practice, legislation and guidelines current at that time so that effects are not significant for local residents.
- The EHS recommends that all noise mitigation measures, including monitoring and corrective actions are included as conditions if granted. This measure is for the protection of public health
- The condition of the access roads to the site is monitored and that any defects identified e.g. potholes or surface cracking are repaired within 24 hours. This is in order to minimise the generation of dust and noise from vehicles and is a health protection measure.
- All mitigation measures identified to protect surface and ground water should be implemented in full.
- In order to ensure dilution and dispersal of treated effluent the receiving river water should have a consistently adequate assimilative capacity. A condition should be included in the license to require the implementation of an emergency plan should water levels drop to an extent which may impact on dispersal and dilution of treated effluent discharge. Regular monitoring of water levels and flow within the upstream of the plant should be undertaken to ensure the assimilative capacity of the receiving water body is maintained.
- That a complaints procedure is implemented and that a member of staff is
  designated as a point of contact to deal with any complaints or queries received
  from members of the public in relation to the proposed activity.
- That an Odour Management Plan is implemented and that regular unannounced odour audits of the plant are undertaken.
- It is recommended that the routine monitoring, maintenance and repair of all plant, equipment and pipework is included as a condition of the licence.

- Desludging will be required, however this is not expected for at least 5-10 years.
   Sediment build up in the wetland will include metals accumulated. Sediment will be removed from the ponds as required when the pool volume has become reduced significantly or the ponds have become eutrophic. A desludging procedure will need to be implemented for the settlement ponds.
- It is essential that the mitigation in the form of the leachate management system operation and maintenance and the monitoring of the effluent quality and receiving environment are continued to ensure that the system continues to achieve the necessary ELVs as let in the license in order to protect public health.
- A system should be put in place for dealing with enquiries and/or complaints from members of the public during the operational phase of the facility.
- Water monitoring results should be reviewed and where there is indication of contamination or significant dewatering of drinking water supplies additional mitigation should be agreed with the Planning Authority. The effectiveness of the additional mitigation should be verified through a sampling programme. Any wells identified as a drinking water supply and located within 150m of the facility are sampled prior to the commencement of extension works. Sampling parameters should be agreed with the Local Authority. These wells should also be sampled at least biannually during the operational period.
- Mitigation measures proposed for the protection of surface and groundwater are implemented in full and are monitored on an on-going basis (as part of an Environmental Management Plan) in order to mitigate any potentially significant effects.
- Dust mitigation measures outlined above are included as conditions of planning permission (if granted); are implemented in full and are monitored to ensure the effectiveness of the mitigation.

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Arlene Ward Environmental Health Officer

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Joanna Troughton

**Senior Environmental Health Officer** 

\* All correspondence or any queries with regard to this report including acknowledgement of this report should be forwarded to Eugene Monahan, Principal Environmental Health Officer Environmental Health Service HSE Bray Health Centre Block B Civic Centre Main Street Bray Co. Wicklow