



KILLARNEY WASTE DISPOSAL

ARTICLE 12 REQUIREMENTS WASTE LICENCE APPLICATION WASTE LICENCE 217-1

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1 SECTION A: NON-TECHNICAL SUMMARY

A1a: Give a non-technical summary of the information provided in the application. The summary shall be a stand-alone document that does not refer to other parts of the application or EIS. A non-technical summary should identify all environmental impacts of significance associated with the carrying on of the activity, and describe mitigation measures proposed or existing to address these impacts. The non-technical summary as submitted does not meet these requirements.

The non-technical summary has been revised to reflect the information supplied in this compliance and to incorporate the amendments required above.

A.1.1 Nature of the Facility

Killarney Waste Disposal (KWD) operate a Materials Recovery Facility at Aughacurreen, 4.5km northwest of Killarney Town, under a Waste Permit from Kerry County Council allowing an annual waste intake for recovery of 16,500 tonnes. The site is 2.2 hectares in size and is located in a rural context. There are approximately 20 no. residences within 500m of the facility boundary. Most of the residences are located on a ribbon development on the nearby road from Knockasarnet to Aghalee. The primary landuse in the vicinity of the facility is agriculture.

Killarney Waste Disposal propose to increase the waste intake at the facility to 40,000 tonnes per annum and to provide an extension to the facility to incorporate a new materials recovery building. Therefore an Environmental Impact Statement (EIS) is required together with the Waste Licence Application for the proposed increase in tonnage and facility extension. It is in this context that this EIS has been prepared by RPS-MCOS Ltd. for Killarney Waste Disposal.

The General Soils Map of Ireland indicates that the soil type in the area is podzolic. These are poor, acidic soils, typical of cool, damp climates. GSI Quaternary maps record Devonian Sandstone dominated Till (boulder clay) at the site location. The thickness of the subsoil deposits in the area can reach up to 30m in places while elsewhere the subsoil is absent (at outcrop) or less than a metre. The GSI has classified the shale and sandstone bedrock underlying the site as a locally important aquifer which is moderately productive only in local zones.

The Killarney Waste Disposal facility is located in the catchment of the Glanooragh River which flows to the Gweestin River c.10km downstream of the facility. The Gweestin flows for a further c.10km before joining the River Laune.

A.1.2 Classes of Activities as specified in the Third and Fourth Schedules of the Act

The proposed waste disposal activities carried out under the Third Schedule and the proposed waste recovery activities carried out under the Fourth Schedule are as follows:

Third Schedule:

Class 11: This activity provides for the processing and mixing of wastes prior to transfer to another facility for disposal.

Class 12: This activity is required for the processing and baling of waste on-site prior to disposal.

Class 13: This activity is required for the storage of waste arising at the facility prior to disposal.

Fourth Schedule:

Class 3: This activity is required for the sorting of metals which will be stored at the facility and then transferred to a metal recycling facility for recovery.

Class 4: This activity is required for the sorting, separation and processing of mixed municipal waste and separately collected dry recyclables and Construction & Demolition waste.

Class 11: This activity is limited to the packaging of waste by baling, wrapping, placing in containers or trailers prior to submission to a recycling facility.

Class 12: This activity is limited to the exchange of recycling at the facility.

Class 13: This activity is required for the short-term storage of waste at the facility.

The Principal Activity carried out at the site in accordance with the Fourth Schedule of the Waste Management Acts 1996 to 2003, is as follows:

Class 2: This activity refers to the processing of municipal waste. This material will be processed and the organic fines separated out and sent off-site for composting. Sorted organic waste will also be accepted at the facility.

A.1.3 Quantity and Nature of the Waste

A total of 16,500 tonnes per annum of non-hazardous waste is currently accepted by KWD. The facility currently accepts municipal waste arising in County Kerry from the domestic and commercial sectors. KWD also provides its own collection service for its customers. It is proposed to increase the annual waste intake to 40,000 tonnes, the breakdown of which is shown below in Table 1.1.

Table 1.1 Waste Types and Quantities Proposed

Waste Type	Maximum Tonnes per Annum
Household	11,000
Commercial	17,000
Construction & Demolition Waste	12,000
Total Waste	40,000

A.1.4 Operations

The proposed operating hours are from 07:00 to 20:00 Monday to Saturday inclusive. The proposed waste acceptance hours are from 07:30 to 19:30 Monday to Saturday inclusive.

The following waste types are accepted for recovery and disposal:

1. Mixed municipal Waste;
2. Source segregated waste, which includes organic waste and dry recyclables (plastic (bottles and film), paper, cardboard and packaging waste, glass, metals);
3. Timber;
4. Construction & Demolition Waste.

Incoming waste is weighed on the weighbridge near the site entrance and the waste record keeping system is updated with information on the incoming waste.

The waste is then tipped into the Material Recovery Facility (MRF) and inspected prior to processing. Any suspect load is removed to the quarantine area for further inspection and if found to be non-compliant is returned to the customer. Mixed municipal waste is processed to separate the organic fines from the residual waste. C&D waste is sorted and processed into various fractions which are sent onto licensed/permitted facilities for materials recovery. Timber is shredded on site and sent on to a Material Recovery Facility. Source segregated waste is baled and sent on for recycling. Timber processing will continue to take place outdoors. A new location area for timber processing and storage is proposed however this location has to be confirmed with the Client and details will be forwarded to the Agency when available.

A.1.5 Emissions, Impacts and Mitigation Measures

Runoff from processing mixed municipal waste (indoors)

The processing of mixed municipal waste produces an effluent. The new processing building will have an effluent holding tank in the centre of the building. This precast concrete holding tank will be 6,920 litres in capacity and will be lined with a 2.5mm thick HDPE liner. A bund will be constructed around the tank which will have a volume of 110% of the tank capacity. The effluent will be sent to Killarney WWTP for treatment.

Runoff from timber shredding and outdoor storage areas for timber and metals

The shredding of timber outdoors has the potential to contaminate groundwater if the drainage water from this area is not adequately controlled and treated. Contaminants will depend on the chemicals used to treat the timber and could, for example include creosols (coal tar derived), organochlorine pesticides, metals (copper-chromium-arsenate, boron) and light organic solvents.

The storage of timber outdoors also has the potential to contaminate groundwater as runoff from waste materials stored may contain contaminants.

There will be no risk to groundwater or surface water as outdoor metal storage will take place on a concreted area and any effluent will drain to the oil and solids separator and then on to the lagoon/reed bed/percolation system. The effluent emissions from the timber processing and storage area will be contained and treated. However the design details have to be confirmed and will be forwarded to the Agency for approval when available.

Noise

It is proposed to increase the waste intake at the facility from 16,500 tonnes to 40,000 tonnes per annum. It is now proposed to accept 12,000 tonnes of C&D waste per annum (consisting of timber, metal, soil and other C&D waste). A ballistic separator will be used to process incoming waste. It is proposed to continue the timber shredding operations outdoors. The results of noise monitoring have shown that noise levels currently on site are generally below the standard emission limits for daytime operations (55 dB (A)). One result of 59 dB (A) was recorded but this is believed to be due to traffic outside the site and not due to site related activities. All new plant operations will be located inside the materials recovery building, thereby reducing noise emissions.

However, the equipment is likely to be required to operate for longer periods and at a greater level of throughput. Therefore the reductions due to the enclosure may be offset by the increases due to activity levels. The increase in traffic levels due to the proposed increase in waste intake has been calculated at 3 dB. The current National Roads Authority (NRA) design criteria for new road schemes is to limit the noise to an equivalent value of 65 dB (A). Even with the proposed increase of 3 dB from traffic noise from the facility the noise level at the monitoring locations will be within the guideline limit of 65dB(A) from the NRA. Therefore no mitigation measures are required for daytime operations. The new location for timber processing will be assessed for the impact of noise when details are available and will be forwarded to the Agency.

Dust

Emissions of dust will be generated from the C&D waste processing. However as these operations are within the materials recovery building the impact will not be significant. The shredding of timber outside will be the main source of dust generation.

The measures to control and reduce dust emissions include the following:

- Regular sweeping will control the amount of dust generated.
- The surrounding trees will attenuate the dust generated from the proposed facility.
- A mobile water sprayer will be employed during dry weather conditions to reduce dust emissions.

- Plant equipment used on site will be regularly maintained to prevent excessive exhaust emissions of particulates and other pollutants
- The timber shredder will be adapted with covers and screens to reduce the amount of dust being emitted into the atmosphere.
- Regular dust monitoring will indicate if the levels are exceeding the standard limits.

With the implementation of the dust measures outlined above, emissions of dust will be adequately controlled. Overall, dust emissions are predicted to be low.

Odour

The processing of mixed municipal waste and the acceptance of segregated organic waste has the potential to emit odour. The potential for odour emissions may be minimised by a series of design features, work practices and mitigation measures. Each of these measures is outlined briefly below:

- All organic and mixed municipal waste is processed indoors and this will significantly reduce any odour emissions from the waste.
- All work surfaces and floors will be cleaned and regularly maintained to a suitable standard to prevent the build up of anaerobic bacteria. All areas where there is a potential for the generation of odour (i.e. temporary storage areas, skips, bins, etc) will be covered to reduce the potential for escape of odours.
- Residence time for waste, even non-odorous waste, will be kept to a minimum before transfer.
- In the event that an odour nuisance is occurring from the facility, despite the building design and work practices, there are a number of odour mitigation measures that may be employed. The main mitigation measure will be the use of a masking agent, which is a chemical component in an open-air spray specifically designed to mix with the fugitive odour. These masking agents typically have pleasant odours designed to “mask” the unpleasant odour from the facility. Alternatively, a counteractant may be employed, by a similar process to masking agents. Counteractants are designed to “interfere” with the odour molecules by a chemical or physical reaction and reduce their odour intensity.
- It is proposed to install a bio-filter at the facility.

Domestic Effluent

Currently the domestic effluent treatment system on site consists of a septic tank. A puraflo treatment unit and raised percolation area is required to be installed as per original planning permission Reg No. 337/03. It is proposed to install this puraflo system and percolation area immediately. The proposed puraflo unit and associated percolation area will be designed, located, constructed and maintained in accordance with the manufacturer's instructions. The design of the puraflo system and percolation has been approved by Kerry County Council. The design of the domestic effluent system is in line with the EPA Wastewater Treatment Manuals.

A.1.6 Determination of Compliance with Section 40 (4) of the Act and the Requirements of BAT

The applicant KWD are committed to applying the BAT principle as appropriate to reduce emissions from the facility as far as is practicable to comply with any conditions of the waste licence and ensure that any emissions are within the standard limits. The applicant KWD, are committed to use energy efficiently in the carrying out of activities and to implement necessary measures to maintain site safety prevent accidents. KWD are fully aware of their environmental responsibilities and realise that financial provisions may be required for decommissioning, aftercare and environmental pollution incidents.

2 SECTION B: GENERAL

B2a: Confirm that the site location map accurately sites the location of the facility. An update of section B should be provided if required.

The site location map accurately sites the location of the facility. The access road to the KWD facility is not accurately located on the OS Discovery Series 50K mapping. The Rural Place Map from the Ordnance Survey used in Drawing No. DG0001-01 Ownership Plan accurately shows the location of the access road.

B2b: Provide a Site Plan drawn to scale appropriate to the size of facility (e.g. 1:1,000 or 1:2,500) and appropriately captioned. The Site Plan must clearly identify the boundaries of the activity in red and the North Point and contain grid references.

Drawing No. DG0003-01, Site Plan for the facility is attached.

B3a: Provide a copy of the full planning permission (notification of decision was provided).

A copy of the full planning permission PP 2131/04 from Kerry County Council is provided in Appendix A.

B3b: Clarify whether the planning permission obtained (PP 2131/04) relates to the development as described in this waste licence application i.e. the intensification of activities including an annual waste intake of 40,000 tonnes. Explain the circumstances by which the EIS has not accompanied a planning application.

Please find in Appendix A a copy of correspondence to Kerry County Council dated 23/08/04 from Paudie O'Mahony and Associates, Consulting Engineers and Architects, providing a response to a request for further information. The Planning Authority, Kerry County Council, was informed in this correspondence that KWD were in the process of preparing a Waste Licence Application and EIS for an increase in the tonnage at the facility to 40,000 tonnes per annum. The planning process was initiated and completed by 23/11/04 before the waste licence application and accompanying EIS was prepared and submitted to the EPA on 02/02/05. Kerry County Council did not request a copy of the EIS as part of the planning application.

B4a: Complete section B.4 of the application form. Note: It is proposed to discharge trade effluent to sewer (sewer includes the wastewater treatment plant). Provide a copy of any effluent discharge licence and/or agreement in place.

Section B.4 of the application form has been completed and is shown in Appendix B along with Attachment B4 containing a copy of the agreement in place between Kerry County Council and KWD.

B7.1: Justify the principal activity having regard for the following note and question H1a below. Note: organic substances (class 2) include paper, cardboard, wood, plastic and residual food. Inorganic materials would include bricks, stones, concrete, tiles and glass.

Table B.7.1 and Attachment B.7 (contained in Appendix B) have been amended to state that the principal activity is:

Class 2: Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes).

B7.3a: The activities proposed includes the disposal of waste (other than hazardous waste) at a facility (other than a landfill facility) where the annual intake is likely to exceed 25,000 tonnes but be less that 100,000 tonnes. Therefore an outstanding fee of €2,000 is required.

The cheque for the outstanding fee of €2,000 is attached.

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3 SECTION C: MANAGEMENT OF THE FACILITY

C1a: Provide the management structure and an organisational chart.

Appendix C contains the management structure and organisational chart for Killarney Waste Disposal.

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4 SECTION D: INFRASTRUCTURE AND OPERATION

D1a: It was noted during the site visit that the site was not fully secure and could be easily accessed. Provide details of securing the facility from access by unauthorised persons.

Fencing will be erected adjacent to the forested boundary to ensure that the site is more secure.

D1b: Give details of the materials of construction for the new access road.

The yard will be concreted as shown in Drawing No. 02-034-J4-MCOS2F02 Site Layout Plan.

D1c: Give details of the weight bridge including capacity, dimensions and record keeping system.

The maximum capacity of the weighbridge is 50,000kg and the minimum capacity of the weighbridge is 200kg. The weighbridge is 50 feet long and 8 feet wide.

The following information is recorded for incoming waste:

- Date and time of delivery,
- Name of company and driver,
- Gross, tare and net weights,
- Origin and description of the waste with relevant EWC Codes.

The following information is recorded for outgoing waste:

- Date and time of shipment,
- Description of the waste with relevant EWC Codes,
- Name of haulier,
- Gross, tare and net weights,
- Destination.

D1d: Give details of the number of loaders to be used. Clarify that the plant currently on-site includes a bag opener and screener and not a shredder and trommel as described in the application. Give details of additional plant equipment proposed to cater for the increase in waste intake (e.g. ballistic screener as discussed during the site visit). Indicate the locations of all process equipment on a plan. Give details of any outdoor processing areas.

Three no. loaders will be used at the facility. The waste licence application incorrectly described the plant machinery in operation at the facility. There is a bag opener and screener in operation at the facility and not a shredder and trommel as originally outlined. It is proposed to use a ballistic separator to cater for the increase in waste intake. It is also proposed to use a dryer for the organic waste. The layout of the proposed materials recovery building has been updated showing the locations of all process equipment (Drawing No. DG0002-01F02). Timber processing will continue to take place outdoors. A new location area for timber processing and storage is proposed. However this location has to be confirmed with the Client and details will be forwarded to the Agency when available.

D1e: Clarify whether fuel will be stored on-site. Give details of storage arrangements as necessary.

Currently no fuel is stored on site. It is proposed to store fuel on site in the future. The location of the fuel storage area is unknown as this time. It is proposed that a storage tank with a capacity of 2,750 litres will be required. A bund will be constructed around the tank to contain 110% of the tank capacity within the bunded area.

D1f: Give details of any proposed outdoor storage areas including location and materials to be stored.

Timber and metal will be stored outside in designated areas. Drawing No. 02-034-J4-MCOS2F02 provides the location of the metal storage area. The timber processing and storage area has to be confirmed by the Client and details will be forwarded to the Agency when available.

D1g: Give details of the final disposal route for domestic effluent from the puraflo. Drawing No. 02-034-J4-MCOS2 does not show storm drainage from the roof of the materials recovery building. Resubmit drawings with roof water drainage details. Give details of proposed trade effluent holding tank and indicate the location of the tank on a plan. Give details of drainage and treatment of run-off from any proposed outdoor storage and processing areas.

The final disposal route for domestic effluent from the puraflo is to a percolation area which is described in Section 6 F1b. Drawing No. 02-034-J4-MCOS2 has been updated to include the roof water drainage details from the materials recovery building, proposed effluent holding tank within the materials recovery building, details of drainage and treatment of run-off from the proposed outdoor metal storage area. Appendix D provides the design details for the new effluent holding tank and surrounding bunding tank.

D1h: Give details of the materials recovery building and equipment compounds.

The new building has been designed with a maximum number of access points to facilitate delivery and loading of waste to and from the building. The extension will be provided on the existing site which is 2.2 hectares in area. The existing material recovery building will be extended by 2,503 sq.m to a total area of 3,223 sq.m and will not exceed the existing structure's height (ridgeline is 9.45m above ground level). A stream which was located on site has been diverted. A designated quarantine area has been identified. Any consignment removed to the quarantine area for further inspection and found to be non-compliant will be returned to the customer. The layout of the proposed materials recovery building has been updated to show the locations of all process equipment (Drawing No. DG0002-01F02).

D1i: It is proposed to process 17,000 tonnes/year of construction and demolition (C&D) waste, give details of C&D waste infrastructure including dust and noise abatement equipment and location within the facility.

It is now proposed to accept 12,000 tonnes per annum of C&D waste as per the amended Table H.1 (C).

The C&D waste will be sorted and screened indoors within the materials recovery building. Dust and noise emissions from C&D waste processing will be reduced significantly as operations will take place inside the materials recovery building. Only timber shredding will take place outdoors and on an intermittent basis.

D2a: Give the throughput capacities of each unit of processing plant

The throughput capacities of each unit of processing plant for an annual waste intake of 40,000 tonnes were estimated as follows:

Bag opener and screener = 7 tonnes/hr
 Ballistic screener = 11 tonnes/hr
 Timber shredder = 5 tonnes/hr
 Dryer = 1.6 tonnes/hr
 Balers = 5.8 tonnes/hr

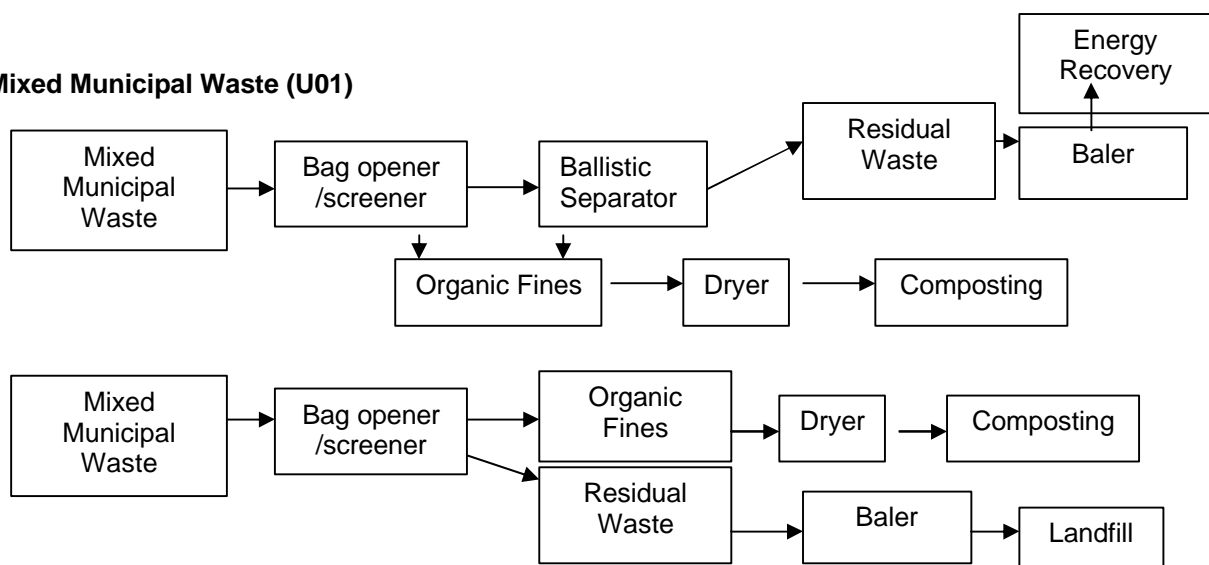
D2b: Give details of proposed unit operations as carried out with proposed new processing plant (ballistic separator) include typical storage periods. Give details of the capability of processing plant to handle the various waste streams. Describe the management of processing plant when changing from one waste stream to another. Give details of emissions (odour, dust, noise, washings from processing plant and run-off from outdoor processing and storage areas as applicable).

The unit operations have been amended and are described below:

Proposed Unit Operations

The main waste streams for processing are as follows:

- **Mixed Municipal Waste;**
- **Source segregated waste, which includes organic waste and dry recyclables (plastic (bottles and film), paper, cardboard and packaging waste, glass, metals);**
- **Timber;**
- **Construction & Demolition Waste.**

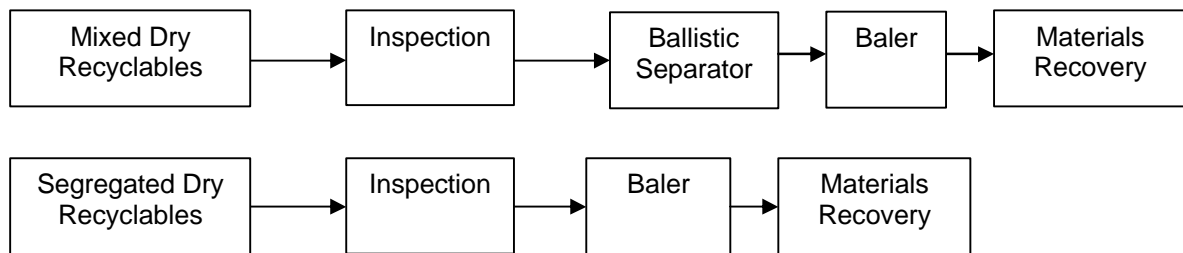
Mixed Municipal Waste (U01)

Waste is tipped onto the processing building floor. Then the material is inspected and any hazardous waste is removed and placed in the quarantine area. There are two processing routes for mixed

municipal waste as shown above. Market availability and hence the destination of residual waste will depend on the process route chosen. The finer organic particles are separated from the rest of the residual mixed waste. The residual waste is baled and wrapped in a plastic film to ensure that the bales remain intact. These bales are stored in the facility and then transferred to landfill or exported to an energy recovery facility. The separated organic fraction of the waste is sent to the dryer to decrease the moisture content and is then sent off-site for further processing at a composting facility.

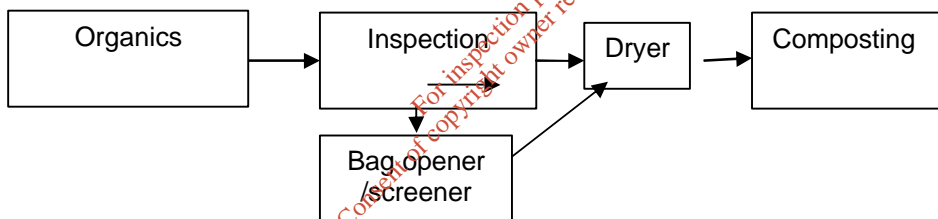
Municipal Waste Source Separated Dry Recyclables (U02)

Dry recyclables will require very little processing. The waste is tipped onto the floor of the processing building for inspection. The segregated dry recyclable waste is transferred to a conveyor belt which feeds the material into the baler which produces bales. The waste is then transported off-site to licensed recovery facilities. The mixed dry recyclables are passed through the ballistic separator and onto the baler.



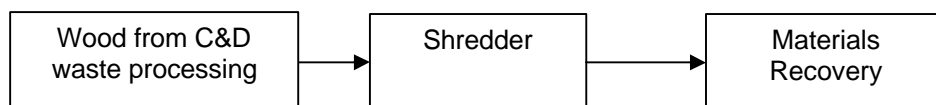
Municipal Waste Source Separated Organics (U03)

Following inspection separated organic waste will be sent to the dryer to decrease the moisture content and then sent off-site for further processing at a composting facility. On occasion if the separated organic waste is dirty it is sent for processing to the bag opener and screener.



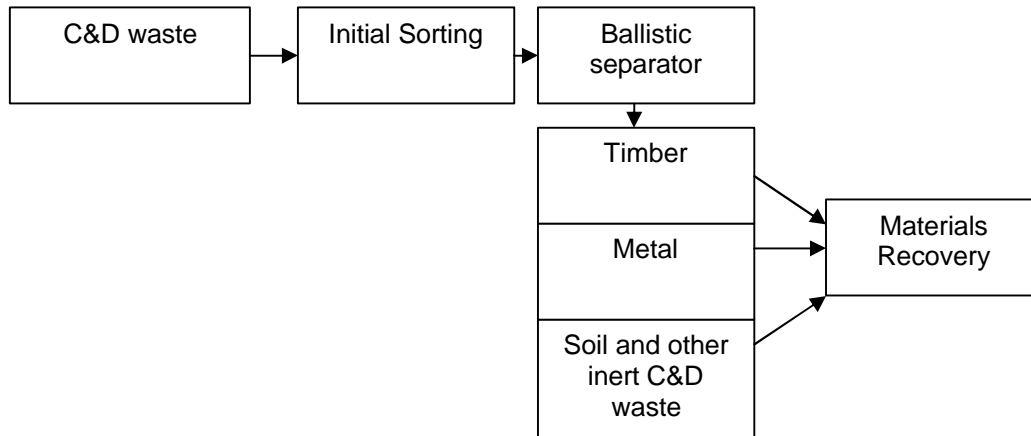
Municipal Waste Source Separated Timber (U04)

Timber will be stored until a viable quantity has accumulated. It is then put through the shredder which is located outside. The shredded wood is then transported to a recovery facility.



Construction & Demolition Waste (U05)

C&D waste is tipped on the floor of the materials recovery building where it is inspected and sorted with loaders and large pieces of waste are removed. The ballistic separator sorts the waste further into the various fractions of metal, timber, soil and other C&D waste. The timber will be shredded outside. The metal and timber will be stored until there are sufficient volumes for transport to a materials recovery facility. The soil and other inert C&D waste is transported to the waste permitted site operated by KWD.



Dry recyclables are delivered to the facility and processed every second week. C&D waste is processed for a few hours once a week. The rest of the operating time mixed municipal waste is processed. There is not much requirement for storage as there are regular shipments from the facility. The plant machinery is cleaned prior to changing from one waste stream to another.

The emissions from the processing of waste are described as follows:

Runoff from processing mixed municipal waste (indoors)

The processing of mixed municipal waste produces an effluent. The new processing building will have effluent holding tank in the centre of the building. This precast concrete holding tank will be 6,920 litres or 1,500 gallons in capacity and will be lined with a 2.5mm thick HDPE liner. A bunding tank will be constructed around the tank which will have a capacity of 3,500 gallons. The effluent will be sent to Killarney WWTP for treatment.

Runoff from timber shredding and outdoor storage areas for timber and metals

The shredding of timber outdoors has the potential to contaminate groundwater if the drainage water from this area is not adequately controlled and treated. Contaminants will depend on the chemicals used to treat the timber and could, for example, include creosols (coal tar derived), organochlorine pesticides, metals (copper-chromium-arsenate, boron) and light organic solvents.

The storage of timber outdoors also has the potential to contaminate groundwater as runoff from waste materials stored may contain contaminants.

There will be no risk to groundwater or surface water as outdoor metal storage will take place on a concreted area and any effluent will drain to the oil and solids separator and then on to the lagoon/reed bed/percolation system. The effluent emissions from the timber processing and storage area will be contained and treated. However the design details have to be confirmed and will be forwarded to the Agency for approval when available.

Noise, Dust

Noise and dust emissions will be generated from waste processing inside the materials recovery building. However the impacts of these emissions will be reduced significantly as operations will take place inside the materials recovery building. Timber shredding operations outdoors will be a source of noise and dust emissions. This operation will take place on an intermittent basis and mitigation measures and the monitoring programme for noise and dust will ensure that standard emissions limits are not exceeded.

Odour

The processing of mixed municipal waste and the acceptance of segregated organic waste has the potential emit odour. The potential for odour emissions is minimised by a series of design features, work practices and mitigation measures at the facility. These measures are outlined briefly below:

- All organic and mixed municipal waste is processed indoors and this significantly reduces any odour emissions from the waste.
- All work surfaces and floors cleaned and regularly maintained to a suitable standard to prevent the build up of anaerobic bacteria. All areas where there is a potential for the generation of odour (i.e. temporary storage areas, skips, bins, etc) covered to reduce the potential for escape of odours.
- Residence time for waste, even non-odorous waste, will be kept to a minimum before transfer.
- In the event that an odour nuisance is occurring from the facility, despite the building design and work practices, there are a number of odour mitigation measures that may be employed. The main mitigation measure will be the use of a masking agent, which is a chemical component in an open-air spray specifically designed to mix with the fugitive odour. These masking agents typically have pleasant odours designed to "mask" the unpleasant odour from the facility. Alternatively, a counteractant may be employed, by a similar process to masking agents. Counteractants are designed to "interfere" with the odour molecules by a chemical or physical reaction and reduce their odour intensity.
- It is proposed to install a bio-filter at the facility. Detail details have yet to be confirmed and will be forwarded to the Agency for approval when available.

D2c: Give details of other services provided by Killarney Waste Disposal Ltd and operated from the facility.

KWD also provide a waste collection and skip hire service.

D2b: Identify the final disposal/recovery destinations of all waste materials.

It is requested that off-site facilities be considered as commercially confidential and no disclosure of these facilities are made on the public record. KWD will maintain a full record of all off-site facilities, which can be made available for inspection by the Agency as required.

5 SECTION E: EMISSIONS

E2a: Complete Tables E.2(i) for roof water emissions to surface waters.

Table E.2(i) for roof water emissions is contained in Appendix E. Roof water drainage from the materials recovery building is directed away from the concreted yard and stormwater treatment system as it is clean water.

E3a: Complete Tables E.3(i) and E.3(ii) for emissions to sewer. Details of all List I and List II substances listed in Annex to EU Directive 76/464/EEC (as amended) contained in any emission must be presented. All relevant information on the receiving sewer, including a description of effluent treatment/abatement systems and capacity should also be included.

Tables E.3(i) and E.3(ii) for emissions to sewer are contained in Appendix E.

The effluent has been sent for an analysis. The results and response to the above will be provided to the Agency when available.

E4a: Complete Table E.4 (i) for emissions to groundwater. Clarify whether trade effluent from timber shredding or run-off from outdoor storage of waste materials is directed to the storm water collection system. Where this is the case, describe the existing or proposed arrangements necessary to give effect to Articles 3,4,5,6 and 7 of Council Directive 80/68/EEC of 17 December 1979 on the protection of groundwater against pollution by certain dangerous substances.

Table E.4(i) for emissions to groundwater is contained in Appendix E.

The storage of metal outdoors has the potential to contaminate groundwater as runoff from waste materials stored may contain contaminants.

However there will be no risk to groundwater as outdoor metal storage will take place on a concreted area and any effluent emissions will drain will be treated. The storm water treatment system will treat the runoff from the outdoor metal storage area so as to eliminate the introduction of List I and II substances into the groundwater. A geological and hydrogeological assessment was carried out as part of the EIS which accompanied this waste licence application (Appendix A, Volume III, EIS). Therefore Articles 3, 4, 5, 6 and 7 of Council Directive 80/68/EEC are being adhered to.

The timber processing and storage area will be assessed when details are available.

E5a: Give details of the predicted noise levels as a result of the proposed increase in waste tonnage intake, high volume C&D processing and new plant operations.

It is proposed to increase the waste intake at the facility from 16,500 tonnes to 40,000 tonnes per annum. It is now proposed to accept 12,000 tonnes of C&D waste per annum (consisting of timber, metal, soil and other C&D waste). A ballistic separator will be used to process incoming waste. It is proposed to continue the timber shredding operations outdoors. The results of noise monitoring have shown that noise levels currently on site are generally below the standard emission limits for daytime operations (55 dB (A)). One result of 59 dB (A) was recorded but this is believed to be due to traffic outside the site and not due to site related activities. All new plant operations will be located inside the materials recovery building, thereby reducing noise emissions.

However, the equipment is likely to be required to operate for longer periods and at a greater level of throughput. Therefore the reductions due to the enclosure may be offset by the increases due to

activity levels. The increase in traffic levels due to the proposed increase in waste intake has been calculated at 3 dB. The current National Roads Authority (NRA) design criteria for new road schemes is to limit the noise to an equivalent value of 65 dB (A). Even with the proposed increase of 3 dB due to traffic noise from the facility the noise level, at the monitoring locations will be within the guideline limit of 65dB(A) from the NRA. Therefore no mitigation measures are required for daytime operations. The new location for timber processing will be assessed for the impact of noise when details are available and will be forwarded to the Agency.

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6 SECTION F: CONTROL & MONITORING

F1a: Describe the proposed treatment/abatement system for dust control from C&D waste and wood waste processing activities.

Emissions of dust will be generated from the C&D waste processing but however as these operations are within the materials recovery building the impact will not be significant. The shredding of timber outside will be the main source of dust generation.

The measures to control and reduce dust emissions include the following:

- Regular sweeping will control the amount of dust generated.
- The surrounding trees will attenuate the migration of dust generated from the proposed facility.
- A mobile water sprayer will be employed during dry weather conditions to reduce dust emissions.
- Plant equipment used on site will be regularly maintained to prevent excessive exhaust emissions of particulates and other pollutants
- The timber shredder will be adapted with covers and screens to reduce the amount of dust being emitted into the atmosphere.
- Regular dust monitoring will indicate if the levels are exceeding the standard limits.

With the implementation of the dust measures outlined above, emissions of dust will be adequately controlled. Overall, dust emissions are predicted to be low.

F1 b: Describe the domestic effluent treatment system proposed in line with EPA Wastewater Treatment Manuals and include details of final disposal route.

Currently the domestic effluent treatment system on site consists of a septic tank. A puraflo treatment unit and raised percolation area is required to be installed as per original planning permission Reg No. 337/03. It is proposed to install this puraflo system and percolation area immediately.

The proposed puraflo unit and associated percolation area will be designed, located, constructed and maintained in accordance with the manufacturer's instructions. An assessment from Bord na Móna is contained in Appendix F. The puraflo system and percolation area will be installed on mound of imported soil 65m² x 1m high as per Figure 10 Agreement Cert No 99/0060. The material to be used in the mound shall consist of an imported sandy clay loam with a T value of 15-30 (soil group 2), Table 2a agreement Cert No. 99/0060. A catchment drain will be installed to the nearest outfall to cater for any seepage from the raised percolation area.

The design of the puraflo system and percolation area has been approved by Kerry County Council. The design of the domestic effluent system is in line with the requirements of EPA Wastewater Treatment Manuals.

F1c: Describe the proposed treatment/abatement system for effluent emissions from outdoor storage areas and outdoor processing areas. Where on-site treatment is proposed, give details of the typical reductions in List I and II substances to be expected with the system.

Outdoor storage of metals will take place on a concreted area and any effluent emissions will drain to the oil and solids separator and then on to the lagoon/reed bed/percolation system.

Any List I and II substances (as outlined in the Dangerous Substance Directive 76/464/EEC as amended and the Groundwater Directive 80/68/EEC) which exist in the runoff from the outdoor metal storage areas will be treated in the on-site storm water treatment system. The oils and solids separator will remove oil and solids from the effluent. This will be emptied on a regular basis as

appropriate and the contents disposed of to a suitably licensed facility. The lagoon and the reed bed will be lined as detailed in Appendix G to prevent leakage and to protect groundwater quality. The lagoon is intended to act as a balancing tank but will also provide some treatment through further settlement of solids. The constructed wetland will treat the effluent further reducing any List I and II compounds that are present. The outlet from the constructed wetland to the percolation area will be monitored to ensure that treatment from the storm water treatment system is effective.

The timber processing and storage area will be assessed when details are available and forwarded to the Agency for approval.

F1d: The percolation area as described in the application for the storm water treatment system does not correspond to the system installed (noted during site visit). Describe the system as installed and clarify whether the final disposal is to surface water or indirectly to groundwater. Amend application as necessary.

The current storm water treatment system had to be modified to ensure that all the discharge from the constructed wetland was directed to the percolation area. Final disposal is indirectly to groundwater. The design of the stormwater treatment system has been amended and is contained in Appendix G.

F4a: Give details of monitoring locations for emissions to sewer.

The effluent holding tank in the materials recovery building will be the monitoring point for emissions to sewer.

F5a: Give details of a monitoring location on the storm water treatment system prior to final disposal to the percolation area.

The outlet from the constructed wetland to the percolation area will be monitored to ensure that treatment from the storm water treatment system is effective. This monitoring point GW1 is shown on Drawing No. 02-034-J4-MCOS2F02.

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7 SECTION H: MATERIALS HANDLING

H1a: It is proposed to intake 17,000 tonnes per annum of C&D waste but there is limited C&D infrastructure existing or proposed on-site. The applicant also indicated during a site visit that the primary business is in dry recyclables. In light of the foregoing, clarify the content of Table H1 (A) and Table H1 (C) of the application.

Tables H1(A) and H1(C) have been amended and are shown below.

TABLE H.1(A). QUANTITIES OF WASTE IN RELATION TO EACH CLASS OF ACTIVITY APPLIED FOR

Waste Management Act 3rd Schedule (Disposal) Activities		Waste Management Act 4th Schedule (Recovery) Activities	
Class of Activity Applied For	Quantity (tpa)	Class of Activity Applied For	Quantity (tpa)
Class 1		Class 1	
Class 2		Class 2	16,000 (3,000, 6,000, 6,500)
Class 3		Class 3	2,000
Class 4		Class 4	7,000
Class 5		Class 5	
Class 6		Class 6	
Class 7		Class 7	
Class 8		Class 8	
Class 9		Class 9	
Class 10		Class 10	
Class 11	15,500	Class 11	26,000 (12,000, 15,500)
Class 12	15,500	Class 12	26,000 (12,000, 15,500)
Class 13	15,500	Class 13	26,000 (12,000, 15,500)

Other C& D Waste	7,000 tpa	Class 4, 11, 12, 13 of 4 th Schedule
Metals	2,000 tpa	Class 3, 11, 12, 13 of 4 th Schedule
Timber	3,000 tpa	Class 2, 11, 12, 13 of 4 th Schedule
Total C&D waste	12,000 tpa	
Organic Waste	6,000 tpa	Class 2, 11, 12, 13 of 4 th Schedule
Dry Recyclables	6,500 tpa	Class 2, 11, 12, 13 of 4 th Schedule
Residual Municipal Waste	15,500 tpa	Class 11, 12, 13 of 3 rd Schedule
Total Municipal Waste	28,000 tpa	

TABLE H.1 (C) WASTE TYPES AND QUANTITIES

WASTE TYPE	TONNES PER ANNUM (existing)	TONNES PER ANNUM (proposed)	TOTAL (over life of site) tonnes
Household	4,500	11,000	
Commercial	8,000	17,000	
Sewage Sludge			
Construction and Demolition	4,000	12,000	
Industrial Non-Hazardous Sludges			
Industrial Non-Hazardous Solids			
Hazardous *(Specify detail in Table H 1.2)			
Inert Waste imported for restoration purposes	COMPLETE FOR LANDFILL & CONTAMINATED LAND FACILITIES ONLY		
Total	16,500	40,000	

*The eventual tonnage of each waste category may vary between categories however the total waste intake of 40,000 tonnes per annum will not be exceeded.

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8 SECTION I EXISTING ENVIRONMENT AND IMPACT OF THE FACILITY

I1a: Describe the impact of dust emissions from the processing and storage of C&D waste wood waste. Give details of proposed mitigation measures.

Table 1 below presents dust monitoring results for KWD facility. The standard emission limit of 350 mg/m²/day is not exceeded at any of the four locations. Therefore the existing facility is not having a negative impact on the surrounding air quality.

Table 1.2: Dust Deposition Results at Killarney Waste Disposal

Dust Monitoring Point	August 2004 mg/m ² /day
D1	172.7
D2	173.8
D3	116.6
D4	90
D5	227.7*
Emission Limit Value	350

* Sample D5 contained excessive foliage and plant debris from overhanging trees.

Emissions of dust will be generated from the C&D waste processing. However as these operations are within the materials recovery building the impact will not be significant. The shredding of timber outside will be the main source of dust generation.

The measures to control and reduce dust emissions include the following:

- Regular sweeping will control the amount of dust generated.
- The surrounding trees will attenuate the dust generated from the proposed facility.
- A mobile water sprayer will be employed during dry weather conditions to reduce dust emissions.
- Plant equipment used on site will be regularly maintained to prevent excessive exhaust emissions of particulates and other pollutants
- The timber shredder will be adapted with covers and screens to reduce the amount of dust being emitted into the atmosphere.
- Regular dust monitoring will indicate if the levels are exceeding the standard limits.

With the implementation of the dust measures outlined above, emissions of dust will be adequately controlled.

I2a: Give details of the source (s) of contamination, described as originating from site in the aquatic ecology report, that are impacting on the Aughacurreen drain (Appendix F, EIS and page 20). Give details of measures to prevent the contamination and remedial measures where necessary.

The Aughacurreen drain is seriously polluted upstream of Killarney Waste Disposal facility at Site B and C and moderately polluted upstream of KWD facility at Site A. At Site C visual and olfactory evidence of oil contamination was observed at this site. However the invertebrate community is indicative of serious organic contamination. The source of contamination is unknown at this location and it is very unlikely that the source of contamination originated at the KWD facility as Site C is upstream of the facility.

Elevated levels of ammonia and COD and a Q-value rating of Q1-2 indicating seriously polluted conditions are evident at Site D which is located downstream of the facility. The source of this contamination is unknown. Stormwater runoff from the site at the time of the waste licence application was being treated in an interceptor for oil and solids separation, the outlet of which was flowing to the Aughacurreen drain on site. The storm water lagoon/reed/percolation system has since been constructed and once completed, an improvement in surface water quality in the Aughacurreen drain is expected.

The Aughacurreen drain is classified as being of D Rating (moderate local value). This section of the Aughacurreen drain which flows through the site (Habitat Section 1) has a rating of "None" for salmonid habitat quality for all life stages from spawning to adult. This indicates that it is regarded as impossible that the stream could support salmonid fish.

The Glanooragh River is moderately polluted (Q3) immediately upstream and downstream of the confluence with the Aughacurreen drain. Agricultural pollution is evident. The biological assessment data gives no indication of a negative impact from the Aughacurreen drain in the months preceding the survey.

I2b: A mitigating measure identified in the EIS requires all waste delivery, storage and processing areas to be fully roofed, bunded and drained on an impervious surface to a holding tank. Yet another part of the EIS it is stated that timber processing carried out outdoors and it is proposed to use the on-site storm water treatment system to treat effluent emissions. Clarify the situation relating to outdoor activities i.e. wood processing and storage. Give details of the assessment of impact of effluent emissions from outdoor storage of waste and processing of wood on the existing environment. Describe proposed mitigating measures.

All waste delivery, storage and processing areas to be fully roofed, bunded and drained on an impervious surface to a holding tank with the exception of timber processing and storage areas for metal and timber. Timber shredding and outdoor storage will take place on a concreted area and any effluent or runoff will be contained and treated. Runoff from the metal storage area will be treated in the stormwater treatment system. The effluent emissions from the timber processing and storage area will be contained and treated however the design details have to be confirmed and will be forwarded to the Agency when available.

However there will be no risk to groundwater or surface water as the outdoor metal storage will take place on a concreted area and any runoff will drain to the oil and solids separator and then on to the lagoon/reed bed/percolation system. The storm water treatment system will treat the runoff so as to eliminate all contaminants affecting the groundwater or surface water quality.

I2c: It is stated in the EIS that domestic effluent is discharged to a septic tank and puraflo. There is no description of the final disposal route. During the site visit it was noted that the puraflo was not installed as yet and domestic effluent was being discharged to the storm water lagoon/reed/percolation system. Clarify the proposed treatment and disposal route having regard to planning permission requirements. Give details of the assessment of impact of domestic effluent on the existing environment and describe proposed mitigation measures.

Currently the domestic effluent treatment system on site consists of a septic tank. A puraflo treatment unit and raised percolation area is required to be installed as per the original planning permission. The treated effluent from the puraflo system will be highly polished with significant levels of organic matter content, suspended solids and indicator bacteria in the wastewater removed prior to discharge to the subsurface. The proposed mound will polish the wastewater and further purify any residual contaminants present thereby minimising or eliminating the risk of groundwater pollution. A catchment drain will be installed to the nearest outfall to cater for any seepage from the raised percolation area.

I3a: Give an assessment of the impact on the environment of the emissions to sewer.

It is not envisaged that effluent from the facility to the WWTP will cause any significant impact on the environment. However a full assessment of the impact can be submitted to the Agency after analysis of the effluent is received.

I6a: With increased activity due to increase in waste intake to 40,000 tpa, new plant operating and high volume C&D processing. It is anticipated that noise levels will change significantly. Give details of the assessment of impact of noise emissions on the environment and describe mitigating measures.

It is proposed to increase the waste intake at the facility from 16,500 tonnes to 40,000 tonnes per annum. It is now proposed to accept 12,000 tonnes of C&D waste per annum (consisting of timber, metal, soil and other C&D waste). A ballistic screener will be used to process incoming waste. It is proposed to continue the timber shredding operations outdoors. From the noise assessment carried out (Appendix D, Volume III of EIS) the results of noise monitoring have shown that noise levels currently on site are generally below the standard emission limits for daytime operations (55 dB (A)). One result was in excess of this standard, but this was due to traffic noise outside the facility and not from site related activities (59 dB (A)). All new plant operations will be located inside the materials recovery building therefore reducing noise emissions. However, the equipment is likely to be required to operate for longer periods and at a greater level of throughput. Therefore the reductions due to the enclosure will be offset by the increases due to activity levels. The increase in traffic levels due to the proposed increase in waste intake will result in an increase of 3 dB. The current National Roads Authority (NRA) design criteria for new road schemes is to limit the noise to an equivalent value of 65 dB (A). Even with the proposed increase of 3 dB from traffic noise from the facility the noise level at the noise monitoring locations will be within the guideline limit of 65dB(A) from the NRA. Therefore no mitigation measures are required for daytime operations. The new location of timber processing will be assessed for the impact of noise when details are available and will be forwarded to the Agency.

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9 SECTION J: ACCIDENT PREVENTION & EMERGENCY RESPONSE

Ja: Describe the arrangements for abnormal operating conditions (malfunctions or momentary stoppages).

Control measures and procedures in place as described for noise, dust, odour and effluent runoff will be sufficient to deal with any accidental emissions that might result from machinery malfunctions or momentary stoppages.

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10 SECTION L: STATUTORY REQUIREMENTS

L1a: Indicate how all the requirements of Section 40 (4) [(a) to (i)] of the Waste Management Acts 1996 to 2003 will be met. Applicants should also describe how the proposed facility will comply with the requirements of BAT. In particular reference should be made to the considerations referred to in Annex IV of Council Directive 96/61/EC concerning integrated pollution prevention and control.

In accordance with the Waste Management Acts 1996 to 2003 Article 40 (4) The Agency shall not grant a waste licence unless it is satisfied that-

- (a) any emissions from the recovery or disposal activity in question ("the activity concerned") will not result in the contravention of any relevant standard, including any standard for an environmental medium, or any relevant emission limit value, prescribed under any other enactment,
- (b) The activity concerned, carried on in accordance with such conditions as may be attached to the licence will not cause environmental pollution,
- (c) The best available technology not entailing excessive costs will be used to prevent or eliminate or, where that is not practicable, to limit, abate or reduce an emission from the activity concerned,
- (d) If the applicant is not a local authority, the corporation of a borough that is not a county borough, or the council of an urban district, subject to *subsection (8)*, he or she is a fit and proper person to hold a waste licence,
- (e) The applicant has complied with any requirements under *section 53*.
- (f) Energy will be used efficiently in the carrying on of the activity concerned,
- (g) Any noise from the activity concerned will comply with, or will not result in the contravention of, any regulations under *section 106* of the Act of 1992,
- (h) Necessary measures will be taken to prevent accidents in the carrying on of the activity concerned and, where an accident occurs, to limit its consequences for the environment,
- (i) Necessary measures will be taken upon the permanent cessation of the activity concerned (including such a cessation resulting from the abandonment of the activity) to avoid any risk of environmental pollution and return the site of the activity to a satisfactory state.

The applicant KWD are committed to use energy efficiently in the carrying on of activities, to implement necessary measures to prevent accidents, to comply with any conditions of the waste licence and ensure that any emissions are within the standard limits.

KWD are fully aware of their environmental responsibilities and realise that financial provisions maybe required for decommissioning, aftercare and environmental pollution incidents.

Annex IV of Council Directive 96/61/EC concerning integrated pollution prevention and control is described as follows:

Considerations to be taken into account generally or in specific cases when determining best available techniques, as defined in Article 2 (11), bearing in mind the likely costs and benefits of a measure and the principles of precaution and prevention:

1. the use of low waste technology;
2. the use of less hazardous substances;
3. the furthering of recovery and recycling of substances generated and used in the process of waste, where appropriate;
4. comparable processes, facilities or methods of operation which have been tried with success on an industrial scale;
5. technological advances and changes in scientific knowledge and understanding;
6. the nature, effects and volume of the emissions concerned;
7. the commissioning dates for new or existing installations;
8. the length of time needed to introduce the best available techniques;
9. the consumption and nature of raw materials (including water) used in the process and their energy efficiency;
10. the need to prevent or reduce to a minimum the overall impact of the emissions on the environment and the risks to it;
11. the need to prevent accidents and to minimize to consequences for the environment;
12. the information published by the Commission pursuant to Article 16 (2) or by international organisations.

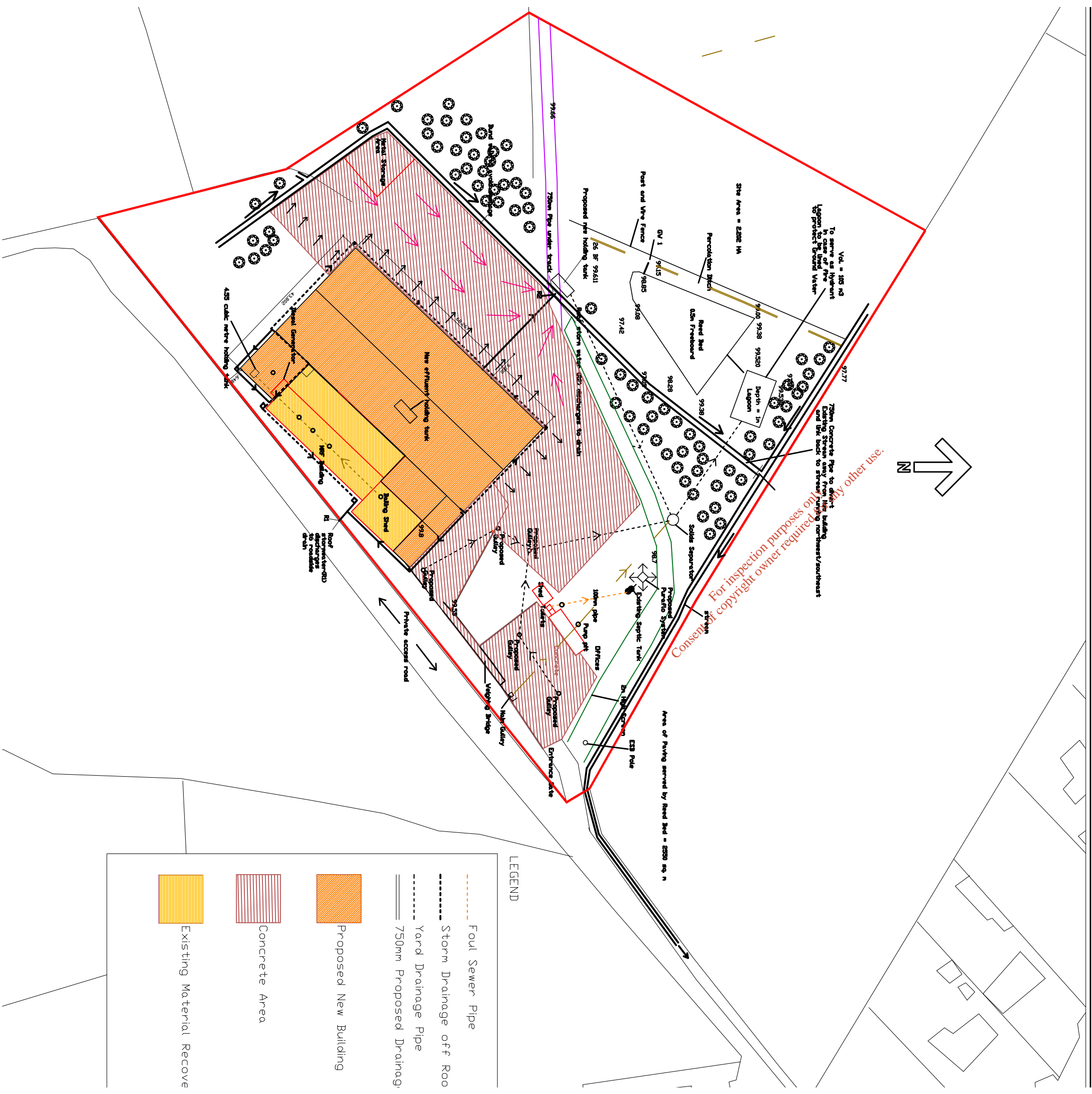
The applicant KWD are committed to applying best available techniques (BAT) in accordance with Annex IV of Council Directive 96/61/EC to prevent and, where practicable, generally to reduce emissions and impact on the environment as a whole.

L2a: Clarify whether your insurance covers both public and environmental liability.

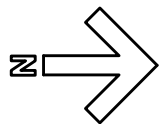
Correspondence from the applicant's insurance company will be forwarded to the Agency when available.

L2b: Provide a copy of the Audited Accounts for the previous year.

A copy of the audited accounts for 2004 are contained in Appendix H.

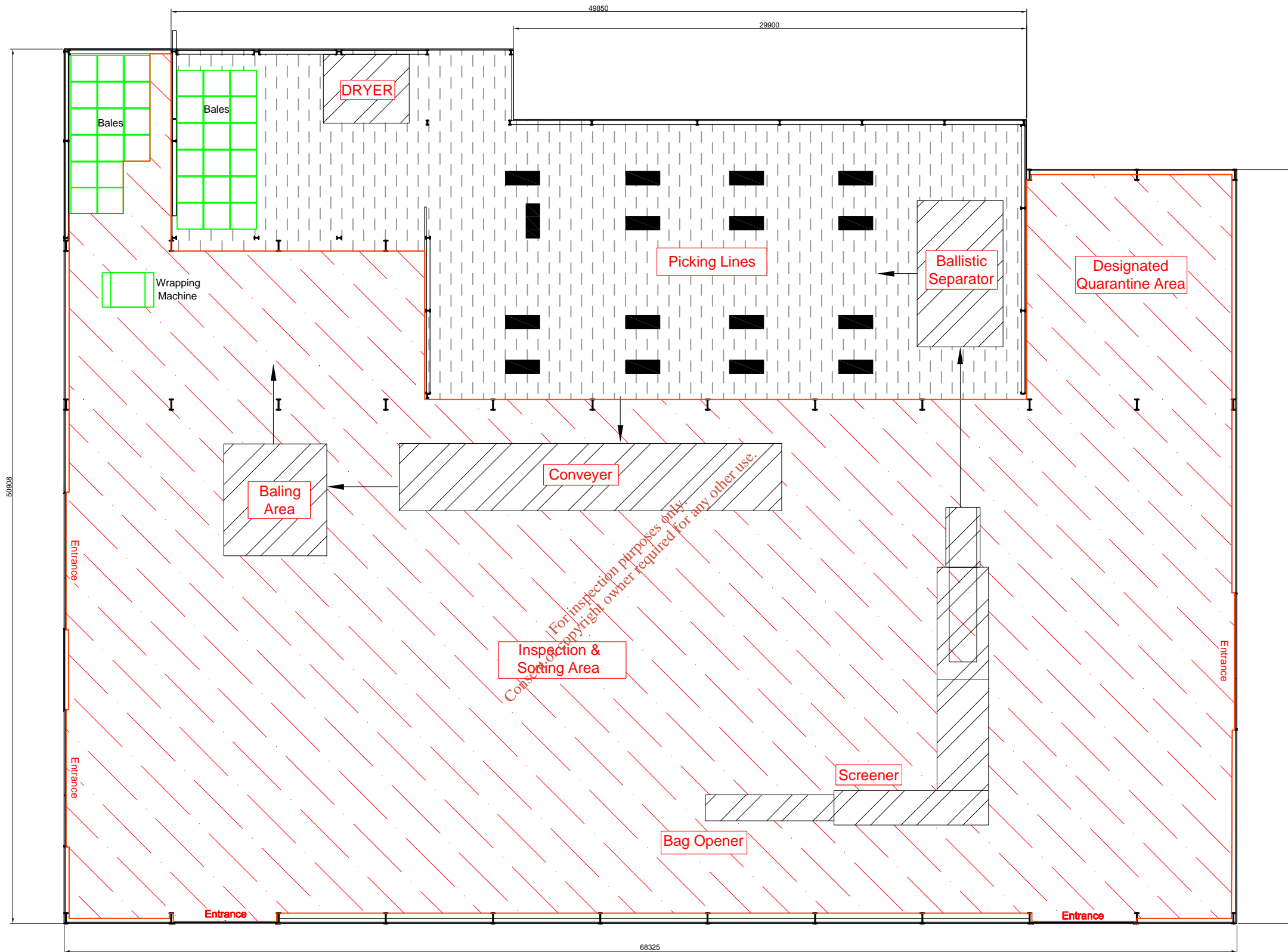


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LEGEND

- Foul Sewer Pipe
- Storm Drainage off Roo
- Yard Drainage Pipe
- 750mm Proposed Drainag
- Proposed New Building
- Concrete Area
- Existing Material Recover



KWD RECYCLING

Killarney Waste Disposal Ltd.
 Aughacureen, Killarney, Co. Kerry.
 Tel: Killarney 064-32458, Tralee 066-7128850 | Fax: 064-38661



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- NOTES**
- This drawing is the property of RPS-MCOS Ltd., it is a confidential document and must not be copied, used, or its content divulged without prior written consent.
 - All Levels refer to Ordnance Survey Datum, Malin Head.
 - DO NOT SCALE, use figured dimensions only, if in doubt ask.

No.	Date	By	Amendment / Issue	App.
F02	17/06/05	CH/SP	Final Issue	S.A.
F01	01/02/05	CH/SP	Final Issue	W.M.

Killarney Waste Disposal LTD.
Waste Licence Application

Title:
 Proposed Layout for MRF Building

Drawn by:	C.N.	Job No:	MGE0031
Checked by:	S.A.	File No:	MGE0031DG0004
Approved by:	W.M.	Drw. No:	DG0004-01
Scale:	Not to Scale	Rev:	F02
Date:	Sept '04		

APPENDIX A

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02/034/J4/9/DP

Planning Dept,
Kerry County Council,
Rathass,
Tralee,
Co. Kerry.

23rd August, 04

Re: Planning Reg. No: 2131/04

Dear Sir/Madam,

Further to your letter of the 20th July we wish to report the following.

RPS-MCOS Ltd. have been engaged to prepare an EPA Waste Licence Application in accordance with the Waste Management (Licensing) Regulations, 2004 with an accompanying Environmental Impact Statement (E.I.S) for Killarney Waste Disposal Ltd located at Aughacurreen, Killarney for an extension to the existing materials recovery facility and proposed increase in tonnage to 40,000 tonnes per annum.

1. As a part of the EIS a Landscape Assessment will be provided which will address the potential impacts of the proposed extension to the facility and increase in annual tonnage on the surrounding environment with proposed mitigation measures. The EIS containing the Landscape Assessment will be forwarded to Kerry County Council when available over the coming weeks in accordance with Article 172 of the Planning and Development Act, 2000 and Article 16 of the Planning and Development Regulation, 2001.
2. 40,000 tonnes per annum is the proposed total annual intake for the facility.
3. The junction accessing this development from local road L7307 as well as the junction of the local road L7307 with local road L2019 shall be overlaid with asphalt in due time, but because of the new application we would like to set up a meeting between Paul Neary, our Client and ourselves to discuss current and future prospective levies. We would appreciate this meeting at the earliest opportunity.

I remain,

Yours sincerely,

Derek Pyne, B.E.,M.I.E.I.,
For Paudie O'Mahoney & Assoc.

RECEIVED 21 JAN 2005

02/0311

KERRY COUNTY COUNCIL**NOTIFICATION OF A GRANT OF PERMISSION****Planning & Development Acts, 2000 to 2002**

TO: SEAN MURPHY

FROM: PAUDIE O'MAHONEY & ASSOCIATES,
UPPER HIGH STREET,
KILLARNEY.

Planning Register Number: 04/2131

Application by SEAN MURPHY, AGHACURREN KILLARNEY CO KERRY for PERMISSION to CONSTRUCT AN EXTENSION TO THE EXISTING MATERIAL RECOVERY FACILITY at AGHACURREN KILLARNEY CO. KERRY

A PERMISSION has been granted for the development described above, subject to the conditions set out in the Notification of Decision of PERMISSION, by Kerry County Council, dated 23/11/2004.

Signed on behalf of
KERRY COUNTY COUNCIL:

Date:

05/01/2005**NOTE:**

1. This PERMISSION will expire five years after the date of this Grant of Permission.
2. The attached commencement notice must be completed and submitted to the Building Control Authority, Fire Station, Balloonagh, Tralee, not less than fourteen days and not more than twenty-eight days before the commencement of works or the material change of use.
3. Where the proposed development is to be served by a new connection to a Kerry County Council Water Supply Scheme or Waste Water Scheme you are advised that an application for the connection(s) should be made to the Water Services Department, County Buildings, Tralee (066 7183503) at least three months before the service is required.

042131

PLANNING AND DEVELOPMENT ACT 2000 AND 2001
NOTIFICATION OF DECISION TO GRANT PERMISSION (SUBJECT TO CONDITIONS)
UNDER SECTION 34 OF THE ACT

KERRY COUNTY COUNCIL

Ref. No. in

Planning Register: 2131/04

TO: Sean Murphy, Aghacurreen, Killarney

Per: Paudie O'Mahony & Assoc., Grosvenor Court, Upper High St., Killarney

Documents Recd.: 27/5/2004, 30/8/2004 and 27/10/2004

In pursuance of the powers, conferred upon them by the above named Acts, Kerry County Council have by Order dated **23rd November, 2004** decided for the reasons set out in the first schedule to grant a permission for the development of land namely:-

In respect of the construction of an extension to existing material recovery facility at Aghacurreen, Killarney, as outlined in plans and particulars received on 27/5/2004 and further information received on 30/8/2004 and 27/10/2004

SUBJECT to the conditions set out in the Second Schedule hereto. (**Fourteen Conditions**)

If there is no appeal against the said decision, a grant of permission in accordance with the decision will be issued as soon as possible after the expiration of the period of four weeks (see footnote).

It should be noted that until a **Grant of Permission** has been issued the development in question is **NOT AUTHORISED**.

SIGNED ON BEHALF OF
THE SAID COUNCIL:

A.O. Planning

DATE: 23rd November, 2014

SCHEDULE (1)

Having regard to the scale of the proposed extension and its relationship with the existing development, it is considered that, subject to compliance with the Conditions set out in the Second Schedule, the proposed development would not seriously injure the visual amenities of the area and would not be contrary to the proper planning and sustainable development of the area.

SCHEDULE (2)

NOTE: An Appeal against a decision of a Planning Authority under Section 34 or Section 35 of the Act of 2000 may be made to An Bord Pleanala within *four weeks* beginning on the date of the making of the decision by the Planning Authority. *An Appeal to An Bord Pleanala will be invalid unless it is accompanied by the appropriate fee. (Please refer to the attached guide for fees payable to An Bord Pleanala).* Appeals should be addressed to: *An Bord Pleanala, 64 Marlborough Street, Dublin 1.* An appeal by the applicant for permission should be accompanied by this form. In the case of an appeal by any other person, the name of the applicant, particulars of the proposed development or structure proposed to be retained and the date of the decision of the Planning Authority should be stated. The acknowledgement of receipt of a valid submission/objection as issued by the Planning Authority should also be submitted with the appeal.

PLANNING AND DEVELOPMENT ACT 2000 AND 2001

Reference No. in
Planning Reg. 21 31/04

Planning Permission for the construction of an extension to existing material recovery facility

1. The development shall be carried out entirely in accordance with the plans and particulars submitted to the Planning Authority on 27/05/2004 and revised on 30/08/04 and 27/10/04 except for any alterations or modifications specified in this decision

Reason: In the interests of visual amenity.

2. All external finishes shall be neutral in tone, colour and texture.

Reason: In the interests of visual amenity.

3. The roof of the proposed extension shall match that of the existing structure in design, colour and texture of the covering material. The colour of the roof shall be limited to grey.

Reason: In the interests of visual amenity.

4. The external finish of the proposed extension shall match the finish of the existing building.

Reason: In the interests of visual amenity.

5. The applicant shall submit a sample of the proposed metal cladding panels to the Planning Authority for approval prior to commencement of development.

Reason: In the interests of visual amenity.

6. Activities on site shall comprise of storage and sorting of materials incidental to the waste recovery facility. This shall exclude manufacturing of final products.

Reason: In the interests of residential amenity.

7. All effluent from the proposed extension shall discharge to the existing septic tank and purifier and shall not pollute any river, stream or aquifer.

Reason: To safeguard public health.

8. Building for storage and sorting of waste must be enclosed and have doors capable of being closed. No finished materials or materials waiting to be processed shall be stored outside.

Reason: To safeguard public health.

9. All roof water shall be collected and diverted to surface waters.

Reason: To safeguard public health.

10. Any contaminated water as a result of activities at the facility shall be collected and passed through an oil interceptor. The contaminated water shall then receive treatment in a reed-bed treatment plant

PLANNING AND DEVELOPMENT ACT 2000 AND 2001

Reference No. in

Planning Reg. 21/31/04

constructed in accordance with a design agreed with Environment Section. **Details shall be submitted within 4 weeks from the date of this permission**

Reason: To safeguard public health.

11. Foul water or effluent collected from waste within the building shall be collected in the existing underground effluent tank. This effluent shall be treated off-site in the Killarney Wastewater Treatment Plant or other treatment plant approved by the Council.

Reason: To safeguard public health.

12. The site shall be landscaped in accordance with a Landscaping plan received on 27/10/00, except for any alterations or modifications specified in this decision. **Details of boundary fencing shall be agreed with the Local Authority prior to constructing it. The landscape plan must address screening along the north western boundary to the satisfaction of the local authority. An amended plan must be submitted within 4 weeks from the date of this permission.**

Reason: In the interests of visual amenity.

13. The applicant shall employ a suitably qualified archaeologist, licensed under the National Monuments Act (1930 – 1994), to carry out pre-development testing at the site and monitor all groundwork's associated with the development. Pre – development testing shall consist of the following:
- (i) No sub-surface work shall be undertaken in the absence of the archaeologist without his/ her express consent.
 - (ii) The archaeologist is required to notify Duchas in writing at least four weeks prior to the commencement of site preparations. This will allow the archaeologist sufficient time to obtain a licence to carry out the work.
 - (iii) The archaeologist shall carry out any relevant documentary research and may excavate test trenches at locations chosen by the archaeologist, having consulted the proposed development plans.
 - (iv) Having completed the work, the archaeologist shall submit a written report to the Planning Authority and Duchas.
 - (v) Where archaeological material is shown to be present, avoidance, preservation in situ, preservation by record (excavation) and / or monitoring may be required. Duchas the Heritage Service will advise the Applicant / Developer with regard to these matters.
 - (vi) No site preparation or construction work shall be carried out until after the archaeologist's report has been submitted and permission to proceed has been received in writing from the Duchas.
 - (vii) Should archaeological material be found during the course of monitoring, the archaeologist may have work on the site stopped, pending a decision as to how best to deal with the archaeology, (e.g. preservation in situ, or excavation). The developer should be prepared to be advised by the National Monuments Service with regard to any mitigating action (e.g. preservation in situ, or excavation) and shall facilitate the archaeologist in recording any material found.
 - (viii) The National Monuments Service shall be furnished with a report on the results of the monitoring.

Reason: In the interests of heritage preservation.

14. Prior to the commencement of development, the developer shall pay a contribution of € 37,575 Kerry County Council (Planning Authority) in respect of public infrastructure and facilities

PLANNING AND DEVELOPMENT ACT 2000 AND 2001

Reference No. in
Planning Reg. 2 31/04

benefiting the proposed development, as a special contribution within the meaning of Section 48 (2) (C) of the Planning & Development Act, 2000 towards the cost of implementation of the following schedule of works:-

<u>Proposed Infrastructure and Facilities</u>	<u>Estimated Cost</u>
1. Overlay of junction accessing development from Local Road L7037.	EUR 1,500
2. Widening and strengthening of junction of Local Road L7037 with Local Road L2019 to allow for adequate HGV turning circles.	EUR 1,950
3. Overlay of junction of Local Road L7037 with Local Road L2019.	EUR 1,525
4. Overlay of segments of Local Road L7037 to facilitate additional HGV traffic.	EUR 11,600

This condition replaces Condition No. 14 and 15 of Grant of Permission for existing development under Planning Reg. 03/337.

Reason: It is considered appropriate that the Developer should contribute towards the cost of public infrastructure and facilities benefiting the development, in accordance with the provisions of Section 48 of the Planning and Development Act, 2000.

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APPENDIX B

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B.4 Sanitary Authority

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 or other body, give the name of the sanitary authority in which the sewer is vested or by which it is controlled and the waste water treatment plant (if any) to which the sewer discharges.

Name: Killarney WWTP

Address: Ross Rd,

Killarney,

Co. Kerry.

Kerry County Council

Tel: (064) 31046

Fax: (064) 35164

The applicant must enclose, as **Attachment B.4**, a copy of any effluent discharge licence and/or agreement between the applicant and the body with responsibility for the sewer.

B.5 Other Authorities

The applicant should tick the appropriate box below to identify whether the activity is located within the Shannon Free Airport Development Company (SFADCo.) area.

Within SFADCo. Area	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
----------------------------	------------------------------	--

The applicant should indicate the **Health Board Region** where the activity is or will be located.

Name: Southern Health Board

Address: Wilton Rd,

Cork.

Tel: 021 4545011

Fax:

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B.6 Notices and Advertisements

Articles 6 and 7 of the Waste Management (Licensing) Regulations 2004 requires all applicants to advertise the application in a newspaper and by way of a site notice. See *Guidance Note*.

Attachment B.6 should contain a copy of the site notice and a drawing showing its location on site. **The original application must include the complete newspaper in which the advertisement was placed.** The relevant page of the newspaper containing the advertisement should be included with the original and three copies of the application.



03/06/2005

Sean Murphy,
Killarney Waste Disposal,
Aughacurreen,
Killarney.

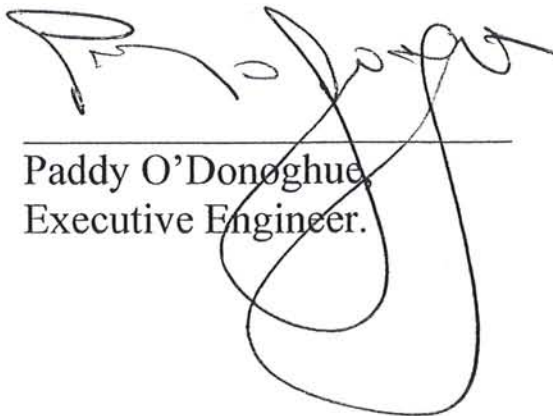
**Re: Disposal of Leachett Run-Off from your Packing Plant
to Killarney Sewerage Treatment Plant.**

Dear Sir,

I refer to your query concerning acceptance of Leachett Run-Off from your packing plant at Aughacurreen, Killarney to be disposed & treated at Killarney Waste Water Treatment Plant, Ross Road, Killarney.

The Council have no objection in receiving run-off leachett from your packing plant at Waste Water Treatment Plant, Ross Road, Killarney subject to the appropriate fee being paid per cub. meter delivered.

Yours Sincerely,



Paddy O'Donoghue,
Executive Engineer.

B.7 Type of Waste Activity, Tonnages & Fees

B.7.1 Specify the class or classes of activity in Table B.7.1, in accordance with the Third Schedule or Fourth Schedule to the Waste Management Acts 1996 to 2003, to which the application relates (check the relevant box(es) and mark the principal activity with a 'P').

Attachment B.7 should identify the principle activity and include a brief technical description of each of the other activities specified. There can only be one principal activity.

TABLE B.7.1 THIRD AND FOURTH SCHEDULES OF THE WASTE MANAGEMENT ACTS 1996 TO 2003

Waste Management Acts 1996 to 2003			
THIRD SCHEDULE Waste Disposal Activities	Y/N	FOURTH SCHEDULE Waste Recovery Activities	Y/N
1. Deposit on, in or under land (including landfill).		1. Solvent reclamation or regeneration.	
2. Land treatment, including biodegradation of liquid or sludge discards in soils.		2. Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes).	P
3. Deep injection of the soil, including injection of pumpable discards into wells, salt domes or naturally occurring repositories.		3. Recycling or reclamation of metals and metal compounds.	X
4. Surface impoundment, including placement of liquid or sludge discards into pits, ponds or lagoons.		4. Recycling or reclamation of other inorganic materials.	X
5. Specially engineered landfill, including placement into lined discrete cells which are capped and isolated from one another and the environment.		5. Regeneration of acids or bases.	
6. Biological treatment not referred to elsewhere in this Schedule which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1 to 5 or paragraphs 7 to 10 of this Schedule.		6. Recovery of components used for pollution abatement.	
7. Physico-chemical treatment not referred to elsewhere in this Schedule which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1 to 5 or paragraphs 8 to 10 of this Schedule (including evaporation, drying and calcination).		7. Recovery of components from catalysts.	
8. Incineration on land or at sea.		8. Oil re-refining or other re-uses of oil.	
9. Permanent storage, including emplacement of containers in a mine.		9. Use of any waste principally as a fuel or other means to generate energy.	
10. Release of waste into a water body (including a seabed insertion).		10. The treatment of any waste on land with a consequential benefit for an agricultural activity or ecological system.	
11. Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule.	X	11. Use of waste obtained from any activity referred to in a preceding paragraph of this Schedule.	X
12. Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule.	X	12. Exchange of waste for submission to any activity referred to in a preceding paragraph of this Schedule.	X
13. Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced.	X	13. Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced.	X

Attachment B7

Third Schedule:

Class 11: This activity provides for the processing and mixing of wastes prior to transfer to other facility for disposal.

Class 12: This activity is required for the processing and bailing of waste on-site prior to disposal.

Class 13: This activity is required for the storage of waste arising at the facility prior to disposal.

Fourth Schedule:

Class 3:

This activity is required for the sorting of metals which will be stored at the facility and then transferred to a metal recycling facility for recovery.

Class 4:

This activity is required for the sorting, separation and processing of mixed municipal waste and separately collected dry recyclables and C&D waste.

Class 11: This activity is limited to the packaging of waste by baling, wrapping, placing in containers or trailers prior to submission to a recycling facility.

Class 12: This activity is limited to the exchange of recycling at the facility.

Class 13: This activity is required for the short-term storage of waste at the facility.

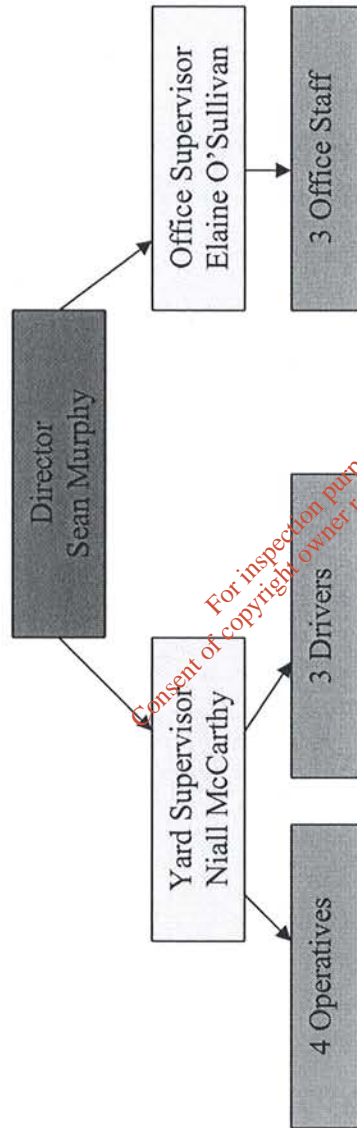
The Principal Activity carried out at the site in accordance with the Fourth Schedule of the Waste Management Acts 1996 to 2003, is as follows:

Class 2: This activity refers to processing of municipal waste. This material will be processed and the organic fines separated out and sent off-site for composting. Sorted organic waste will also be accepted at the facility.

APPENDIX C

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Management Structure and Organisational Chart for Killarney Waste Disposal



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APPENDIX D

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1,500g tank inside a 3,500g tank.

NOTES

Mark Fleury,
Killarney Waste,
Bunded tank proposal.

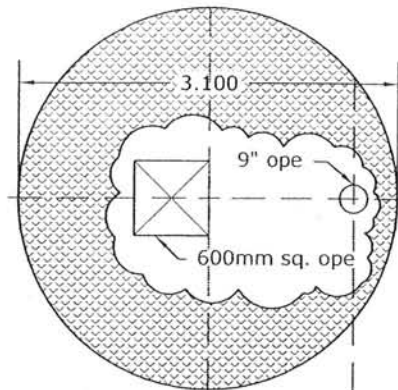
*1 no 1,500 gallon tank placed
inside a 3,500g tank.

*Concrete base poured in 3,500g
tank to support 1,500g tank.
300mm x 300mm x 600mm deep
sump left in floor.

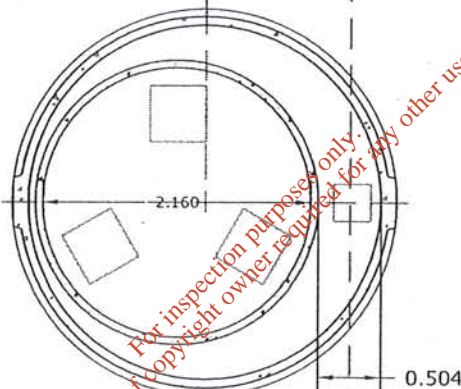
*Precast concrete lid with 600mm
x 600mm access ope over 1,500
gallon tank & Ø225mm
observation ope over 3,500gallon
tank.

*Prime & Tokstrip..

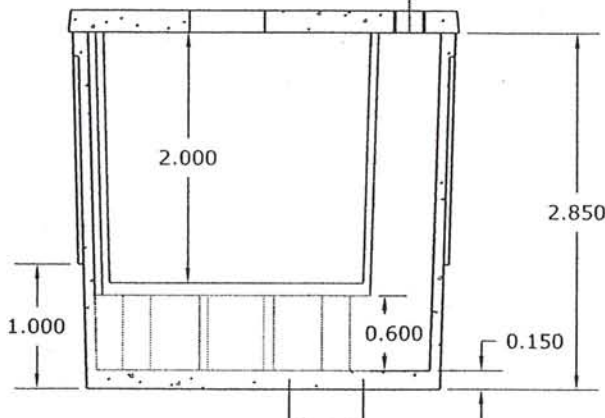
*Suggested base - 100mm cl804
well compacted



ROOF PLAN



FLOOR PLAN



SECTION

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P.O. #:	Proposal Dwg.
Sts:	
Drn:	P.Walsh
Ckd:	
Date:	02/06/05

Killarney Waste,
Mark Fleury
1500g & 3500g tanks

Revisions	
1	
2	
3	

CARLOW PRECAST TANKS LTD

Manufacturers of Septic & effluent tanks, pump chambers, reservoirs, interceptors and special products
Phone +00 353 (59)91 59322 Fax +00 353 (59)91 59202 e-mail: sales@carlowprecasttanks.com

APPENDIX E

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TABLE E.2(i): EMISSIONS TO SURFACE WATERS
(One page for each emission)

Emission Point:

Emission Point Ref. N ^o :	R1
Source of Emission:	Roof water run-off
Location :	Roof water runoff to rear of materials recovery building
Grid Ref. (10 digit, 5E,5N):	936674E 938855N
Name of receiving waters:	Roadside drain
Flow rate in receiving waters:	_____ m ³ .sec ⁻¹ Dry Weather Flow _____ m ³ .sec ⁻¹ 95%ile flow
Available waste assimilative capacity:	_____ kg/day

Emission Details:

(i) Volume to be emitted: surface area of roof 999m ² x 1430mm (Avg rainfall per annum) = 1,429m ³ Avg rainfall per day = 3.915m ³			
Normal/day	3.915 m ³	Maximum/day	4.698 m ³
Maximum rate/hour	0.195 m ³		

(ii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included*):

Periods of Emission (avg)	_____ min/hr _____ hr/day _____ day/yr
---------------------------	--

TABLE E.2(i): EMISSIONS TO SURFACE WATERS
(One page for each emission)

Emission Point:

Emission Point Ref. N ^o :	R2
Source of Emission:	Roof water run-off
Location :	Roof water runoff to front of materials recovery building
Grid Ref. (10 digit, 5E,5N):	936078E 939422N
Name of receiving waters:	Aughnacurreen land drain
Flow rate in receiving waters:	_____ m ³ .sec ⁻¹ Dry Weather Flow _____ m ³ .sec ⁻¹ 95%ile flow
Available waste assimilative capacity:	_____ kg/day

Emission Details:

(i) Volume to be emitted: surface area of roof = 2,040m ² x 1,430mm (Avg rainfall per annum) = 2,917m ³ Avg rainfall per day = 7.99m ³			
Normal/day	7.99 m ³	Maximum/day	9.588 m ³
Maximum rate/hour	0.400 m ³		

(ii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included*):

Periods of Emission (avg)	_____ min/hr _____ hr/day _____ day/yr
---------------------------	--

TABLE E.3(i): EMISSIONS TO SEWER(One page for each emission)

Emission Point:

Emission Point Ref. N ^o :	Effluent Holding Tank in centre of Materials Recovery Building
Location of connection to sewer :	N/A Tankered to WWTP
Grid Ref. (10 digit, 5E,5N):	936387E 939029N
Name of sewage undertaker:	Kerry County Council

Emission Details:

(i) Volume to be emitted: With proposed increase in tonnage 6,770 litres 6.77m ³ per fortnightly to be tankered to WWTP.			
Normal/day	0.564 m ³	Maximum day	0.6768 m ³
Maximum rate/hour	0.282m ³		

(ii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included*):

Periods of Emission (avg)	_____ min/hr	_____ hr/day	_____ day/yr
---------------------------	--------------	--------------	--------------

TABLE E.4(i): EMISSIONS TO GROUNDWATER (1 Page for each emission point)

Emission Point or Area:

Emission Point/Area Ref. N ^o :	GW1
Emission Pathway: (borehole, well, percolation area, soakaway, landspreading, etc.)	Percolation Area
Location :	At the outlet to the reed bed
Grid Ref. (10 digit, 5E,5N):	936046E 939706N
Elevation of discharge: (relative to Ordnance Datum)	
Aquifer classification for receiving groundwater body:	Locally important aquifer
Groundwater vulnerability assessment (including vulnerability rating):	Variable: moderate to low in areas with substantial subsoil deposits of low permeability and high to extreme where overburden is of high permeability, thin or absent.
Identity and proximity of groundwater sources at risk (wells, springs, etc):	2 wells 1km from site used for agricultural and domestic use.
Identity and proximity of surface water bodies at risk:	Aughnacurreen drain

Emission Details:

(i) Volume to be emitted			
Normal/day	m ³	Maximum/day	m ³
Maximum rate/hour	m ³		

(ii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included*):

Periods of Emission (avg)	_____ min/hr _____ hr/day _____ day/yr
---------------------------	--

APPENDIX F

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BORD NA MÓNA

BORD NA MÓNA ENVIRONMENTAL LIMITED

Paudie O Mahoney & Associates,
Consulting Engineer,
Grosvenor Court,
Upper High Street,
Killarney,
Co. Kerry.

10 June, 2005

**Re: Puraflo wastewater treatment system for a dwelling house at
Aughacurreen, Killarney, Co. Kerry for Sean Murphy.
Quotation No: 73978**

Dear Sir/Madam,

As the Site Suitability Report indicates a T Value = >60 and a high watertable, you will be required to carry out the following works in association with the installation of the Puraflo system.

The Puraflo modules and percolation area should be installed on an imported round 65m² x 1m deep as per fig 10 Agreement Certificate No. 99/0060. The material to be used in the imported mound should consist of sandy clay loam with a T Value of 15-30 (soil group 2, table 2a Agreement Certificate No. 99/0060.)

The treated effluent from the Puraflo system will be highly polished with significant levels of organic matter content, suspended solids and indicator bacteria in the wastewater removed prior to discharge to the subsurface. The proposed mounding will polish and further purify any residual contaminants present thereby minimising or eliminating the risk of groundwater pollution.

A catchment drain should be installed to the nearest outfall to cater for any seepage that might occur from the raised percolation area

I am satisfied the Puraflo system and percolation area will work to specification on this site.

Yours sincerely

Donal O'Grady
Area Marketing Manager
Wastewater Treatment Technologies

LITTLETON, THURLES, CO. TIPPERARY, IRELAND.
TELEPHONE: 1850 481136 / (0504) 44215. INT: +353-504-44215. FAX: (0504) 44225. INT: +353-504-44225.

REGISTERED OFFICE: MAIN STREET, NEWBRIDGE, CO. KILDARE.
REGISTERED IN IRELAND NUMBER: 303313

BORD NA MÓNA

BORD NA MÓNA ENVIRONMENTAL LIMITED

PURAFLO PEAT FILTER SYSTEM QUOTATION

DATE	10/06/05	QUOTE NO.	73978
SITE OWNER SITE ADDRESS PHONE	Sean Murphy, Aughacurreen, Killamey, Co. Kerry.	REFERENCE	Paulie O Mahoney & Associates Consulting Engineers, Grosvenor Court, Upper High Street, Killamey. 064 33412
SCOPE OF SUPPLY EXTRAS (if any)	<p><i>Bord na Mona Environmental Ltd will deliver to site, install and commission the Puraflo Peat Filter System consisting of:</i> 2 Puraflo Modules, Concrete Pumping Chamber, Electrical Control Panel, 40mm PE Pipe, 110mm uPVC Sewer, Pipe from Septic Tank onwards</p> <p><i>Provision of the following is the responsibility of the customer:</i> Septic Tank – SR8 Compliant (with T pieces, down legs and baffle wall), JCB and Driver, Electrical cable from house to control panel at septic tank, Electrician to complete electrical connection, a quantity of 1" – 2" clean broken stone (depending on percolation requirements), All site re-installations.</p>		
PRICE	<p>€3,947.14 + vat @ 13.5% = €4,480.00</p> <ul style="list-style-type: none"> 30% Order Deposit to be paid when order is placed = €1,344.00 Balance to be paid on day of installation = €3,136.00 <p>Additional charges may be incurred by the customer for any delays that result in the Installer having to make subsequent visits to the site to complete the installation. Please see Conditions of Sale for full details.</p> <p>FINAL PRICE OF SYSTEM IS SUBJECT TO SITE VISIT</p>		

When returning your signed quotation to Bord na Mona Environmental Ltd, please ensure the following items are included:

- Copy of your Site Map and Planning Conditions as approved by the County Council
- Soil T / P Value (percolation test results)
- Order Deposit Cheque

Please return the signed quotation along with the items listed above to:
 Puraflo Co-ordinator, Bord na Mona Environmental Ltd, Newbridge, Co. Kildare

Tel: 1850 381136 / 045 431201, Fax: 045 432312, E-Mail: ed.info@bnm.ie, Website: www.bnm.ie

TO BE COMPLETED BY INVOICEE <small>(Please use block capitals)</small>	NAME:	ADDRESS:	COMPANY: <small>(if applicable)</small>
		PHONE:	TITLE: <small>(if applicable)</small>
SIGNED <small>(Customer)</small>		DATE	
SIGNED <small>(For Bord na Mona Environmental Ltd)</small>		DATE 10/06/05	

I have read, understand and accept the above quotation & General Conditions of Sale attached. This form when signed by both parties constitutes a binding contract. A copy showing both signatures will be returned to you.

APPENDIX G

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WasteWorks

*KWD Recycling. Runoff treatment system.
Increased yard area.
Notes on design re existing installation.*

1.0 Design.

Installed system based on yard area of 2652m². Yard area now increased to 4600m². Retention times etc recalculated as follows;

2.0 Runoff volume.

Calculated on the basis yard area 4600m².

Rainfall	
Average rainfall 180 days (mm)	500
Total surface area (m ²)	4600
Total 180d rainwater (m ³)	2300
Av rainwater/day (m ³ /d)	12.8

3.0 Interceptor.

Stage 1 - Interceptor	
Capacity (m ³)	13.5
Retention time (days)	1.1

The interceptor is 13.5m³ capacity. This provides over 1 day average hydraulic retention time. Main purpose, separation of oil and floating/settleable solids.

4.0 Lagoon.

Stage 2 - lagoon	
Retention time (days)	5.9
Lagoon capacity (m ³)	75
Av hydraulic depth (m)	1.00

This is intended as a balancing tank and to provide some treatment. It is intended also to act as an emergency for fire fighting purposes. The lagoon is lined with butyl rubber liner (guaranteed for 30 years exposure to weather/UV). Average retention time 6 days.

5.0 Wetland.

This is a lined soil based wetland. It is lined with plastic sheeting laid on top of clay. Designed along general principles for wetlands for runoff. Average hydraulic retention time: 7 days.

Stage 3 Wetland	
Retention time (days)	7
Wetland capacity (m ³)	90
Av depth (m)	0.1
Area (m ²)	900

APPENDIX H

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Registration Number 126626

Killarney Waste disposal Limited
Directors' Report and Financial Statements
for the year ended 31 August 2004

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Killarney Waste disposal Limited

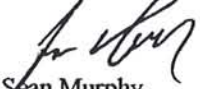
Profit and Loss Account
for the year ended 31 August 2004

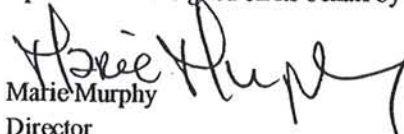
Continuing operations

	Notes	2004 €	2003 €
Turnover	2	3,700,887	3,240,240
Administrative expenses		(3,278,449)	(2,527,693)
Operating profit	3	422,438	712,547
Interest receivable and similar income		2,588	-
Profit on ordinary activities before taxation		425,026	712,547
Tax on profit on ordinary activities		(184,769)	(94,427)
Retained profit for the year		240,257	618,120
Retained profit brought forward		2,093,833	1,475,713
Retained profit carried forward		2,334,090	2,093,833

There are no recognised gains or losses other than the profit or loss for the above two financial years.

The financial statements were approved by the board on 28 April 2005 and signed on its behalf by


Sean Murphy
Director


Marie Murphy
Director


Killarney Waste disposal Limited

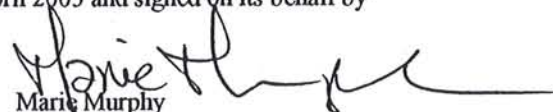
Balance Sheet
as at 31 August 2004

	Notes	2004 €	€	2003 €	€
Fixed Assets					
Tangible assets	6	2,138,618		2,088,288	
Current Assets					
Debtors	7	1,058,976		871,323	
Investments	8	103,604		103,604	
Cash at bank and in hand		184,074		210,260	
		<u>1,346,654</u>		<u>1,185,187</u>	
Creditors: amounts falling due within one year	9	<u>(826,103)</u>		<u>(724,073)</u>	
Net Current Assets			<u>520,551</u>		<u>461,114</u>
Total Assets Less Current Liabilities			2,659,169		2,549,402
Creditors: amounts falling due after more than one year	10	<u>(323,809)</u>		<u>(454,299)</u>	
Net Assets			<u><u>2,335,360</u></u>		<u><u>2,095,103</u></u>
Capital and Reserves					
Called up share capital	11		1,270		1,270
Profit and loss account			<u>2,334,090</u>		<u>2,093,833</u>
Equity Shareholders' Funds	13		<u><u>2,335,360</u></u>		<u><u>2,095,103</u></u>

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The financial statements were approved by the Board on 28 April 2005 and signed on its behalf by


Sean Murphy
Director


Marie Murphy
Director