Cumann Lucht Bainistíochta Contae agus Cathrach
County and City Management Association

MANAGEMENT OF MATERIALS ARISING FROM ROADWORKS

2020
GUIDANCE DOCUMENT FOR THE LOCAL AUTHORITY SECTOR

connacht-ulster waste region
eastern - midlands waste region
southern waste region

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This guidance document has been developed by a National Working Group supported by the Local Government Management Agency (LGMA) under the remit of the County and City Management Association (CCMA) Environment Committee and chaired by John Carley, Director of Service in Wexford County Council. The document is intended as a best practice guide for the Local Authority sector in the management of materials arising from roadworks. The chair acknowledges the support of all the members of the working group and the stakeholders consulted during the process, including Transport Infrastructure Ireland (TII). The other members of the working group are:

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EXECUTIVE SUMMARY

The objective of this document is to provide a practical materials and waste management guide for Local Authority staff involved in construction and development works including roads, housing, environment and other capital or infrastructure projects. The document outlines the minimum requirements for the delivery of construction projects, in order to be compliant with current legislation, and encourages Local Authorities to minimise environmental and human impacts from these works.

There are three key questions to be asked when managing materials and/or wastes generated from roadworks or road development projects:

1. Can the material be categorised as a by-product?
2. Can the material be categorised as a waste?
3. Can the material be categorised as end of waste?

This guidance document outlines current practice when considering the above questions, which are generally case-specific and dependent on the demands and/or suitability of outlets for reusing/recycling the materials at the time of the development.

The document highlights the requirement for each Local Authority to ensure that at least one depot in its functional area is authorised by the EPA as Certificate of Registration. This ensures that wastes can be properly stored at an authorised site by the Local Authority.

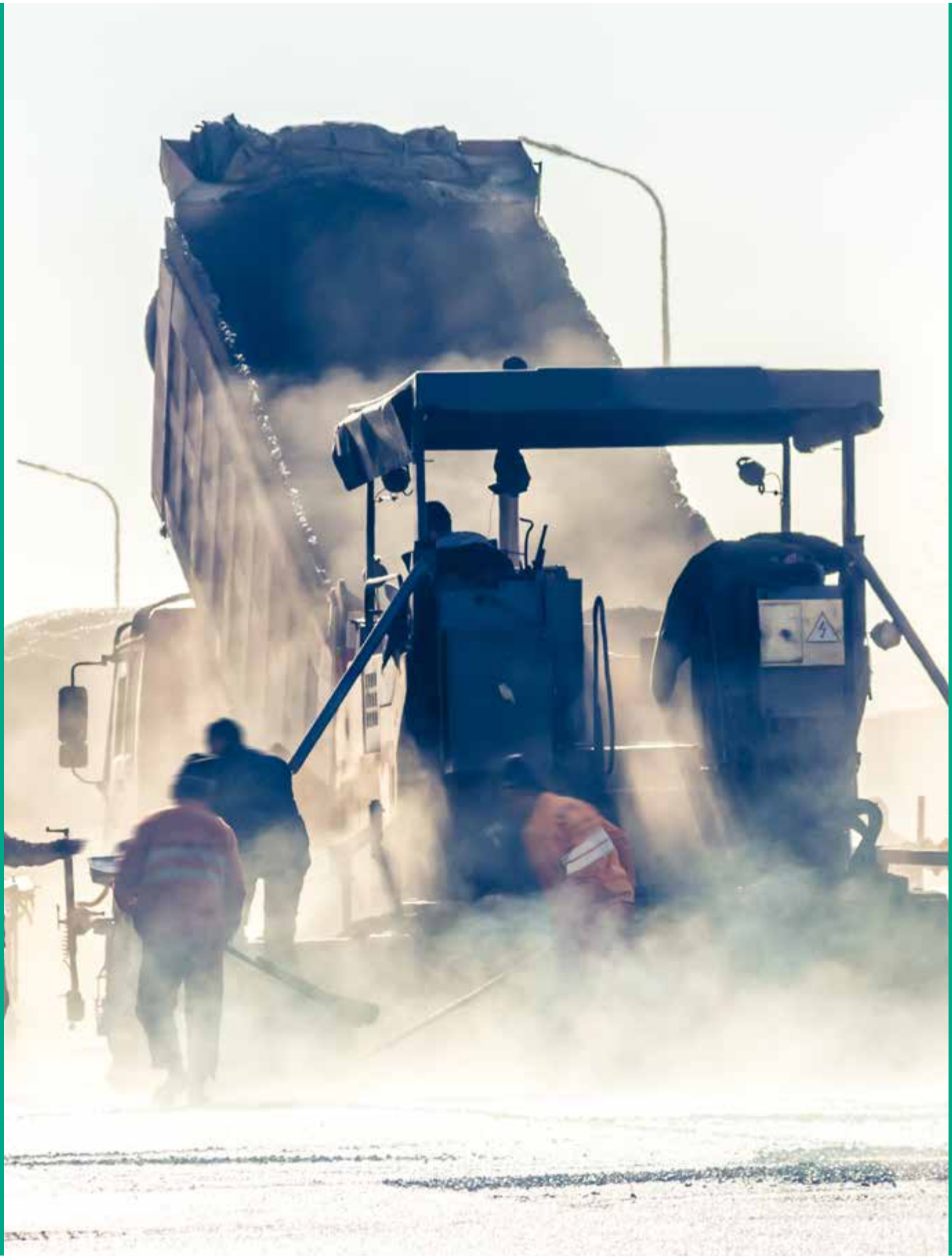
The document outlines a number of recommendations for the sector:

1. Each Local Authority ideally at Municipal District level shall arrange to prepare a Waste and By-product Management Plan to include all materials generated during the improvement, repair and maintenance of existing roads and the development of new road infrastructure managed by the Local Authority. A plan shall also be completed at Municipal District level in relation to the annual roads programme, at the pre-planning stage of the programme.
2. Each Local Authority, through a dedicated senior officer, shall ensure that a Waste and By-product Management Plan is prepared to include all materials generated from national road pavement overlay/inlay improvement projects.
3. The National Road Design Offices shall ensure that a Waste and By-product Management Plan to include all materials is prepared for all Capital Road projects managed by the National Road Design Offices.
4. Each Local Authority should implement a testing regime for use of planing materials under Article 27 declaration as per parameters described in Appendix 1. The testing should be done prior to any planing activities being undertaken in order to identify the potential presence of any hazardous materials, such as coal tar. Article 27 is a process whereby producer (Local Authority) declares surplus material on site to be a by-product rather than a waste (see Section 4).

5. If the presence of coal-tar is identified from the test results, this indicates the presence of hazardous material, the planing material is not recommended as a by-product and the Article 27 process is not appropriate.
6. All materials shall be segregated at source to ensure the appropriate environmental and economic end use.
7. Road planings shall remain the responsibility of Local Authorities in accordance with the Waste Management Act, i.e. cradle to grave.
8. All relevant staff shall receive appropriate training on the management of material arising from roadworks.
9. Each Local Authority, at Municipal District Level, shall identify authorised waste facilities for management of its wastes.
10. Each Local Authority, at Municipal District Level, that temporarily stores road construction wastes at its depots must have the required waste authorisations, e.g. Certificate of Registrations.
11. The policy of all Local Authorities should be to maximise the reuse of all material generated on the project site.
12. Careful consideration is to be given to the site boundary on road construction and maintenance projects to ensure that all temporary storage of waste is within the site boundary.

The document shall be considered as a guide and will be updated periodically as legislation changes and best-practice approaches are learned and shared within the sector.

This guidance document is based on the current understanding of legislative requirements, and Local Authorities are encouraged to continue to improve waste management approaches above and beyond the improvements outlined in the guidance document.



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INTRODUCTION

1.1 SUMMARY

This document examines the approach to be taken by Local Authorities in managing the various road construction and pavement materials generated during the improvement, repair and maintenance of existing roads and the development of new road infrastructure. The existing road construction materials are examined to consider their environmental regulation. Consideration is given to the controls on the management of this material as follows:

- When the material is not classified as a waste
- When it is regarded as a by-product
- When it is regarded as a waste
- When it has been recovered sufficiently to satisfy end-of-waste criteria.

One of the major streams of interest when completing road projects is road planings. Road planings are generated from maintenance and repair of asphalt pavement on road surfaces. Asphalt is a mixture of aggregates (rock, gravel and sand), binder (bitumen) and filler. Road Planings are also generated on capital projects at pavement tie-ins, side road alignments, and where overlays are required.

Transport Infrastructure Ireland (TII) published a standard for the application of secondary asphalt in recycled asphalt products, and this contains a series of restrictions including a quantity limit of 30%.

The Local Authority sector has also considered the use of road planings on projects and programmes managed by Local Authorities and TII as follows:

1. Milled planings to be reused in RAP plants to be incorporated into new asphalt products to the 30% limit permitted under the TII standard or
2. Road base and sub base in accordance with TII Specification for Road Works Series 600 and Series 800
3. Road edging
4. Embankments
5. Accommodation works
6. Footpaths
7. Public car parks
8. Public greenways.

Article 27 is a process whereby the producer (Local Authority) declares surplus material on site to be a by-product rather than a waste (see Section 4).

Economic operators/notifiers may decide, in accordance with the conditions of Article 27, that their substance or object is a by-product. Decisions made by economic operators/notifiers under Article 27 must be notified to the Environmental Protection Agency. The Agency is required to maintain a register of notified decisions.

IT SHOULD BE NOTED THAT THE EPA HAS NOT MADE ANY DECISIONS ON LOCAL AUTHORITY ARTICLE 27 NOTIFICATIONS FOR ROAD PLANINGS AS IT IS NOT YET IN A POSITION TO MAKE THESE DECISIONS.

Article 27(3)(a) states that the Agency may determine that a notified by-product should actually be considered a waste. A determination may, in fact, reverse the decision made by the economic operator. In this case, the Local Authority may be required to remove the material from the current location for recovery/disposal at an alternative facility. The Agency is obliged to consult with the relevant Local Authority and the economic operator before making a determination on any notification. Many Local Authorities have indicated through their contractors that road planings are a by-product and as such would follow Article 27 process as per the EPA guidance at the time of writing of this report.

Article 28 sets out the grounds by which a material that is recovered or recycled from waste can be deemed to be no longer a waste (see Section 5).

A major national end of waste (EOW) project is underway in the Local Authority sector and road planings have been risk assessed in a number of scenarios, the results indicate that the reuse and recycling of road planings does not compromise environmental or human health safety.

An application is being prepared for the EPA in 2020, in accordance with recently published EPA Draft Guidance Document on End-of-Waste Part 1 & Part 2.

This is not currently an option for treatment of road planings as it make take more than 12 months to complete the processing of the application.

Other potential waste streams that are covered in this report are:

- Excavated bituminous road materials (e.g. road crossing)
- Soil and stone
- Top soil
- Subsoil
- Peat
- Rock
- Green waste (bushes, trees, branches, shrubs and any vegetation)
- Bricks, tiles, slabs, concrete
- Pipes and fittings
- Timber, signage and glass
- Tyres and other car waste

Guidance on the management of these materials is included in the document.

1.2 TERMS OF REFERENCE

1.2.1 CCMA ENVIRONMENT COMMITTEE - REUSE OF ROAD CONSTRUCTION MATERIALS WORKING GROUP

Following meetings with TII, it was agreed at the CCMA Environment, Climate Change and Emergency Planning Committee in October 2018 that a Working Group be created to address the issue of managing road construction materials. Chaired by John Carley, DOS Wexford, staff from Kerry County Council, Laois County Council, Mayo County Council and the Southern Region Waste Management Office were nominated to the working group. The group was charged with developing a guidance note to assist Local Authorities in meeting their obligations to comply with the provisions of the EC (Waste Directive) Regulations 2011 and to ensure that activities in road construction and road maintenance are managed in compliance with relevant environmental legislation.

1.2.2 SCOPE OF DOCUMENT

The Working Group, in preparing the guidance document for the CCMA, shall have regard to the approach to be taken by Local Authorities in managing road construction materials generated during the improvement, repair and maintenance of existing roads and the development of new road infrastructure. Consideration is given to the controls on the management of this material as follows:

- When the material is not classified as a waste
- When it is regarded as a by-product
- When it is regarded as a waste
- When it has been recovered sufficiently to satisfy EOW criteria
- Current technical literature on the subject (e.g. The Management of Waste from National Road Construction Projects, TII)
- Summary of other relevant risk assessments recently undertaken in the sector
- Work being commissioned by the Regional Waste Management Planning Offices on road planings
- Practical guide to the management of waste and byproducts from road works
- Any other matters/factors that the working group considers relevant

The Working Group shall meet as needs dictate, given the requirement to engage with multiple stakeholders including Local Authorities, the EPA, TII.
The Working Group, through the Chair, will report to the CCMA Environment, Climate Change and Emergency Planning Committee on a regular basis as required.

It is envisaged that a final draft document making a number of recommendations be complete by end of May 2020 for consideration by the CCMA.

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WHEN ROAD CONSTRUCTION MATERIALS BECOME A WASTE

2.1 INTRODUCTION

When existing road materials (planed/excavated or removed) become a waste, they require management in accordance with the requirements of the Waste Management Act 1996 as amended. Waste materials are subject to regulation for their proper handling, processing, transport and final treatment (reuse/recycling or disposal). Compliance with waste regulations will require additional environmental safeguarding and may lead to additional costs. Any sampling and testing referred to in this guidance pertains only to environmental testing and has not impact on performance or structural testing.

2.2 WHAT IS A WASTE?

The Waste Management Act 1996, as amended defines a waste as *"any substance which the holder discards or intends or is required to discard"*
Given the extent of the First Schedule and the European Waste Catalogue (now the List of Wastes, LoW), the definition of waste essentially comes down to the intent of the holder. Anything that you do not require on your site or you intend to remove off site may/could be defined as a waste.

2.2.1 LIST OF WASTE (LOW) CODES

Each waste type is allocated a unique six-digit code under the LoW system. Wastes can be classified as being non-hazardous, hazardous (identified with an asterisk, *), or as a mirror entry (potentially either hazardous or non-hazardous).
Examples of some typical construction & demolition LoW codes include: 17 05 04 (soil & stone), 17 01 01 (concrete), 17 03 01* (bituminous mixtures containing coal tar), 17 03 02 (bituminous mixtures other than those mentioned in 17 03 01).
Details of the various LoW codes etc. are available in the EPA publication *Waste Classification – List of Waste & Determining if Waste is Hazardous or Non-Hazardous* (EPA, 2018).

It is important to correctly identify all wastes arising on site using these codes, as these identifiers are used in tracking the waste and can dictate the final reuse/disposal of the material.

2.3 PREVENTION OF WASTE

The best management of materials on site is to ensure you do not create waste or surplus in the first instance. Prevention is financially advantageous as it reduces the purchase of construction materials and eliminates the need to remove wastes from site. This can be achieved in a number of ways:

- Order what you need - do not order surplus to your requirement
- Create material stockpiles and storage areas so as to ensure that materials do not get contaminated or mixed such that they are not fit for purpose
- Better storage can reduce wastage from weather and other damage
- Segregate waste streams (mixed wastes are more difficult to dispose of and can limit the possibilities for reuse or recycling)
- Consider reuse of materials on the site - excess soil can be reused in landscaping on site; however, if you remove it from your site it may be classified as a waste (if not declared/approved under Article 27) and require expensive handling and treatment as such
- Use all temporary materials as many times as possible. Site security fencing, hoarding and scaffolding can be used over and over on different sites if care and attention are given when removing. Care should be taken when reusing temporary materials to prevent the spread of invasive species
- Consider reuse of soil and stone as by-product under Article 27
- Where possible, engage in grass recycling (don't collect the cuttings) - if grass is collected and brought off site it is now a green waste; if left on the green area uncollected it never became a waste. Care should be taken to prevent the spread of invasive species
- Consider mulching hedge trimmings on site and reuse on site as mulch on landscaped areas to supress weeds
- Renovation that retains and repairs existing structures, for example masonry bridges, with the introduction of new materials only where necessary, can greatly reduce waste arisings.

2.4 MANAGING WASTE

It is not possible to eliminate all waste arising from roadworks, and it is essential that the management of waste arisings is both anticipated and planned for. The preparation of a Construction Material/Resource and Waste Management Plan in advance of the works is recommended. Advanced preparation of such a plan for a Local Authority's annual roadworks plan presents many advantages:

- Better awareness on waste prevention & reduction
- Authorised facilities for different waste streams can be identified
- It allows sufficient time to make necessary Article 27 declarations to the EPA
- Better compliance with waste management legislation
- It allows sufficient time and opportunity to identify and certify/permit sites for the storage and deposit (soils) of materials.

2.5 GENERAL PRINCIPLES OF WASTE MANAGEMENT

2.5.1 DUTY OF CARE

The duty of care principle requires that any person handling or managing waste is ethically responsible for applying the utmost care in its handling, recovery and/or final disposal. This can include preparing Construction Material/Resource and Waste Management Plans, ensuring all contractors used for the removal of waste hold the appropriate permits and licences, keeping records, and making Article 27 declarations. It is important to note that the duty of care lies with the producer of the waste, which is the Local Authority.

2.5.2 THE POLLUTER PAYS

The polluter pays principle allows that where possible, the person or organisation that creates the pollution should pay for the pollution control and cleanup of the waste. If waste from your construction site is discovered in an illegal dump, not only will the waste management company used be liable for prosecution but you, the producer, may also be prosecuted and incur cleanup costs.

2.5.3 THE PRECAUTIONARY PRINCIPLE

The precautionary principle is your response to uncertainty. Where the risks to health or the environment are uncertain or unknown, you must assume the risk is significant and plan protection and waste handling measures accordingly.

2.5.4 THE PROXIMITY PRINCIPLE

The proximity principle is that waste treatment and disposal should take place as near to the point of production as is environmentally and technically possible. There are exceptions, particularly with hazardous wastes, where limited waste contractors may be authorised to deal with certain waste streams.

2.6 FUNDAMENTALS FOR WASTE MANAGEMENT COMPLIANCE

The main definitions and concepts relating to waste arising from construction and demolition projects include the following.

2.6.1 COLLECTION & TRANSPORT OF WASTE

Waste must only be transported/collected by a waste contractor holding a current and valid waste collection permit issued by the National Waste Collection Permit Office (NWCPO) for the relevant waste types. (This requirement does not apply to Local Authority plant moving waste generated from Local Authority projects) Contractors engaged by Local Authorities in the collection and transport of waste should be asked to provide copies of their waste collection permits and these should be checked to ensure that the relevant waste types (List of Waste Codes) are included in the permit. In addition, waste collection contractors should be asked to confirm that the proposed authorised waste outlet is included in the contractor's waste collection permit.
Details of collection permits can be confirmed on the NWCPO website at www.nwcpo.ie.

2.6.2 INERT WASTE

'Inert waste' is waste that does not undergo any significant physical, chemical or biological transformations. This includes uncontaminated soil and stone, but does not include bituminous materials or green waste.

Inert waste materials have traditionally been used for land reclamation, development and engineering works at landfills (which are deemed to be waste recovery activities). Local Authorities may choose to use existing authorised facilities for the management of their inert wastes or, alternatively, potential new facilities may be sourced or identified.

Where a new inert waste facility is proposed, there is a requirement to obtain both planning permission/approval (note: there is currently no option to obtain planning exemption for inert waste facilities) and an appropriate waste authorisation.

The types of waste authorisations applicable to inert waste facilities are as follows:

- Licensed Waste Facilities – large-scale facilities authorised by the EPA (landfills, large-scale waste plants, etc.)
- Waste Facility Permits (WFPs) – mid-scale facilities authorised by Local Authorities (e.g. mid-sized privately operated waste facilities and plants)
- Certificates of Registration (CORs) – smaller-scale facilities authorised by the EPA (e.g. Local Authority operated inert waste recovery sites) and by Local Authorities (e.g. privately operated small-scale waste facilities).

Details of the types (classes) of waste activities that are subject to Waste Facility Permits and Certificates of Registration, along with the relevant thresholds for each, are set out in the Third Schedule of the Waste Management (Facility Permit & Registration) (Amendment) Regulations 2008 [S.I. No. 86 of 2008] and 2019 [S.I. No. 250 of 2019] – detailed in the template in Appendix 4. Local Authorities may apply to the EPA for a **Certificate of Registration** for a site over which they have direct control. Applications for Certificates of Registration in all other cases are dealt with by the relevant Local Authority.

Applications by Local Authorities for Certificates of Registration are dealt with by the EPA's Environmental Licensing Unit. Applications must be submitted in hard-copy to its offices in Johnstown Castle Estate, Co. Wexford. A copy of the relevant application form is attached and further details of the application process are available via the EPA website at: http://epa.ie/licensing/licques/. In advance of submitting any application, the applicant shall consult with their environment department for advice and guidance.

2.6.3 TEMPORARY STORAGE OF WASTE

Waste may be temporarily stored, pending collection, **for a period not exceeding six months** on the site where the waste is produced. Therefore, in advance of any project commencing, careful consideration needs to be given to the location of any temporary waste storage areas proposed for use. Where feasible, these areas should be **included** within the defined boundary of the project site.

It is also recommended that each Local Authority ideally at Municipal District level examine all material storage depots and, following an environmental, risk and feasibility study, seek a COR for at least one depot in each Municipal District area.

It is anticipated that these facilities will provide for controlled and environmentally safe temporary storage of certain waste streams for bulking prior to disposal. For example, old damaged or obsolete signage may be stockpiled until sufficient quantities can be brought to an authorised facility. Excavated materials from road openings, which by the nature of the works are mixed (soil, stone, macadam), can be stockpiled until such time as sufficient quantity to fill a lorry is collected.

An example of a completed COR application is given in Appendix 4.

2.6.4 WASTE FACILITY AUTHORISATIONS

The types of waste authorisations and appropriate thresholds applicable to inert waste facilities are as follows:

- Licensed Waste Facilities (authorised by the EPA) – applicable to facilities where the total intake of soil & stone exceeds 200,000 tonnes or where the total intake of inert waste other than soil or stone (e.g. concrete and rubble) exceeds 50,000 tonnes
- Waste Facility Permits (authorised by Local Authorities) – applicable to facilities where the total intake of soil & stone is less than 200,000 tonnes, or where the total intake of inert waste other than soil or stone does not exceed 50,000 tonnes
- Certificates of Registration (CORs) (authorised by the EPA and by Local Authorities) - applicable to facilities where the total intake of soil & stone is less than 25,000 tonnes, or where the total intake of inert waste other than soil or stone does not exceed 10,000 tonnes.

It should be noted that bituminous waste materials (including road planings, trench cuttings, etc.) and wastes that are contaminated with bituminous material are not classified as inert wastes and, therefore, cannot be disposed of or recovered at inert waste facilities. Alternative management and disposal options need to be identified for such wastes, potentially including the use of Article 27 (see Sec. 4) or disposal to landfill.

2.6.5 ARTICLE 11

Where there is uncertainty about whether waste authorisation is required for an activity, or where there is doubt about the type of waste authorisation required, a request for a determination on the issue may be submitted to the EPA under Article 11 of the Waste Management (Facility Permit & Registration) Regulations. Requests must be submitted online and are dealt with by the EPA within a period of 15 working days. Details of the submission process etc. are available on the EPA website via the following link: http://www.epa.ie/licensinglicquesarticle11declarations/

An article 11 Request form is included in Appendix 4 of this document.

2.7 DEVELOPING A CONSTRUCTION MATERIAL/RESOURCE AND WASTE MANAGEMENT PLAN

A number of sources of information are currently available in Ireland on the subject of construction & demolition (C&D) waste management. In general, all the guidance available highlights and promotes core waste management approaches, including:

1. Waste prevention and minimisation, particularly at design stage
2. Preparation of a Construction Material/Resource and Waste Management Plan in advance of project commencement
3. Appropriate on-site waste segregation and storage
4. Appropriate record-keeping, to include movement of waste off-site by authorised collectors as well as details of destination facilities etc.

The relevant guidance documents currently available in the Irish context are as follows (in date order of publication):

- **Best Practice Guidelines on the Preparation of Waste Management Plans for Construction & Demolition Projects (DoEHLG 2006)** - This guidance document provides information on the development of waste management plans for construction and demolition (C&D) projects above specified thresholds. However, the guidance is equally applicable to all construction projects, irrespective of scale. The guidance refers to the need for consideration of waste management issues at the design, tender and development stages of any project. Information is also provided on the required format and content of C&D waste management plans.

- **Guidance Manual – Waste Facility Permit & Registration Regulations (EPA 2009)** – This document provides information regarding the concepts and application procedures relevant to waste facility permits and certificates of registration. The document would be of particular use to Local Authorities, which may be preparing applications for these types of waste authorisations.

- **Guidance on the Interpretation of Key Provisions of Directive 2008/98/EC on Waste (European Commission, 2012)** – This document provides guidance on the terms and concepts contained in the EC Waste Framework Directive. The issues covered include the definition of waste, guidance on the temporary storage of waste, exclusions that apply under the directive, etc.

- **Design Out Waste – A Design Team Guide to Waste Reduction in Construction & Demolition Projects (EPA, 2015)** – This guide provides C&D waste management information that may be of use to project design teams. Particular emphasis is placed on the need to identify waste prevention and minimisation opportunities at the initial design stage of a project.

- **EU Construction & Demolition Waste Management Protocol (European Commission, September 2016)** – The protocol outlines the main principles and concepts of relevance to C&D projects in the European context.

- **The Management of Waste from National Road Construction Projects (TII, December 2017)** – This document is the most directly relevant guidance currently available in Ireland for the roads construction and management sector. It deals with a wide variety of relevant topics in a very comprehensive manner, including: waste legislation and policy, relevant definitions and concepts (including discussions on the definition of waste etc.), relevant authorisations (including waste authorisations, planning approvals, etc.), waste management planning for roads projects and management of key waste types (soils, rock, etc.).

- **Guidelines for the Waste Audits Before Demolition & Renovation Works of Buildings (European Commission, May 2018)** - This document provides guidance on the assessment of C&D waste streams at the pre-development stage, with particular emphasis on the concept of the waste audit.

- **Guidelines for the Creation, Implementation and Maintenance of an Environmental Operating Plan (NRA)** - this document is to provide guidance to main contractors on how Environmental Operating Plans should be formulated, implemented and maintained. In addition, it will assist local authorities and the Engineer on what should ideally be incorporated in such plans.

- **Guidance on Soil & Stone By-Products (EPA, June 2019)** – This guidance document specifically relates to the potential determination of soil and stone as a by-product in accordance with Article 27 of the European Communities (Waste Directive) Regulations 2011 (New regulations are to transposed in July 2020). It sets out the EPA's requirements with regard to by-product notifications submitted to the Agency under Article 27, and to the decision criteria applicable. The guidance may be of use in circumstances where excess uncontaminated soil and stone is to be generated as part of a project and where a potentially suitable destination site, or sites, is available.

- **By-Product Guidance- A Draft Guide to by-products and submitting a by-product notification under Article 27 of the European Communities (Waste Directive) Regulations 2011 (S.I. No. 126 of 2011), EPA 2020.** - The purpose of this guidance is to encourage the prevention of waste including the lawful and beneficial use of by-products; and set out the EPA's regulatory approach to determining notifications on by-products and to provide guidance to interested parties.

- **End of Waste Draft Guidance Part 1 & 2 , EPA 2020** - Part 1 introduces End-of-Waste by describing the context and benefits and introducing the end-of-waste test to potential applicants. Part 2 provides guidance for applicants on how to address the requirements of the end-of-waste test

- Finally, a range of relevant waste-related information is available directly from online sources; for example, the EPA hosts a broad range of information on waste-related matters on its website, at: https://epa.ie/pubs/advice/waste/. The National Waste Collection Permit Office (NWCPO) provides details of all current waste collection permit holders and all current waste facility permit and certificate of registration holders on its website, at: http://www.nwcpo.ie/default.aspx.

2.7.1 CONSTRUCTION MATERIAL/RESOURCE AND WASTE MANAGEMENT PLAN

Waste management is the subject of extensive regulation and there are numerous environmental requirements to be met during the construction life cycle of the project. Environmental Control Measures are dealt with under the following headings:

- consultation;
- compliance with relevant licences, approvals and legislation;
- construction and demolition waste management plan;
- waste prevention, reuse and recycling;
- storage and treatment of topsoil; storage and treatment of acceptable subsoils;
- appointment of waste contractors;
- treatment of hazardous waste (Hazardous Material e.g. coal tar must go for appropriate disposal to a suitably authorised hazardous waste facility);
- treatment of recyclable waste;
- treatment of general waste, and discovery of buried waste.

The content of a Construction Material/Resource and Waste Management Plan should be accessible in format and readability to all operational staff involved in the project. It should provide practical steps for the management of waste on a specific project.

In the context of a Local Authority annual roadworks programme, the plan should be reviewed and updated on an annual basis to ensure that only authorised facilities and permitted waste collection operators are used. Where the review identifies a deficit of available certified or permitted sites, this creates an opportunity to examine the development of new authorised facilities, particularly for soil and stone recovery, before the project commences. An annual review process will also allow for the inclusion of the real cost of waste management in planning future roadworks and assist in developing a continuous improvement approach in terms of waste minimisation.

Individual headings within the plan should include:

- Description of the project
- Wastes arising
- Proposals for minimisation, reuse, recycling and disposal
- Proposals for COR sites, Article 27 applications, lawful sites for Article 27 materials
- List of current permitted waste collectors and facilities available in the area for transport & waste management (recycling/disposal), including dates for expiry of CORs, permits, licences for these operators and facilities to cover all types of materials listed under waste arisings
- Estimated costs for waste management
- Role and responsibility of all parties for waste management
- Record keeping and auditing.

The EPA are due to publish guidance on Construction Material/Resource and Waste Management Plans in 2020.

2.7.2 ESTIMATING WASTE ARISING

Site waste can be highly variable between sites and at different stages of construction. It's best to devise a simple waste audit sheet listing the various types of waste (using LoW Codes as well as general descriptions will allow for easier examination of reuse/disposal options, given that authorised waste collectors and the waste facilities they use receive their specific authorisations by LoW code). While it can be easier to envisage your waste arising as a volume waste disposal, it is typically charged by the tonne. The most relevant LoW codes for road projects and their the Conversion factors are listed in table 1.

TABLE 1: CONVERSION FACTORS FOR ROAD PLANINGS

WASTE DESCRIPTION- SOIL AND STONE	LOW CODE	CONVERSION FACTORS TO CONVERT M^3 TO TONNES
Hazardous - soil & stones	17 05 03*	1.5
Inert - mixture of concrete, bricks, tiles etc.	17 01 07	1.5
Inert - soil & stones	17 05 04	1.5
Non Hazardous (Non Inert) - soil & stones	17 05 03*	1.5
Soil and stone	20 02 02	1.5

Source: Department of Communications, Climate Action and Environment (2007)

WASTE DESCRIPTION OTHER WASTE TYPES	LOW CODE	CONVERSION FACTORS TO CONVERT M^3 TO TONNES
Biodegradable waste	20 02 01	0.38
Bituminous mixtures other than those mentioned in 17 03 01	17 03 02	0.82
Concrete	17 01 01	1.27
Furniture and bulky items	20 03 07	0.18
Gypsum	17 08 02	0.33
Inert - glass	17 02 02	0.61
Metals	17 04 07	0.42
Mixed C&D waste (17 09 04)	17 09 04	0.32
Mixed hazardous - C&D waste (17 09 03*)	17 09 03*	0.27
Mixed metals	17 04 07	0.42
Mixed municipal waste	20 03 01	0.21
Municipal waste not otherwise specified.	20 03 99	0.56
Non Hazardous (Non Inert) - dredgings	17 05 06	0.51
Other non-biodegradable wastes	20 02 03	0.22
Packaging	15 01 06	0.21
Sharps (not from health care)	20 01 99	0.27
Street-cleaning residues	20 03 03	0.47
Tiles and Ceramics	17 01 03	0.59
Wood	17 02 01	0.34

Source: WRAP (The Waste and Resources Action Programme) (2014)

2.8 EXAMPLE SCENARIO

The handling of materials including waste and by-products from a road construction project can include several steps and processes to ensure compliance; some require advance planning. The following scenario provides examples of many of the issues for consideration in a typical roadworks resurfacing project.

2.8.1 PROJECT DESCRIPTION

Planned resurfacing of a road consisting of existing hot rolled asphalt surface; proposal is to plane the existing surface and to resurface. First steps include preparation of the site, such as hedge cutting, verge cleaning, drainage improvement. Road studs will then be removed prior to planing and resurfacing.

2.8.2 WASTE STREAMS

- Hedge cuttings (green waste)
- Soil and stone (from drainage and verge cleaning)
- Road studs
- Road planings
- Road crossing
- Other: Could include metals from old obsolete signage; litter/waste from verge and staff on site including domestic type waste; old tyres/bumpers/hub caps; illegally dumped materials in drains/ditches, old pipework.

2.8.3 WASTE MANAGEMENT CONSIDERATIONS

2.8.3.1. Hedge cutting

Scenario 1 - Hedge cutter finely cuts/chops hedge growth and material left in-situ (not a waste). It should be noted that where invasive species are found in a hedge/verge these should not be cut and may require different management. Many local authorities have developed or are in the process of developing policies on the management of invasive species under their biodiversity and climate change objectives.

Scenario 2 - Hedge cutting gathered and removed by authorised contractor (or council vehicle) to an authorised facility for treatment as green waste, possibly composted. There is a need to:

- Confirm authorisation of waste collection contractor on NWCPO website to transport this type of material, ensuring that vehicle registrations and permits match
- Ensure and confirm the end destination of the material and that this facility has authorisation to accept and manage this material
- Confirm that the proposed end destination is listed in the collector's waste collection permit.

Records are to be kept of all authorisations and quantity of material disposed.

2.8.3.2. Soil and stone from verge and drainage works

Much of the clean, uncontaminated material may be reused on the site to reshape the verges and or for landscaping – in this scenario, no waste authorisation is required as this material is not classified as waste. If an **excess** of material is anticipated, there are two options:

- This material could be declared as by-product under Article 27. (This requires a minimum lead time of 10 weeks from submission of declaration to the EPA.) In this scenario, you must comply with all criteria for Article 27. You may instead call the material a waste and bring it to an authorised waste facility that accepts soil and stone. You need to know the availability of authorised sites in the area that can accept this material type and confirm the authorisation of the waste collector to transport this material. Local farmers, GAA clubs and golf clubs, for example, may have a waste authorisation to accept soil and stone material for the purposes of raising or improving lands. These may be very convenient to your site and save on transport costs (applying the proximity principle).

Contact the environment department for a list of current authorised facilities.

Records are to be kept of all authorisations and quantity of material disposed.

2.8.3.3. Road studs

These must be declared as waste as you do not intend to reuse them, and therefore they must be removed by an authorised waste collector and brought to an authorised facility.

As above, all authorisations need to be confirmed for the waste collector and facility to determine that they are approved and appropriate.

Records are to be kept of all authorisations and quantity of material disposed.

2.8.3.4. Road Planings

Many Local Authorities have declared road planings under Article 27 as a by-product and reused the material in road and footpath construction as fill material. Research and examination of road planings under Article 28 is underway (see Section 4).

2.8.3.5. Road Crossings

Material from road crossings can include bituminous layers, soil & stone and pieces of broken pipe/offcuts of pipe and concrete, among other items. These materials, if removed from the site, become waste and must be handled as such. Where the materials are to be removed from site as waste, it is recommended that they are segregated for environmental and economic purposes. Where a Local Authority has a depot that has a waste authorisation for the storage of waste materials, these segregated materials can be bulked until sufficient quantities are accumulated to facilitate economic final treatment/disposal. Records of material types and quantities removed to storage and/or final treatment/disposal need to be collated, together with details of the authorised facilities where the material is brought.

2.8.3.6. Road cutting/excavations

Generally, rural roads consist of 25mm surface dressing on cl.804. The surfacing dressing layer is required to be removed first and stored separately for disposal at an appropriately authorised facility.

Roads containing macadam will require the removal of the macadam initially, which should also be stored separately for disposal at an appropriately licensed facility.

Road material containing bitumen should be removed and stored separately to all other materials. **It should not be mixed with other excavated material**. Surplus material containing bitumen should be transported to an appropriately authorised site. Other inert surplus material may be disposed at an appropriately licensed inert facility. A list of such sites can be obtained from the environment department.

All authorisations need to be confirmed for the waste collector and facility to determine whether they are approved and appropriate for the waste material they are dealing with/disposing of. Records are to be kept of all authorisations and quantity of material disposed.

2.8.3.7. Other

Other materials could include metals from old obsolete signage; litter/waste from verge and on site including domestic-type waste; old tyres/bumpers/hub caps; illegally dumped materials in drains/ditches; and old pipework.

This waste should be segregated into various waste streams in order to maximise the economic options for reuse, recycling and disposal.

It is considered vital that Local Authority roads crews have authorised depots available to them that are suitable for stockpiling various waste streams until sufficient quantities are available to have the materials brought in bulk to authorised waste facilities (see Section 2.6.3).

03

ROAD PLANINGS

3.1 ROAD PLANINGS

3.1.1 MAJOR URBAN ROUTES

There is 916 km of motorways in Ireland. TII manages, operates and maintains the motorway network.

The investment in the major inter-urban routes and other road improvements has resulted in significant travel time savings, delivered a more reliable transport infrastructure service, and contributed to Ireland's economic growth by reducing the time and costs to businesses of accessing markets.

3.1.2. NATIONAL ROADS

There is 5306 km of national roads, which represents 5% of the total road network but accounts for 50% of the traffic.

The asset value of the national road network is approximately €32bn and requires ongoing reinvestment to maintain a return on the original investment. TII monitors the condition of the principal assets - pavements and bridges - through the use of pavement and bridge management systems.

Traffic volumes across the national road network increased by 3% in 2017.

3.1.3. REGIONAL & LOCAL ROADS

The regional and local roads programme is important from economic, social and political perspectives. These roads serve an important economic role in the Irish context and have valuable social and community functions. There is almost 94,000 km of regional and local roads in Ireland, which accounts for 94% of the country's roads network; they carry approximately 50% of all road traffic. These roads are often the sole means of access for local economic activity.

These roads play a very important role in Ireland because of:

- The dispersed nature of the population and industrial development
- The importance of tourism and agriculture as generators of wealth and employment
- The increasing attention being given to rural development and urban regeneration.

The network of regional and local roads provides mobility within and between local areas and provides vital links to the strategic national road network and the ports and airports, which are our links with the wider European economy.

3.1.4 EXCHEQUER FUNDING IN ROAD INFRASTRUCTURE 2019

The Department of Transport, Tourism & Sport allocated €484.4m for regional and local roads in 2019, with Transport Infrastructure Ireland allocating €338.0m for national roads in 2019.

A further €10m was allocated by the Department of Rural and Community Development to improve private roads.

This represents a total investment in the road infrastructure by the exchequer of €831.4m in 2019. Local authorities provide further funding for the maintenance and improvement to the road network in their respective counties.

TABLE 2: ROADS FUNDING ALLOCATION

2019 ROADS GRANT ALLOCATIONS		**KM**
DTTAS Regional & Local Roads 2019	€483,400,000	0.21
TII 2019	€338,000,000	1.27
DC&RA LIS	€10,000,000	0.59
Total	€**831,400,000**	1.24

Local authority roadworks completed under the annual roadworks programme, including road improvements, bridge repairs, footpath works, fencing, and provision of traffic lights/pedestrian crossings, to name but a few, can generate waste of many categories, from broken concrete slabs and spoil to litter from site welfare facilities. All these waste materials should be collected and managed to ensure compliance with the Waste Management Act, 1996 as amended.

As road pavements age, they suffer deterioration due to the effects of traffic, weather and sunlight, which manifests as polishing, rutting, fretting, ravelling and cracking, and leads over time to a disintegration of the surface layer.

TII has a pavement management assessment system for reviewing the deterioration and the required level of treatment.

Local Authorities, following annual assessments, replace sections of road pavement each year under their roadworks programme. The replacement may involve the planing of the existing road surface using a road planer. A road planer is a cold milling machine which uses a rotating milling drum to remove asphalt from a defective road and generates asphalt road planings as a result. The depth of the planing depends on the nature of the road failure and can vary from 40 mm up to 450 mm. The planing is carried out as part of the pavement improvement contracts managed by the Local Authority annually. Major inter-urban routes are managed by TII.

Fig. 1: A planed road surface.

Fig. 2: The milling machine generated the planings

Fig. 3: Actual planings

3.2 INTERNATIONAL LITERATURE REVIEW – ROAD PLANINGS

Waste Management Planning Lead Authorities (WMPLAs) commissioned Sweco, an environmental consultancy, to prepare an international literature review of asphalt road planings. The report was completed in April 2019 and comprises a comparative international study of 10 EU countries on the after-use of road planings and similar materials.

The study highlights a variety of approaches to handling of secondary asphalt either directly or as part of a more general initiative on construction and demolition wastes. The report sets out actions and responsibilities for dealing with the following:

- Determining how road construction materials be regulated
- Developing by-product and end of waste rules and guidance.

The actions and responsibilities are detailed in Table 3.

TABLE 3: ACTIONS & RESPONSIBILITIES FROM INTERNATIONAL LITERATURE REVIEW

ACTION	RESPONSIBILITY
Revisit the text of the Waste Management (Facility Permit and Registration) Regulations to see if any easier exemption system could be proposed to regulate the storage and recovery of small quantities of asphalt and make proposals to the Department of Communications, Climate Action and Environment (DCCAE)	Local Authorities (LAs) and WMPLAs
Actively consider any proposal for extending the exemption system as detailed above, produce a consultation paper and undertake stakeholder consultation with a view to amending the existing legislation	DCCAE
Develop end of waste guidance for the environmentally sustainable management of post-processed asphalt, including detailed specifications, and undertake stakeholder consultation	Industry, TII, EPA, LAs, WMPLAs
Develop a comprehensive code of practice for the processing of waste and by-product asphalt, including requirements for quality control/monitoring and independent verification	Industry, TII, EPA, LAs, WMPLAs
Develop a guidance note to show how REACH affects EOW recovered asphalt and its implications	Industry, TII and WMPLAs
Produce a protocol relating to agreed criteria for cross-border traffic of by-product and recovered asphalt between Ireland and Northern Ireland	National TransFrontier Shipment Office (NTFSO), Northern Ireland Environment Agency and DCCAE
Produce a scoping document on the practicality and implications of a producer responsibility initiative for asphalt sector	LAs, WMPLAs and DCCAE
DC&RA LIS	17 04 07

The study also outlines the need to consider whether secondary asphalt that meets the EOW criteria should remain subject to any restrictions or conditions affecting its after-use to ensure environmental safeguards are in place.

3.3 TESTING REGIME & INDEPENDENT REPORT

The WMPLAs commissioned Causeway-Geotech to carry out a testing regime on selected planing projects. A protocol was agreed with the EPA and this is given in Appendix 1.

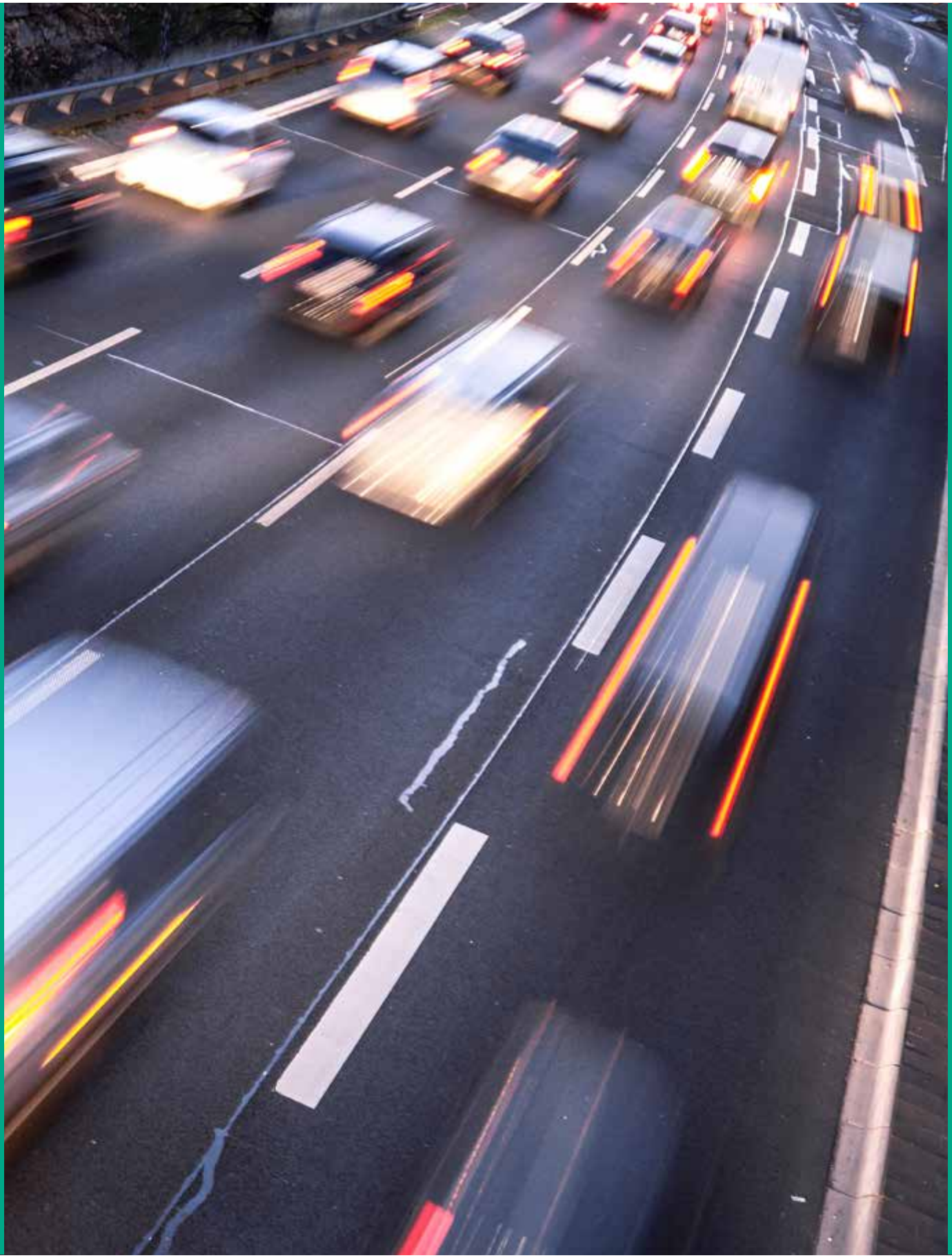
The roads selected for the project are outlined in Table 4 below. The containers for sampling were delivered to all relevant locations and samples were tracked to the Chemtest Lab for testing.

TABLE 4: SAMPLING POINTS FOR ROAD PLANINGS

LOCAL AUTHORITY	ROAD LOCATION NAME	ROAD NUMBER
Kerry County Council	Rathmore	N72
Kerry County Council	Kenmare to Moll's Gap	N71
Kerry County Council	South of Kilflynn	N69
Kerry County Council	North of Abbeydorney	R556
Mayo County Council	Castlebar Inner Relief Road	N5
Mayo County Council	North of Kilkelly	N17
Laois County Council	Mountmellick Emmet Street to Tullamore Road	N80
Wexford County Council	Clonroche	N30
Carlow County Council	Kildavin to Bunclody	N80
TII	Monasterevin	M7

The summary report and results of the sampling are contained in Appendix 2.

Following the completion of testing the WMPLAs commissioned Golders Associates to complete the risk assessment following a competitive process. The risk assessment carried out by the consultants recommends that the reuse of road planings will satisfy EOW criteria. The final stage of the process is to apply to the EPA for EOW status.



04

ARTICLE 27 PROCESS, APPLICATION AND GENERAL CONDITIONS

4.1 WHAT IS A BY-PRODUCT?

In some circumstances, it may be possible to determine that a material is classified as a by-product, rather than as a waste. Examples include the following potential situations:

- Use of clean soil and stone for land reclamation or development purposes
- Use of bituminous road planings as feedstock for new bitmac or asphalt production
- Use of bituminous planings in footpaths and other works.

Article 27 is a process where the producer (Local Authority) declares surplus material on site to be a by-product rather than a waste. Economic operators/notifiers may decide, in accordance with the conditions of Article 27, that their substance or object is a by-product. Decisions made by economic operators/notifiers under Article 27 must be notified to the Environmental Protection Agency. The Agency is required to maintain a register of notified decisions. **It should be noted that the EPA has not made any decisions on Article 27 notifications for road planings, as they are not yet in a position to make these decisions.**

Article 27(3)(a) states that the Agency may determine that a notified by-product should actually be considered a waste. A determination may, in fact, reverse the decision made by the economic operator. In this case, the Local Authority may be required to remove the material from the current location for recovery/disposal at an alternative facility. The Agency is obliged to consult with the relevant Local Authority and the economic operator before making a determination on any notification. Many Local Authorities have indicated through their contractors that road planings are a by-product and at the time of writing, would follow Article 27 process in accordance with recently published draft guidance by the EPA on By-products.

4.2 CRITERIA FOR BY-PRODUCT TO BE DECLARED

Any potential by-product must fully meet each of four specific criteria that are set out in Article 27 of the European Communities (Waste Directive) Regulations 2011 [S.I. No. 126 of 2011]. (New regulations to be transposed in July 2020) These are as follows:

1) Further use of the substance or object is certain – there must be a guaranteed certainty of use, not just a mere possibility, and that use should ideally be undertaken within a definite timeframe

2) The substance or object can be used directly without any further processing other than normal industrial practice – activities such as the grading of material would typically be considered as normal industrial practices, but activities such as treatment for the removal of contamination would not

3) The substance or object is produced as an integral part of a production process

4) Further use is lawful in that the substance or object fulfils all relevant product, environmental and health protection requirements for the specific use and will not lead to overall adverse environmental or human health impacts. In most cases demonstrating compliance with this condition follows a two step process:
   1. Demonstrating that the further use is lawful i.e. that the further use of the material holds an authorisation and/or that the material meets the technical specification relevant to the proposed use (e.g. a material complied with the relevant parts of the TII Specification for Roadworks). Confirmation should also be available that the proposed use complies with any preapproval requirements (planning permission, Part 8 approval, etc.)
   2. Demonstrating that the further use of the by-product does not lead to overall adverse environmental or human health impact from the further use of the by-product. The ways that this can be demonstrated include:
      · Demonstrating the technical requirements provide sufficient human health and environmental protection; or
      · Using a comparator to support your assessment; or
      · Undertaking an environmental and humanhealth risk assessment.

Guidance on the decision-making process in relation to by-products is set out in the following decision-tree.

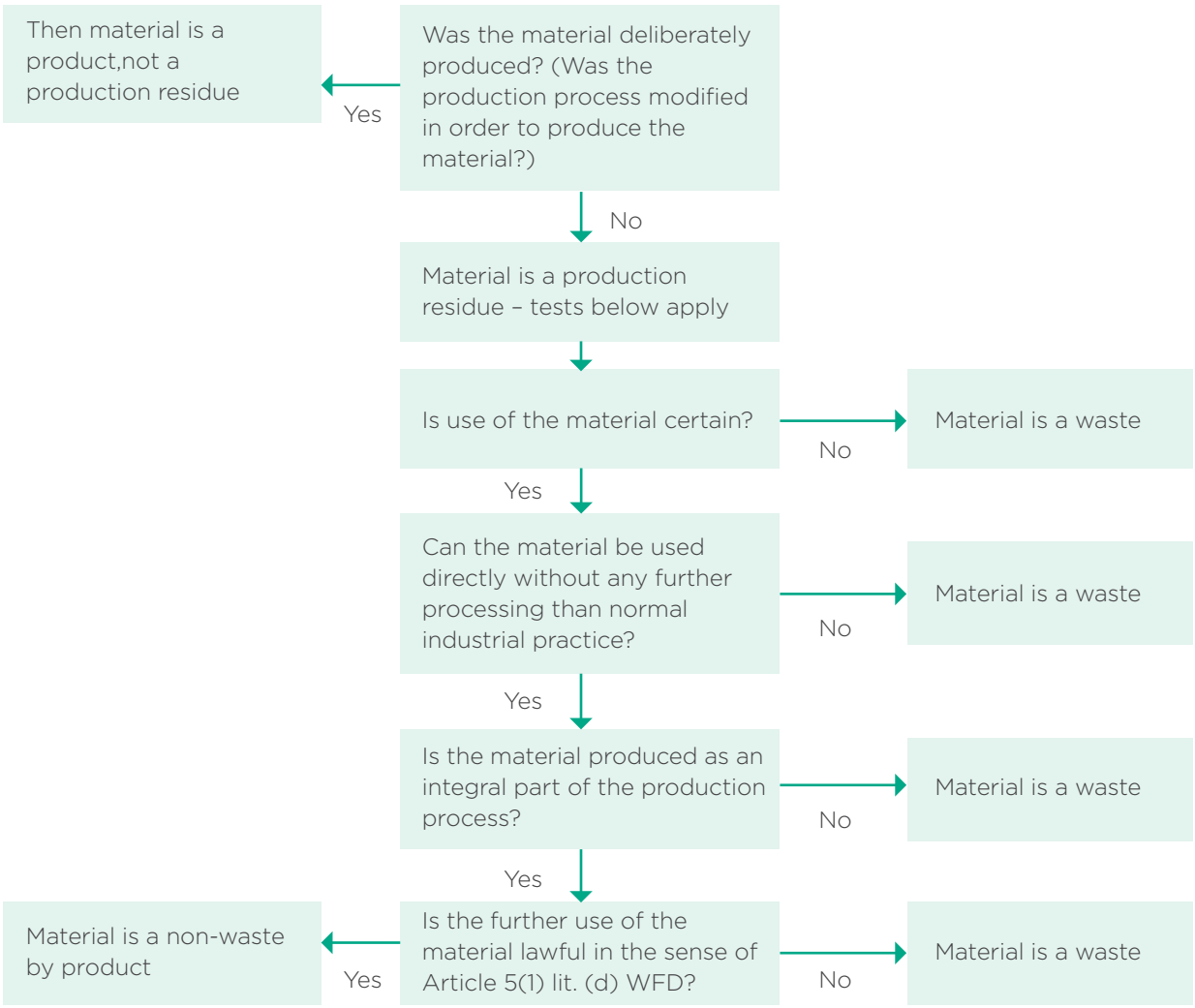


Fig. 4: Decision tree for determining whether a material is a by-product.

The determination on whether a material is to be classified as a by-product is initially made by the material producer. Notification of the determination must be formally submitted by the producer to the EPA, via an online reporting tool. All notifications received by the EPA are placed on its notification register, which may be viewed on the EPA website.

Where a notification is submitted to the EPA, specific information must be included to clearly show that all four criteria are being met in each case.

Notifications by Local Authorities are considered by the EPA on a case-by-case basis. In the event that it determines the material to be a waste, it will advise the notifier that the material is to be managed as a waste, thereby reversing the decision by the material producer.

Details on the Article 27 process are available from the EPA website at:
http://www.epa.ie/waste/wastereg/byprod/

It should also be noted that guidance on the Article 27 process applicable to the use of soil and stone has been published by the EPA and is available at:
http://www.epa.ie/pubs/advice/waste/product/soilandsoneby-products.html.

The Article 27 process is described in the recently published EPA Draft Guidance on By-products.

A completed Article 27 application template for road planings is given in Appendix 3 as a reference for Local Authorities.

In relation to any Article 27 declarations involving the proposed use of planings material, testing of the material should be carried out in advance in order to determine if potentially hazardous materials such as coal tar may be present. Core samples should be taken from the pavement proposed for planing and these should be sent for analysis in accordance with the testing regime set out in Appendix 1. Details of this analysis should then be included with any Article 27 submission to the EPA. It should be noted that where potentially hazardous materials such as coal tar are identified then the material should not be considered for by-product designation and an alternative management strategy will be required.

05

ARTICLE 28 END OF WASTE PROTOCOL

5.1 ARTICLE 28

Article 28 sets out the grounds by which a material that is recovered or recycled from waste can be deemed to be no longer a waste. This is a complicated process.

A major national end of waste (EOW) project is underway in the Local Authority sector and road planings have been risk assessed in a number of scenarios, the results indicate that the reuse and recycling of road planings does not compromise environmental or human health safety.

The report on the Risk Assessment recommends an application to the EPA for End-of-Waste.

An application is being prepared in accordance with recently published EPA Draft guidance on End-of-Waste Part 1 & Part 2.

This is not currently an option for treatment of road planings as it make take more than 12 months to complete the process.

In Ireland, Article 28 of the European Communities (Waste Directive) (New regulations to be transposed in July 2020) Regulations 2011 transposes Article 6 of the 2008 Waste Framework Directive (2008/98/EC). In Article 28, the basis by which a material that is recovered or recycled from waste can be deemed no longer a waste is set out. Certain specified waste shall cease to be a waste when it has undergone a recovery, including a recycling operation, and complies with specific criteria to be developed in accordance with the following conditions:

- The substance or object is commonly used for a specific purpose
- A market or demand exists for such a substance or object
- The substance or object fulfils the technical requirements for the specific purpose and meets the existing legislation and standards applicable to products, and
- The use of the substance or object will not lead to overall adverse environmental or human health impacts.

Further details on end of waste are available from the EPA website at:
https://www.epa.ie/waste/wastereg/art28/

06

RECOMMENDATIONS & PROCESSES

1. Each Local Authority, ideally at Municipal District level, shall arrange to prepare a Waste and By-product Management Plan to include all materials generated during the improvement, repair and maintenance of existing roads and the development of new road infrastructure managed by the Local Authority. A plan shall also be completed at Municipal District level in relation to the annual roads programme, at the pre-planning stage of the programme.

2. Each Local Authority, through a dedicated senior officer, shall ensure that a Waste and By-product Management Plan is prepared to include all materials generated from national road pavement overlay/inlay improvement projects.

3. The National Road Design Offices shall ensure that a Waste and By-product Management Plan to include all materials is prepared for all Capital Road projects managed by the National Road Design Offices.

4. Each Local Authority should implement a testing regime for use of planing materials under Article 27 declaration as per parameters described in Appendix 1. The testing should be done prior to any planing activities being undertaken in order to identify the potential presence of any hazardous materials, such as coal tar. Article 27 is a process where producer(Local Authority) declares surplus material on site to be a by-product rather than a waste (see Section 4).

5. If the presence of coal-tar is identified from the test results, this indicates the presence of hazardous material, planing is not recommended and design should be reviewed to accommodate the presence of coal tar. Article 27 process is not appropriate in this case.

6. All materials should be appropriately segregated at source to ensure the appropriate environmental and economic end use.

7. Road planings shall remain the responsibility of Local Authorities in accordance with Waste Management Act, i.e. cradle to grave.

8. All relevant staff shall receive appropriate training on the management of material arising from roadworks.

9. Each Local Authority, at Municipal District Level, shall identify authorised waste facilities for management of its wastes.

10. Each Local Authority, at Municipal District Level, that temporarily stores road construction wastes at its depots must have the required waste authorisations e.g. Certificate of Registration.

11. The policy of all Local Authorities should be to maximise the reuse of all material generated on the project site.

12. Careful consideration is to be given to the site boundary on road construction and maintenance projects, to ensure that all temporary storage of waste is within site boundary.

APPENDIX 1

ENVIRONMENTAL SAMPLING AND ANALYSIS PROTOCOL FOR FURTHER USE OF RECLAIMED ASPHALT PLANINGS (RAP)

ENVIRONMENTAL SAMPLING AND ANALYSIS PROTOCOL FOR FURTHER USE OF RECLAIMED ASPHALT PLANINGS (RAP)

1.0 INTRODUCTION

The Southern, Connacht-Ulster, and Eastern-Midlands Waste Management Planning Lead Authorities have approached the Environmental Protection Agency (EPA) and agreed a procedure to make an end of waste submission or alternative exemptions for handling road planings. An international literature review assessing the management of road planings across the European Union has been prepared by SWECO. This literature review is 'Phase 1' of the end of waste project. Causeway Geotech completed the Phase 2 works of sampling and analysis of road planings on road projects across Ireland and prepared an analysis report. Golder has prepared a Phase 3 report, which comprised an environmental and human health risk assessment to support an end of waste application. This document comprises a Sampling and Analysis Protocol (SAP) for environmental testing of the RAP prior to further use in bound and unbound scenarios. This document is to be appended to the Phase 3 Report prepared by Golder.

2.0 SCOPE & OBJECTIVE

The purpose of this SAP is to provide a protocol for environmental sampling and analysis to be included at the sampling and design stage of a road planing project prior to removal of the pavement. It is proposed that environmental testing proposed in this SAP is included at the sampling and design stage to identify the presence of coal tar over the depth of pavement to be planed, recycled insitu or reused elsewhere. The presence of coal tar limits certain further use of RAP as it is considered hazardous in nature. RAP containing coal tar at hazardous levels is not suitable for further use and is required be managed under waste legislation.

3.0 SAMPLING

Road pavement recycling projects typically require sampling of the existing pavement to provide information of the depth of pavement, binder content and aggregate grading (post binder extraction) to inform the laboratory mix design for the cold insitu recycling for a specific section length of pavement. The information gathered from the sampling exercise is used to determine the depth of pavement to be recycled and the required percentage addition of binder and aggregate required to achieve design strength.

It is proposed that environmental sampling and analysis be carried out in parallel to the performance sampling and design stage to minimise excess intrusive sampling of the pavement and also to provide early indication of the potential reuse options.

3.1 SAMPLING PROCEDURE

Road pavement samples are typically obtained by taking core samples through the depth of existing pavement, by excavating trial holes, or by mini milling machine, whichever is appropriate to the pavement construction or approved by the area engineer. Where possible core samples should be obtained as the pavement layers are clearly identifiable, less intrusive on the pavement and easier to reinstate. Only material from the layer(s)/depth to be planed and proposed for recycling should be sampled and subject to environmental testing as per Section 4.0 below.

3.2 SAMPLING FREQUENCY

It is proposed that one sample should be taken per 500 m of road length on alternating lanes for each project. A minimum of 2 samples for environmental analysis should be taken per project. Where recycling projects are of significant length, environmental sampling frequency may be reduced from 1 sample per 500 linear metres to 1 sample per 1,000 linear metres or (otherwise agreed), where results are consistent. This proposed derogation is subject to agreement with the local area engineer. Where cores are obtained over the depth of the pavement to be recycled, these cores are to be pulverised and prepared by the laboratory for further environmental testing. A representative sample of the material shall be placed in suitable laboratory containers and managed as per section 3.3 below.

3.3 MARKING, PACKAGING, PRESERVATION AND TRANSPORT

The location of where each sample has been taken should be recorded. Visual observations should be recorded on physical makeup and any other pertinent information.

The samples will be placed in appropriate, clearly labelled, clean, durable containers supplied by the laboratory. The containers shall be selected based on the different types of characteristics to be determined in the sample. Markings on the containers will include a unique code and / or identification, place of sampling, date of sampling and designation of the material. Containers will be sealed onsite, to prevent loss/spillage of sample and / or cross-contamination. Samples will be packed in a fashion that prevents damage during transport.

A chain of custody shall be maintained for all samples.

4.0 LABORATORY CHEMICAL ANALYSIS

Environmental laboratory analysis is to be carried out on the representative samples taken from the road to be recycled, to determine the suitability of the existing material for reuse ex-situ. The following solid phase analysis for the Tar Suite is proposed to be carried out at the design stage of the project:

- Solvent Extraction Method (Dichloromethane or similar solvent);
- SARA by Iatroscan – Saturates (lube oil), Aromatics, Resins, Asphaltenes;
- SVOC forensic scan including Alkylated Naphthalene series (biomarkers) and 16 PAHs; and
- Reporting of above results including classification of coal tar as present/absent and estimate of coal tar (%).

5.0 REPORTING

The laboratory carrying out analysis shall be accredited to INAB/UKAS or similar. All chemical analysis shall be reported in final format to MCERTS accreditation or similar.

The Golder Report addresses the environmental and human health risks associated with using RAP for a range of uses both in bound and unbound conditions. The requirements to meet the TII specifications for the use of RAP still apply (1,2).

6.0 REFERENCES

1) Transport Infrastructure Ireland (TII), Specification for Road Works Series 900 - Road Pavements – Bituminous Materials (CC-SPW-00900), 2017. (Available at www.tiipublications.ie/library/).
2) Transport Infrastructure Ireland (TII), Specification for Road Works Series 800 - Road Pavements – Unbound and Cement Bound Mixtures (CC-SPW-00800), 2013. (www.tiipublications.ie/library/).

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APPENDIX 2

SUMMARY TEST RESULTS

Southern Road Planings Environmental Testing

Client:	Southern Waste Region
Report No.:	19-0962
Date:	January 2020
Status:	Final for issue

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Document Control Sheet

Note on: Methods of describing soils and rocks & abbreviations used on exploratory hole logs

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5 DISCUSSION 15

APPENDICES

Appendix A Environmental laboratory test results

Document Control Sheet

Report No.:		19-0962			
Project Title:		Southern Road Planings Environmental Testing			
Client:		Southern Waste Region			
Revision:	A01	**Status:**	Final for issue	**Issue Date:**	29th Jan 2020
Prepared by:			**Reviewed and approved by:**		
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Southern Road Planings Environmental Testing

1 AUTHORITY

On the instructions of Southern Waste Region ("the Client"), environmental analysis of road planings samples collected from works at a number of road regrading projects across the southern region of the Republic of Ireland.

Roads where samples were collected and analysed included:

- N5 Castlebar Inner Relief Road
- N17 Kilkelly Road
- N80 Mountmellick Road
- M7 Monasterevin
- N80 Kildavin to Bunclody
- N30 Clonroche
- N70 Waterville
- R556 Rathscannell to Ballinclogher Cross
- N69 Popes Cross

These works were completed to address a request from the EPA to quantify and demonstrate the risks to the natural environment or human health presented by the use of recycled aggregates.

This report outlines the sampling technique employed and contains the laboratory analytical testing data. A discussion on the findings of the analytical data is also provided.

2 SAMPLE PREPARATION

Representative samples of road planings were collected by a site engineer at each operational site. Each sample was broken down into small fragments to allow the material to fit into the containers provided by the laboratory. Following sampling, each container was appropriately labelled and placed in a cooler box provided by the laboratory prior to collection by courier for delivery to the laboratory.

3 ANALYTICAL TESTING

To meet the requirements of the EPA, leachate testing was carried out on each planings sample for a range of determinants including:

- Total petroleum hydrocarbons (C6-C40);
- Speciated polycyclic aromatic hydrocarbons (PAH);
- Benzene, Toluene, Ethylbenzene and Xylenes (BTEX compounds).

Waste acceptance criteria (WAC) testing was carried out on the samples.

This testing was conducted on the samples by Chemtest at its laboratory in Newmarket, Suffolk. Results of environmental laboratory testing are presented in Appendix A.

4 DATA REVIEW

On initial examination of the potential risk of contamination from the road planings, and at the request of the EPA, the laboratory results have been compared to the European Union Environmental Objectives (Surface Water) (Amendment) Regulations 2019. Tables 1 to 9 presents the findings of this review for the samples from each road planings project.

Table 1: N5 Castlebar Inner Relief Road data assessment

Determinand	AA-EQS Inland surface waters*	Units	S01	S02
TPH >C6-C10		µg/l	< 0.10	< 0.10
TPH >C10-C21		µg/l	< 0.10	< 0.10
TPH >C21-C40		µg/l	< 0.10	< 0.10
Total TPH >C6-C40		µg/l	< 10	< 10
Naphthalene		mg/l	< 0.00010	< 0.00010
Acenaphthylene		mg/l	< 0.00010	< 0.00010
Acenaphthene		mg/l	< 0.00010	< 0.00010
Fluorene		mg/l	< 0.00010	< 0.00010
Phenanthrene		mg/l	< 0.00010	< 0.00010
Anthracene	1.00E-04	mg/l	< 0.00010	< 0.00010
Fluoranthene		mg/l	< 0.00010	< 0.00010
Pyrene		mg/l	< 0.00010	< 0.00010
Benzo[a]anthracene		mg/l	< 0.00010	< 0.00010
Chrysene		mg/l	< 0.00010	< 0.00010
Benzo[b]fluoranthene	Footnote 1	mg/l	< 0.00010	< 0.00010
Benzo[k]fluoranthene	Footnote 1	mg/l	< 0.00010	< 0.00010
Benzo[a]pyrene	1.70E-07	mg/l	< 0.00010	< 0.00010
Indeno(1,2,3-c,d)Pyrene	Footnote 1	mg/l	< 0.00010	< 0.00010
Dibenz(a,h)Anthracene		mg/l	< 0.00010	< 0.00010
Benzo[g,h,i]perylene	Footnote 1	mg/l	< 0.00010	< 0.00010
Benzene		mg/l	< 0.0010	< 0.0010
Toluene		mg/l	< 0.0010	< 0.0010
m & p-Xylene		mg/l	< 0.0010	< 0.0010
o-Xylene		mg/l	< 0.0010	< 0.0010
Ethyl Tert-Butyl Ether		mg/l	< 0.0010	< 0.0010

* European Union Environmental Objectives (Surface Water) (Amendment) Regulations 2019; Table 12 Priority Hazardous Substances; Maximum Allowable Concentration

(1) For the group of priority substances of polyaromatic hydrocarbons (PAH), the biota EQS and corresponding AA-EQS in water refer to the concentration of benzo(a)pyrene, on the toxicity of which they are based. Benzo(a)pyrene can be considered as a marker for the other PAHs, hence only benzo(a)pyrene needs to be monitored for comparison with the biota EQS or the corresponding AA- EQS in water.

Table 2: N17 Kilkelly Road data assessment

Determinand	AA-EQS Inland surface waters*	Units	S01	S02
TPH >C6-C10		µg/l	< 0.10	< 0.10
TPH >C10-C21		µg/l	< 0.10	< 0.10
TPH >C21-C40		µg/l	< 0.10	< 0.10
Total TPH >C6-C40		µg/l	< 10	< 10
Naphthalene		mg/l	< 0.00010	< 0.00010
Acenaphthylene		mg/l	< 0.00010	< 0.00010
Acenaphthene		mg/l	< 0.00010	< 0.00010
Fluorene		mg/l	< 0.00010	< 0.00010
Phenanthrene		mg/l	< 0.00010	< 0.00010
Anthracene	1.00E-04	mg/l	< 0.00010	< 0.00010
Fluoranthene		mg/l	< 0.00010	< 0.00010
Pyrene		mg/l	< 0.00010	< 0.00010
Benzo[a]anthracene		mg/l	< 0.00010	< 0.00010
Chrysene		mg/l	< 0.00010	< 0.00010
Benzo[b]fluoranthene	Footnote 1	mg/l	< 0.00010	< 0.00010
Benzo[k]fluoranthene	Footnote 1	mg/l	< 0.00010	< 0.00010
Benzo[a]pyrene	1.70E-07	mg/l	< 0.00010	< 0.00010
Indeno(1,2,3-c,d)Pyrene	Footnote 1	mg/l	< 0.00010	< 0.00010
Dibenz(a,h)Anthracene		mg/l	< 0.00010	< 0.00010
Benzo[g,h,i]perylene	Footnote 1	mg/l	< 0.00010	< 0.00010
Benzene		mg/l	< 0.0010	< 0.0010
Toluene		mg/l	< 0.0010	< 0.0010
m & p-Xylene		mg/l	< 0.0010	< 0.0010
o-Xylene		mg/l	< 0.0010	< 0.0010
Ethyl Tert-Butyl Ether		mg/l	< 0.0010	< 0.0010

* European Union Environmental Objectives (Surface Water) (Amendment) Regulations 2019; Table 12 Priority Hazardous Substances; Maximum Allowable Concentration

(1) For the group of priority substances of polyaromatic hydrocarbons (PAH), the biota EQS and corresponding AA-EQS in water refer to the concentration of benzo(a)pyrene, on the toxicity of which they are based. Benzo(a)pyrene can be considered as a marker for the other PAHs, hence only benzo(a)pyrene needs to be monitored for comparison with the biota EQS or the corresponding AA- EQS in water.

Table 3: N80 Mountmellick Road data assessment

Determinand	AA-EQS Inland surface waters*	Units	S01
TPH >C6-C10		µg/l	< 0.10
TPH >C10-C21		µg/l	< 0.10
TPH >C21-C40		µg/l	< 0.10
Total TPH >C6-C40		µg/l	< 10
Naphthalene		mg/l	< 0.00010
Acenaphthylene		mg/l	< 0.00010
Acenaphthene		mg/l	< 0.00010
Fluorene		mg/l	< 0.00010
Phenanthrene		mg/l	< 0.00010
Anthracene	1.00E-04	mg/l	< 0.00010
Fluoranthene		mg/l	< 0.00010
Pyrene		mg/l	< 0.00010
Benzo[a]anthracene		mg/l	< 0.00010
Chrysene		mg/l	< 0.00010
Benzo[b]fluoranthene	Footnote 1	mg/l	< 0.00010
Benzo[k]fluoranthene	Footnote 1	mg/l	< 0.00010
Benzo[a]pyrene	1.70E-07	mg/l	< 0.00010
Indeno(1,2,3-c,d)Pyrene	Footnote 1	mg/l	< 0.00010
Dibenz(a,h)Anthracene		mg/l	< 0.00010
Benzo[g,h,i]perylene	Footnote 1	mg/l	< 0.00010
Benzene		mg/l	< 0.0010
Toluene		mg/l	< 0.0010
m & p-Xylene		mg/l	< 0.0010
o-Xylene		mg/l	< 0.0010
Ethyl Tert-Butyl Ether		mg/l	< 0.0010
* European Union Environmental Objectives (Surface Water) (Amendment) Regulations 2019; Table 12 Priority Hazardous Substances; Maximum Allowable Concentration			
(1) For the group of priority substances of polyaromatic hydrocarbons (PAH), the biota EQS and corresponding AA-EQS in water refer to the concentration of benzo(a)pyrene, on the toxicity of which they are based. Benzo(a)pyrene can be considered as a marker for the other PAHs, hence only benzo(a)pyrene needs to be monitored for comparison with the biota EQS or the corresponding AA- EQS in water.			

Table 4: M7 Monasterevin data assessment

Determinand	AA-EQS Inland surface waters*	Units	S01	S02	S03	S04	S05
TPH >C6-C10		µg/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
TPH >C10-C21		µg/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
TPH >C21-C40		µg/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total TPH >C6-C40		µg/l	< 10	< 10	< 10	< 10	< 10
Naphthalene		mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Acenaphthylene		mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Acenaphthene		mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Fluorene		mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Phenanthrene		mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Anthracene	1.00E-04	mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Fluoranthene		mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Pyrene		mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Benzo[a]anthracene		mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Chrysene		mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Benzo[b]fluoranthene	Footnote 1	mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Benzo[k]fluoranthene	Footnote 1	mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Benzo[a]pyrene	1.70E-07	mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Indeno(1,2,3-c,d)Pyrene	Footnote 1	mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Dibenz(a,h)Anthracene		mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Benzo[g,h,i]perylene	Footnote 1	mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Benzene		mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene		mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
m & p-Xylene		mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
o-Xylene		mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethyl Tert-Butyl Ether		mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010

* European Union Environmental Objectives (Surface Water) (Amendment) Regulations 2019; Table 12 Priority Hazardous Substances; Maximum Allowable Concentration

(1) For the group of priority substances of polyaromatic hydrocarbons (PAH), the biota EQS and corresponding AA-EQS in water refer to the concentration of benzo(a)pyrene, on the toxicity of which they are based. Benzo(a)pyrene can be considered as a marker for the other PAHs, hence only benzo(a)pyrene needs to be monitored for comparison with the biota EQS or the corresponding AA- EQS in water.

Table 4 (continued): M7 Monasterevin data assessment

Determinand	AA-EQS Inland surface waters*	Units	S06	S07	S08	S09	S10
TPH >C6-C10		µg/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
TPH >C10-C21		µg/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
TPH >C21-C40		µg/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total TPH >C6-C40		µg/l	< 10	< 10	< 10	< 10	< 10
Naphthalene		mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Acenaphthylene		mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Acenaphthene		mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Fluorene		mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Phenanthrene		mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Anthracene	1.00E-04	mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Fluoranthene		mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Pyrene		mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Benzo[a]anthracene		mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Chrysene		mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Benzo[b]fluoranthene	Footnote 1	mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Benzo[k]fluoranthene	Footnote 1	mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Benzo[a]pyrene	1.70E-07	mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Indeno(1,2,3-c,d)Pyrene	Footnote 1	mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Dibenz(a,h)Anthracene		mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Benzo[g,h,i]perylene	Footnote 1	mg/l	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Benzene		mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene		mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
m & p-Xylene		mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
o-Xylene		mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethyl Tert-Butyl Ether		mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010

* European Union Environmental Objectives (Surface Water) (Amendment) Regulations 2019; Table 12 Priority Hazardous Substances; Maximum Allowable Concentration

(1) For the group of priority substances of polyaromatic hydrocarbons (PAH), the biota EQS and corresponding AA-EQS in water refer to the concentration of benzo(a)pyrene, on the toxicity of which they are based. Benzo(a)pyrene can be considered as a marker for the other PAHs, hence only benzo(a)pyrene needs to be monitored for comparison with the biota EQS or the corresponding AA- EQS in water.

Table 5: N80 Kildavin to Bunclody data assessment

Determinand	AA-EQS Inland surface waters*	Units	S01
TPH >C6-C10		µg/l	< 0.10
TPH >C10-C21		µg/l	< 0.10
TPH >C21-C40		µg/l	< 0.10
Total TPH >C6-C40		µg/l	< 10
Naphthalene		mg/l	< 0.00010
Acenaphthylene		mg/l	< 0.00010
Acenaphthene		mg/l	< 0.00010
Fluorene		mg/l	< 0.00010
Phenanthrene		mg/l	< 0.00010
Anthracene	1.00E-04	mg/l	< 0.00010
Fluoranthene		mg/l	< 0.00010
Pyrene		mg/l	< 0.00010
Benzo[a]anthracene		mg/l	< 0.00010
Chrysene		mg/l	< 0.00010
Benzo[b]fluoranthene	Footnote 1	mg/l	< 0.00010
Benzo[k]fluoranthene	Footnote 1	mg/l	< 0.00010
Benzo[a]pyrene	1.70E-07	mg/l	< 0.00010
Indeno(1,2,3-c,d)Pyrene	Footnote 1	mg/l	< 0.00010
Dibenz(a,h)Anthracene		mg/l	< 0.00010
Benzo[g,h,i]perylene	Footnote 1	mg/l	< 0.00010
Benzene		mg/l	< 0.0010
Toluene		mg/l	< 0.0010
m & p-Xylene		mg/l	< 0.0010
o-Xylene		mg/l	< 0.0010
Ethyl Tert-Butyl Ether		mg/l	< 0.0010
* European Union Environmental Objectives (Surface Water) (Amendment) Regulations 2019; Table 12 Priority Hazardous Substances; Maximum Allowable Concentration			
(1) For the group of priority substances of polyaromatic hydrocarbons (PAH), the biota EQS and corresponding AA-EQS in water refer to the concentration of benzo(a)pyrene, on the toxicity of which they are based. Benzo(a)pyrene can be considered as a marker for the other PAHs, hence only benzo(a)pyrene needs to be monitored for comparison with the biota EQS or the corresponding AA- EQS in water.			

Table 6: N30 Clonroche data assessment

Determinand	AA-EQS Inland surface waters*	Units	S01
TPH >C6-C10		µg/l	< 0.10
TPH >C10-C21		µg/l	< 0.10
TPH >C21-C40		µg/l	< 0.10
Total TPH >C6-C40		µg/l	< 10
Naphthalene		mg/l	< 0.00010
Acenaphthylene		mg/l	< 0.00010
Acenaphthene		mg/l	< 0.00010
Fluorene		mg/l	< 0.00010
Phenanthrene		mg/l	< 0.00010
Anthracene	1.00E-04	mg/l	< 0.00010
Fluoranthene		mg/l	< 0.00010
Pyrene		mg/l	< 0.00010
Benzo[a]anthracene		mg/l	< 0.00010
Chrysene		mg/l	< 0.00010
Benzo[b]fluoranthene	Footnote 1	mg/l	< 0.00010
Benzo[k]fluoranthene	Footnote 1	mg/l	< 0.00010
Benzo[a]pyrene	1.70E-07	mg/l	< 0.00010
Indeno(1,2,3-c,d)Pyrene	Footnote 1	mg/l	< 0.00010
Dibenz(a,h)Anthracene		mg/l	< 0.00010
Benzo[g,h,i]perylene	Footnote 1	mg/l	< 0.00010
Benzene		mg/l	< 0.0010
Toluene		mg/l	< 0.0010
m & p-Xylene		mg/l	< 0.0010
o-Xylene		mg/l	< 0.0010
Ethyl Tert-Butyl Ether		mg/l	< 0.0010
* European Union Environmental Objectives (Surface Water) (Amendment) Regulations 2019; Table 12 Priority Hazardous Substances; Maximum Allowable Concentration			
(1) For the group of priority substances of polyaromatic hydrocarbons (PAH), the biota EQS and corresponding AA-EQS in water refer to the concentration of benzo(a)pyrene, on the toxicity of which they are based. Benzo(a)pyrene can be considered as a marker for the other PAHs, hence only benzo(a)pyrene needs to be monitored for comparison with the biota EQS or the corresponding AA- EQS in water.			

Table 7: N70 Waterville data assessment

Determinand	AA-EQS Inland surface waters*	Units	S01
TPH >C6-C10		µg/l	< 0.10
TPH >C10-C21		µg/l	< 0.10
TPH >C21-C40		µg/l	< 0.10
Total TPH >C6-C40		µg/l	< 10
Naphthalene		mg/l	< 0.00010
Acenaphthylene		mg/l	< 0.00010
Acenaphthene		mg/l	< 0.00010
Fluorene		mg/l	< 0.00010
Phenanthrene		mg/l	< 0.00010
Anthracene	1.00E-04	mg/l	< 0.00010
Fluoranthene		mg/l	< 0.00010
Pyrene		mg/l	< 0.00010
Benzo[a]anthracene		mg/l	< 0.00010
Chrysene		mg/l	< 0.00010
Benzo[b]fluoranthene	Footnote 1	mg/l	< 0.00010
Benzo[k]fluoranthene	Footnote 1	mg/l	< 0.00010
Benzo[a]pyrene	1.70E-07	mg/l	< 0.00010
Indeno(1,2,3-c,d)Pyrene	Footnote 1	mg/l	< 0.00010
Dibenz(a,h)Anthracene		mg/l	< 0.00010
Benzo[g,h,i]perylene	Footnote 1	mg/l	< 0.00010
Benzene		mg/l	< 0.0010
Toluene		mg/l	< 0.0010
m & p-Xylene		mg/l	< 0.0010
o-Xylene		mg/l	< 0.0010
Ethyl Tert-Butyl Ether		mg/l	< 0.0010

* European Union Environmental Objectives (Surface Water) (Amendment) Regulations 2019; Table 12 Priority Hazardous Substances; Maximum Allowable Concentration

(1) For the group of priority substances of polyaromatic hydrocarbons (PAH), the biota EQS and corresponding AA-EQS in water refer to the concentration of benzo(a)pyrene, on the toxicity of which they are based. Benzo(a)pyrene can be considered as a marker for the other PAHs, hence only benzo(a)pyrene needs to be monitored for comparison with the biota EQS or the corresponding AA- EQS in water.

APPENDIX 3

ARTICLE 27 TEMPLATE

The Reference Number: ART27-XXXX

DECLARATION

I have read and accept the above declaration:	Yes
I am authorised and/or entitled to make this notification:	Yes
Notified Material:	Road Planings arising from road resurfacing contract
Production Process:	Road Planings are generated by cold milling machine which uses a rotating drum to remove the road surface prior to resurfacing
Notification Received:	12/11/2019
Material is the primary aim of the production process:	No

ECONOMIC OPERATOR

ECONOMIC OPERATOR DETAILS

Economic Operator Name:	XXX
Economic Sector:	Construction and/or Demolition
Economic Sector Other Details:	
Article 11 Submitted:	No
Article 11 Number:	
Economic Operator's Interest:	User
Other Interest Description:	

IDENTIFY THE SOURCE AND NATURE OF THE BY-PRODUCT BEING NOTIFIED

Notified Material:	Road Planings arising from road re-surfacing contracts and TII Projects
Soil and Stone:	No
Process:	Road Planings are generated by cold milling machine which uses a rotating drum to remove the road surface prior to resurfacing
Contamination:	No
Contamination Details:	
Source Location:	The Road Planings are generated by road resurfacing works undertaken on behalf of XXX on various locations on the HD28 Schemes 2019
EO is the source owner:	No
Local Authority at Source:	XXX

CONTACT DETAILS FOR SOURCE OF MATERIAL

Source Location Owner:	
No owner of Source:	Yes
First Name:	
Last Name:	
Email Address:	
Source Phone Number:	
Mobile Number:	
Source Organisation:	
Address Line1:	
Address Line2:	
Address Line3:	
Town/City:	
County:	
Eircode/Postcode:	

DETAILS OF ENVIRONMENTAL AUTHORISATIONS AT THE SOURCE

Environmental Authorisation at source:	None
Register Number:	

IDENTIFY THE USE AND USER OF THE NOTIFIED BY-PRODUCT

USE OF MATERIAL

Use Location:	Excavated road planings are to be brought for recycling at the operator's existing XXX
EO is use location owner:	Yes
Use Process:	The road planings will be recycled as feedstock to the asphalt plant and used to produce bituminous a road surfacing materials.
Local Authority at Use Location:	XXX
Use Location Owner:	XXX
First Name:	XXX
Last Name:	XXX
User Organisation:	XXX
Organisation Phone:	XXX
Email Address:	XXX
Mobile Number:	XXX
Address Line1:	XXX
Address Line2:	XXX
Address Line3:	XXX
Town/City:	XXX
County:	XXX
Eircode/Postcode:	XXX

DETAILS OF ENVIRONMENTAL AUTHORISATION AT USE LOCATION

Environmental Authorisation at the location of use:	None
Register Number:	

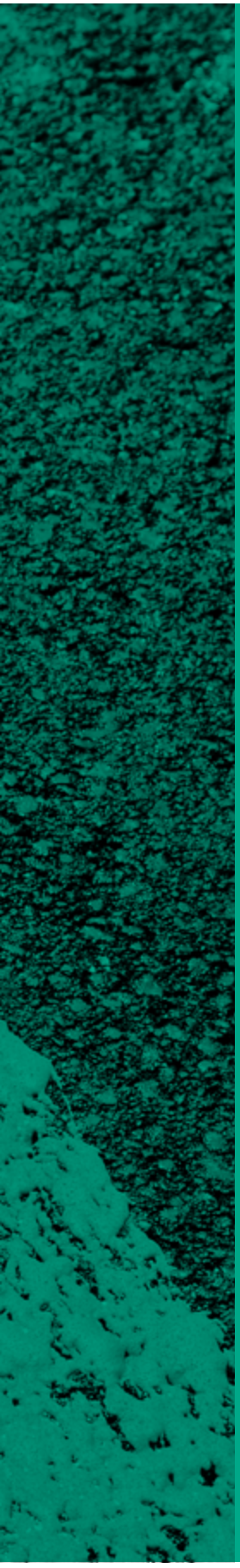
ADDRESS THE CONDITIONS FOR BEING A BY-PRODUCT

Article 27(1)(a):	Further use of excavated road planings imported to XXX quarry is certain, in that they will be recycled in the production of bituminous road surfacing materials at the existing asphalt plant. In many instances, road planings from the source site will be used to produce the replacement bituminous materials supplied back to the source site. The economic operator is economically incentivised to recycle the road planings as they reduce the input cost for virgin aggregate and bitumen and energy costs which would otherwise be incurred in the production of bituminous road surfacing materials. Transport Infrastructure Ireland currently permits the use of up to 30% recycled bituminous materials in the production of road surfacing materials for national roads. In the UK and Europe, between 70% and 85% is permitted.
Article 27(1)(b):	Excavated road planings can be recycled directly in the production of bituminous road surfacing materials, with no requirement for any intermediate processing between their excavation and their use as feedstock/raw material.
Article 27(1)(c):	Road planings are produced as an integral part of the production (construction) process in the resurfacing of deficient or sub-standard roads and pavements. This production is an essential requirement of the construction works and cannot otherwise be avoided.

Article 27(1)(d): The intended use is lawful. Asphalt production activity at XXX is regulated by
(i) Planning Permission Ref. No. S/01/XXXX issued by XXX on 4 December 2001 and
(ii) an Air Emissions Licence Ref No. AP2/XX issued by XXX on 14 December 2001.

Copies of these consents accompany this Article 27 notification.

Milled road planings will readily meet standard construction industry specifications for recycled bituminous materials, specifically (i) Bituminous Mixtures - Material Specification - IS EN 13108-8: Reclaimed Asphalt - 2005 (National and European Standard) and (ii) NRA Specification for Road Works: Series 900 Road Pavements-Bituminous Bound Materials (January 2010): Clause 902 Reclaimed Asphalt. Copies of these specifications can be furnished on request. The importation and recycling of road planings as feedstock in the asphalt production process will not result in any adverse environmental or human health impacts, principally because XXX has an Environmental Management System (EMS) and regulatory controls in place to avoid, mitigate and monitor any potentially adverse environmental or health impacts which might arise. The reuse/recycling of road planings is consistent with the principles of sustainable development in that it conserves natural resources (principally virgin aggregate and bitumen required for the manufacturing process) and constitutes sustainable resource use. Recycling of road planings also results in a significant reduction in energy demand and emissions of carbon dioxide (CO_2). 50 kg of CO_2 is generated for each tonne of asphalt produced using virgin materials, as against 28kg of CO_2 generated for each tonne produced using recycled materials (road planings).



APPENDIX 4

CERTIFICATE OF REGISTRATION TEMPLATE APPLICATION

FOR OFFICE USE ONLY:

APPLICATION REFERENCE NUMBER:

RETURN NUMBER (IF APPLICABLE):

THE WASTE FACILITY CERTIFICATE OF REGISTRATION APPLICATION/REVIEW FORM

By

XXXXX County Council

To

Licensing Unit
Environmental Protection Agency
McCumiskey House
Richview
Clonskeagh Road
Dublin 14`

WASTE CERTIFICATE OF REGISTRATION APPLICATION FORM

THE SECTION A: TYPE OF APPLICATION

1. Please tick the relevant box to which this application applies (Only one box may be ticked).•

Application for a Certificate of Registration	✓
Application for a Review of a Certificate of Registration	

A2. Is the application being completed by a Consultant/Agent?

Yes

No ✓

If yes give the Consultant's/Agent's name, address and contact details below.

Address:	
Tel:	
Fax:	
Email:	
Contact Name:	

SECTION B: ABOUT THE APPLICANT

This section relates to the applicant(s) who will be operating the waste facility.

1. Full name of applicant(s) [Article 10 (1) (a)]

Applicant(s) must be a legal entity (individual, sole trader, partnership or body corporate).

Name(s):	XXX City/County Council
Name(s):	
Name(s):	

2. All trade name(s) used or proposed to be used by the applicant(s) [Article 10 (1) (b)]

Trade Name:	
Trade Name:	

If the applicant(s) is a sole trader, section B3 and B4 do not need to be completed.

3. Is the applicant(s) a partnership? [Article 10 (1) (e)]

Yes

No ✓

If the applicant is a partnership, give the names and addresses of all partners:

Name:	
Address:	
Name:	
Address:	
Name:	
Address:	

4. Full address of applicant(s) [Article 10 (1) (d)]

The address of the principal place of business, or in the case of a body corporate the registered or principal office, of the applicant(s) and, where applicable, the telephone number, telefax number and email address of the applicant(s), and, if different, any address to which correspondence relating to the application should be sent:

Address:	County Secretary's Office Aras an Chontae, XXXXX XXXXX Co XXXXX
Tel:	0XX XXXXXX
Fax:	
Email:	
Contact Name:	

5. Legal Interest in the Land [Article 10 (1) (c)]

State and provide a copy of the proof of the legal interest and permission held by the applicant(s) in the land on which the proposed facility is located (e.g. leaseholder, owner, tenant, prospective purchaser):

Legal Interest:	Landowner
Document(s) Reference:	0XX XXXXXX

6. Relevant Convictions/Court Order

Has the applicant, including in the case of a body corporate any officer of that body corporate, been convicted of any offence, the Act, the Environmental Protection Agency Acts 1992 and 2003, the Local Government (Water Pollution) Acts 1977 and 1990 or the Air Pollution Act 1987 and the Waste Management (Facility Permit and Registration) Regulations 2007 to 2011 within the previous 10 years? [Article 10 (1) (dd)]

Yes

No ✓

If yes, (a) please include a supplementary sheet detailing the court hearing, case, nature of the offence and any penalty or requirements imposed by the court. Where there is more than one offence to be considered, please use a separate sheet for each offence. [Article 10 (1) (dd)]

Document(s) Reference:	

If yes, (b) please include a supplementary sheet detailing any requirement imposed on the applicant by order of the court under the Act. [Article 10 (1) (ee)]

Document(s) Reference:	

Where the applicant is a person or partnership, include details of any such conviction where the person or partner was at any time within the last 10 years prior to this application, a director, manager, company secretary or similar officer for a body corporate. [Article 10 (2) (b)]

Document(s) Reference:	

7. Technical Competence (Fit and Proper Person)

Please detail the technical knowledge and qualifications of the applicant(s) (Article 5) relevant to the management of a waste facility. Please use a separate sheet if required.

Each facility (Local Authority Depot and/or Permitted fill site) will be individually managed by the District Area Engineer/Town Engineer in whose jurisdiction the facility is situated. District Area Engineers and Town Engineers by virtue of their technical qualifications and appointed roles are technically competent to execute the necessary
management of permitted fill sites and Local Authority Depots.

Document(s) Reference:

8. Financial Commitment Discharge [Article 10 (1) (s)]

Please provide particulars in respect of such matters affecting the ability of the applicant(s) to meet the financial commitments or liabilities which will be entered into or incurred by the person(s) in carrying on the activity or in ceasing to carry on the activity at the facility.

Document(s) Reference:	N/A (Public authority)

SECTION C: ABOUT THE FACILITY

1. The location or postal address of the facility to which the application relates [Article 10 (1) (g)]

Address:	xxxxx xxxxx xxx
Townland:	xxx
National Grid Reference for centre of site (10 digit 5E,5N)	Xxxxx, xxxx

2. Site Location Map and Layout Plans [Article 10 (1) (k)]

The following details must also be included:

- **Five copies** of the appropriate plans and maps (1:2500) relating to the facility including:
    - site location map,
    - proposed layout plan of facility
    - a clear delineation of the site boundaries, and
    - particulars of:
        - Ordnance Survey Sheet Reference Number(s) (1:50,000 – discovery series)
        - Elevation Levels (metres) and Ordnance Datum used
        - Dimensions (metres)
        - Orientation of North Point
- In addition, five copies of a site layout plan (<1:5000) must also be supplied showing how the site will be laid out and including details of (where applicable)
    - Site entrance
    - Waste storage areas
    - Waste treatment areas
    - Site drainage, including oil interceptor (if installed)
    - Site office
    - Weighbridge (if present)
    - Traffic flow
    - Nature of surfacing within the permitted facility
    - Emission points:

3. Planning Permission and Planning Authority [Article 10 (1) (t)]

State the planning permission or planning application number (whichever is applicable at the time of submission of the application) for the facility, along with the name of the planning authority who issued it. If a certificate/declaration of exemption applies, please state this and supply a copy of the certificate/declaration of exemption:

Planning Permission Number:	N/A
Planning Application Number:	N/A
Local Authority:	exempt/or may be subject to Part 8 Planning Procedure
Document(s) Reference:	

4. Operating Hours

What are the proposed operating hours of the facility?

Weekdays:	08.00hrs–16.30hrs
Weekends:	Saturday 08.00hrs–13.00hrs
Public Holidays:	Closed

5. Traffic Management System [Article 10 (1) (v)]

Please provide details on any proposed internal traffic management system (including queuing)

Document(s) Reference:	As per site layout plans. No external site queuing

6. Lifetime of the facility [Article 10 (1) (r)]

What is the expected lifetime, in years, of the facility or activity?

Expected Lifetime:	5 years

7. Agency declaration on type of authorisation [Article 10 (1) (u) & Article 11]

Has the Environmental Protection Agency declared what type of authorisation the proposed activity requires? If yes, please enclose a copy of this declaration.

Yes

No ✓

Document(s) Reference:	5 years

SECTION D: ABOUT THE ACTIVITY

1. Description of the waste activity

Describe the nature of the waste-related activity which is proposed to be carried on within the facility. [Article 10 (1) (j)]. (Continue on a separate sheet if necessary)

A) Depot Facility to include the following waste infrastructure:
- proposed residual waste skip storage area (including refuse from street bins),
- road sweepings – temporary storage and treatment area,
- temporary materials/waste storage area for recovery of C & D, including road planings, kerbing, etc.,
B) Waste Recovery Site – material deposition for the purpose of improvement
- recovery of inert material, including clay, silt, sand, gravel or stone,
- recovery of inert waste (C & D), including concrete, bricks, tiles, etc.

2. Is an Environmental Impact Statement (EIS) required for this activity? If yes, please enclose a copy of the EIS.

Yes

No ✓

Document(s) Reference:	N/a

3. Class or classes of the waste activity [Article 10 (1) (l)]

Identify the class or classes of activity that will take place at the facility, in accordance with:

(i) Disposal and Recovery activities as per the third and fourth schedules of the Waste Management Acts 1996–2011 (see **Appendix 2**); **and**

(ii) Classes of Activity subject to certificate of registration with the Local Authority or the Agency as per Part II of the third schedule of the Regulations (see **Appendix 3**).

Where two or more activities are carried out at the facility, identify the principal activity as per the Regulations.

Please use a separate sheet if required.

Disposal activities as per the third schedule of the Waste Management Acts 1996, as amended by SI 126 of 2011

Insert Class Number	Insert Class Description
D1	*Deposit into or on to land (e.g. landfill)*

Recovery activities as per the fourth schedule of the Waste Management Acts 1996, as amended by SI 126 of 2011

Insert Class Number	Insert Class Description
R3	Recycling/reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes), which includes gasification and pyrolysis using the components as chemicals
R4	Recycling/reclamation of metals and metal compounds
R5	Recycling/reclamation of other inorganic materials, which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials
R10	Land treatment resulting in benefit to agriculture or ecological benefit
R11	Use of waste obtained from any of the operations numbered R1 to R10
R12	Exchange of waste for submission to any of the operations numbered R1 to R11 (if there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as dismantling, sorting, crushing, compacting, pelletising, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)
R13	Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage (being preliminary storage according to the definition of 'collection' in section 5(1)), pending collection on the site where the waste is produced)

Classes of Activity subject to certificate of registration with the Local Authority or the Agency as per Part II of the third schedule of the Regulations	
Insert Class Number	**Insert Class Description**
3	The reception and interim storage of crashed or immobilised vehicles, other than end-of-life vehicles, pending decisions by the registered owners of these vehicles, or, as appropriate, by an authorised person of a Local Authority, or a member of An Garda Síochána on whether the vehicles are to be classed as end-of-life vehicles. The number of vehicles stored at any one time shall not exceed six at any one location.
5	Recovery of excavation or dredge spoil, comprising natural materials of clay, silt, sand, gravel or stone and which comes within the meaning of inert waste, through deposition for the purposes of the improvement or development of land and the total quantity of waste recovered at the site shall not exceed 25,000 tonnes.
6	Recovery of inert waste (other than excavations or dredgings, comprising natural materials of clay, silt, sand, gravel or stone), for the purpose of the improvement or development of land and the total quantity of waste recovered at the site shall not exceed 10,000 tonnes.
7	Recovery of inert waste arising from construction and demolition activity, including concrete, bricks, tiles, or other such similar material, at a facility (excluding the improvement or development of land) where: (a) the annual intake shall not exceed 10,000 tonnes, and (b) the maximum quantity of residual waste consigned from the facility for submission to disposal at an authorised facility shall not exceed 15% of the annual intake.
10	The reception, storage and transfer of waste by a Local Authority, not mentioned elsewhere in this schedule, where the annual intake does not exceed 10,000 tonnes, and- (a) the maximum amount of waste dispatched from the facility for onward transportation and disposal does not exceed 1500 tonnes per annum, and (b) a period of storage of waste for disposal does not exceed 30 days.
Principal Activity:	**Class 10**
Document(s) Reference:	N/a

4. Waste Volumes: [Article 10 (1) (m)]

Detail the annual quantity of waste to be handled at the facility, for each class. Please provide specifics of the following, where relevant:

- The lifetime tonnage for CoR Classes 5 & 6
- The amount of residual waste for CoR Classes 7 & 10
- Days of storage for CoR Classes 1 & 10

Quantity at any one time for CoR Classes 11, 12 & 13

Class	**Upper Threshold as per 3rd Schedule**	**Proposed Volume**
Class 5	25,000	5000
Class 6	10,000	1210
Class 7	10,000	8000
Class 10	10,000	5000

Please state units used, which may be tonnes, cubic metres or number of units dependent upon waste type. Refer to Table 1 – Volume to weight Conversion factors in section 1.3 Guidance on the application form.

Site Throughput (with Units):	

Where waste is accepted by volume, or estimations are used, the volume to weight conversion factors shall be detailed on a separate sheet.

Document(s) Reference:	

5. Waste Types [Article 10 (1) (m) (i)]

Using the current European Waste Catalogue Code(s), state the waste types to be handled at the facility:

EWC Code (6 digits)	Quantity/units
17 01 01	
17 01 03	
17 01 07	
17 03 02	
17 04 07	
17 05 04	
17 09 04	
20 01 99	
20 02 01	
20 02 02	
20 02 03	
20 03 01	
20 03 03	
20 03 99	

6. Improvement or development of land [Article 10 (1) (x)]

Does the proposed activity involve the improvement or development of land?

Yes

No

If yes, please supply details of
- The existing and final profiles and contours of the land
- Average and maximum depth of fill
- Facility closure plan
- Purpose of fill (landscaping, engineering, etc.)
- Supporting statement as to the purpose of the placement of waste on land from agricultural adviser, engineer, landscape architect or other technical expert.

If necessary, some of this information may be supplied in drawing plan form.

Document(s) Reference:	

7. Waste Processes [Article 10 (1) (n)]

Please describe the plant, methods, processes, and operating procedures for all activities undertaken at the facility.

If necessary, continue onto additional sheets, ensuring that all sheets are numbered and labelled.

Waste is stored as part of the day-to-day operation of each Local Authority depot. All waste disposal and recovery will be collected by authorised waste collectors. In the case of sites for filling (Classes 5 & 6), all waste brought onto site will be recorded and checked before deposition. Any waste deemed contaminated or otherwise unsuitable for placing on site will be returned and disposed of in a suitable manner. factor.
Document(s) Reference:

8. Recording waste types and quantities [Article 10 (1) (m) (ii)]

Detail how the types and quantities of waste accepted will be accurately recorded. If any estimation or conversion factors are to be applied, please detail these:

For soil and stones the number/type of trucks entering the site, multiply by a conversion factor.
Waste Quantities:

9. Waste Acceptance Procedures [Article 10 (1) (ff)]

What are the waste acceptance procedures that will be applied at the facility? Include details of what will happen with wastes that do not comply with the acceptance criteria (quarantine or rejection):

The depot manager (District Engineer) will monitor all waste entering the site.

10. Emissions from the Facility [Article 10 (1) (o)]

Will the facility create any emissions to air (including dust and odour), water, land, sewer or noise?

Yes

No ✓

If yes, please detail the source, location, nature, composition, quantity, level and rate of these emissions. State whether the emissions will be continuous or periodic, and if periodic please give details.

If necessary, continue onto additional sheets, ensuring that all sheets are numbered and labelled.

Document(s) Reference:

11. Monitoring Emissions at Source [Article 10 (1) (p)]

PDetail how the emissions and the environmental impact of such emissions will be monitored. Include on the site layout plan details of monitoring and sampling points, including a key to allow clear identification of these points.

If necessary, continue onto additional sheets, ensuring that all sheets are numbered and labelled.

Label emissions and sampling/monitoring points as follows:
- Discharge points to water and associated sampling/monitoring locations – SW1, SW2, etc.
- Discharge points to sewer – S1, S2, etc.
- Discharge points to air and associated sampling/monitoring locations – A1, A2, etc.
- Noise sources and associated monitoring locations – N1, N2, etc.
- Discharges to land (for example, via percolation area or sludge for landspreading) – LD1, LD2
- Soil sampling – SS1, SS2.

Site Specific
Document(s) Reference:

12. Minimising environmental impact of emissions [Article 10 (1) (gg)]

What are the likely environmental impacts of these emissions? Include details of how these emissions will be minimised to prevent the following:

If necessary, continue onto additional sheets, ensuring that all sheets are numbered and labelled.

(i) Adverse environmental impact
(ii) Litter
(iii) Dust
(iv) Odour
(v) Noise

The Local Authority will operate proactively in relation to litter and dust minimisation Odour, noise and other adverse impacts will not arise.
Document(s) Reference:

13. Ambient Monitoring [Article 10 (1) (p)]

Detail how the emissions and the environmental impact of such emissions will be monitored. Include on the site layout plan details of monitoring and sampling points, including a key to allow clear identification of these points. Label emissions and sampling/monitoring points as follows:

- Surface water ambient sampling/monitoring locations – ASW1, ASW2, etc.
- Groundwater – GW1, GW2 etc.
- Air ambient sampling/monitoring locations – AA1, AA2, etc.
- Noise ambient monitoring locations – AN1, AN2, etc.

If necessary, continue onto additional sheets, ensuring that all sheets are numbered and labelled.

N/a
Document(s) Reference:

14. Housekeeping [Article 10 (1) (q)]

What are the measures in place to prevent unauthorised or unexpected emissions from the facilities and minimise the impact on the environment of any such emissions, including emergency measures for incidents such as spillages?

If necessary, continue onto additional sheets, ensuring that all sheets are numbered and labelled.

N/a
Document(s) Reference:

Description of the proposed measures to be taken for vermin control (for example, flies, birds and rodents) [Article 10 (1) (hh)]

N/a
Document(s) Reference:

15. Facility Security [Article 10 (1) (gg)]

Provide details of the on-site security measures, including details of how unauthorised disposal of waste at the facility will be prevented.

If necessary, continue onto additional sheets, ensuring that all sheets are numbered and labelled.

All sites will be secured by way of 3 metre high site perimeter fencing.
Document(s) Reference:

16. Other Procedures

Provide details of any other operational or housekeeping procedures on site, not already covered (for example accident and emergency, EMS/EMAS, environmental reporting).

If necessary, continue onto additional sheets, ensuring that all sheets are numbered and labelled.

N/a
Document(s) Reference:

17. Arrangements for the off-site recovery or disposal of wastes [Article 10 (1) (bb)]

Provide a description of any proposed arrangements for the off-site recovery or disposal of wastes. If this waste is destined for another waste facility, include the site name and permit/licence number of the site(s) which it is proposed to use.

If waste is destined for export relevant details (waste broker, proposed TFS arrangements, etc.) should be provided.

N/a
Document(s) Reference:

18. Animal By-Products [Article 10 (1) (w)]

Does the facility biologically treat animal by-products within the meaning of Regulation (EC) 1774/2002 (as amended)?

Yes

No ✓

If yes, please supply details of any application made to the Minister for Agriculture and Food for veterinary authorisation for the facility

Document(s) Reference:

SECTION E: FACILITY SETTING

1. Proximity to European or designated sites [Article 10 (1) (x)]

Is the proposed facility located in, or adjacent to, or impinges upon any European (for example, SACs, SPAs or Ramsar) sites? Does the facility sit within any other designated sites (for example, NHAs)?

Designation	**Yes**	**No**
Special Areas of Conservation (SACs)		
Special Protection Areas (SPAs)		
Ramsar		
Natural Heritage Areas (NHAs)		
Nature Reserves		
Refuge for Flora or Fauna		
Wildfowl Sanctuaries		
Management Agreements		

If yes, please give details of the sites and identify on a map their location relative to site of the activity:

Affected Sites:	
Document(s) Reference:	

2. Water Catchment [Article 10 (1) (aa)]

Is the site located in the immediate catchment of a water course?

Yes

No

If yes, please supply details of the flood studies undertaken to ensure that the potential for increased run-off or contamination of the watercourse is adequately mitigated.

[1]Local Government (Water Pollution) Act, 1977 defines 'waters' to include the following:
(a) any (or any part of any) river, stream, lake, canal, reservoir, aquifer, pond, watercourse or other inland waters, whether natural or artificial,
(b) any tidal waters, and
(c) where the context permits, any beach, river bank and salt marsh or other area which is contiguous to anything mentioned in paragraph (a) or (b), and the channel or bed of anything mentioned in paragraph (a) which is for the time being dry.

Document(s) Reference:

3. Land Use

Please provide details of the following:

Current use of the land:	
Historic use of the Land:	
Condition of the land (for example contamination):	
Adjacent land use:	North: South: East: West:

4. Correspondence with Minister/National Parks and Wildlife Service [Article 10 (1) (z)]

Please supply details of any discussions or correspondence which have taken place with the Minister for the Environment, Heritage and Local Government and/or the National Parks and Wildlife Service.

N/a
Document(s) Reference:

5. Biodiversity [Article 10 (1) (y)]

Please provide details of the biodiversity of the site.

N/a
Document(s) Reference:

SECTION F: ADDITIONAL INFORMATION

1. Additional Information

Additional information which the applicant feels may be required by the authority in making its decision, and any information identified as part of pre-application consultation, should be included here.

None
Document(s) Reference:

SECTION G: STATUTORY DECLARATION

I declare that the information given in the application by (Legal Entity)

_____ for the purpose of obtaining a certificate of registration is correct, and that no information which is required to be included in the said application has been omitted. I make this solemn declaration conscientiously believing the same to be true and by virtue of the Statutory Declarations Act 1938.

I authorise the Environmental Protection Agency to make any enquiries from official sources as it may consider necessary for the purpose of determining this application and, pursuant to section 8 of the Data Protection Act 1988, I consent to the disclosure of details of convictions for relevant offences specified under article 10 of the Waste Management (Facility Permit and Registration) Regulations 2007 to 2011.

Signature:

_____

Name (block capitals)

1. WARNING: ANY PERSON WHO GIVES FALSE OR MISLEADING INFORMATION FOR THE PURPOSE OF OBTAINING A CERTIFICATE OF REGISTRATION RENDERS THEMSELVES LIABLE TO SEVERE PENALTIES.CHECKLIST OF INFORMATION TO BE SUPPLIED WITH APPLICATION

Information required	Article	Included
Details of any court hearing, case, nature of the offence and any penalty or requirements imposed by the court.	10(1)	
Where the applicant is a person or partnership, include details of any such conviction where the person or partner was at any time within the last 10 years prior to this application, a director, manager, company secretary or similar officer for a body corporate	10(1)	
Site location plan, with clearly marked site boundaries in red, and North point indicated, Ordnance survey reference sheet number(s), the site elevation with reference to the ordnance datum used must be included	10(3)(c)	
Proposed site layout must be included, with the North point indicated and site dimensions in metres. This plan should include all necessary monitoring and sampling point locations, and any emission point(s) clearly marked. There should be a clearly legible key for the identification of the relevant points. Ordnance survey reference sheet number(s), the site elevation with reference to the ordnance datum used must be included All maps/drawings/plans must be no larger than A3 size and scaled appropriately such that they are clearly legible. In exceptional circumstances, where A3 is considered inadequate, a larger size may be requested	10(3)(c) (ii) and (iii)	
The correct application fee in accordance with article 42 and as specified in the fifth schedule of the Regulations	10(3)(f)	

2. ARTICLE 11 REQUEST FORM

Request to Environmental Protection Agency for determination as to whether an activity requires a waste licence, waste facility permit, certificate of registration or none of these

Enquiries regarding this application should be made to:

Office of Climate, Licensing and Resource Use, Environmental Protection Agency, P.O. Box 3000,
Johnstown Castle Estate, Co. Wexford
Tel: 053-9160600
Fax: 053-9160699
Email: info@epa.ie
LoCall: 1890 335599
Opening hours: 9.00am to 5.00pm
Reception hours: 9.00am to 5.30pm

The application must be submitted to the same point of contact. The form can be submitted by post, facsimile or email. If submitting electronically, the form should be in Word or PDF format and the declaration must still contain a signature, e.g. a scanned version of the original signed hardcopy could be submitted.

Where there is insufficient space, additional information should be attached.

Details of person/body/company making request for determination	
Name (if Local Authority, give name of Local Authority)	
Address	
Telephone	
Fax	
Email	
Contact name & position	

Details of person/body/company proposing to carry out the activity	
Name (if Local Authority, give name of Local Authority)	
Address	
Telephone	
Fax	
Email	
Contact name & position	
Details of the proposed activity	
Proposed location	
Local Authority in whose functional area the activity is located	
Interest of person making request in the proposed activity	
Does the person proposing to carry out the activity own the land on which it is to be carried out?	

Nature and extent of proposed activity	
Describe in detail the nature of the proposed activity	

Nature and extent of proposed activity					
	Description	Annual intake	Total intake3	Hazardous	
				Yes	No
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
Total =					

For recovery activities, also detail the quantity of residual waste that will arise annually for disposal – in tonnes for solid waste and in litres and tonnes for liquid waste	
For composting activities, also detail the amount of compost and biowaste that will be held at the facility at any one time – in tonnes and cubic metres	
Detail the source(s) of the waste/material	

Deposition for improvement or development of land, e.g. farmland reclamation or construction foundations	
Detail the purpose of the fill	
Detail the suitability of the material as fill, where possible by reference to specific standards	
Detail whether the material to be used as fill will undergo any processing prior to use	

Other factors	
Describe any associated activities on or adjacent to the site, e.g. industrial activities	
Is the proposed waste activity part of a larger waste plan for the site involving further activities, or is it a once-off activity?	

Describe adjacent land use	
Identify any proposed or designated Natural Heritage Areas, Special Protection Areas or Special Areas of Conservation within, or contiguous to, the proposed site of the waste activity within 2 km of the site	
Is the site of the proposed activity a wetland?	
Does the activity require any environmental protection measures?	
Does the activity require any other authorisations? (e.g. planning permission, ministerial consent for works in protected sites) and, if so, are these in place?	

Declaration

I hereby request the Environmental Protection Agency (EPA) to make determination under Article 11 of the Waste Management (Facility Permit and Registration) Regulations, 2007 as amended, as to whether the above detailed activity requires a waste licence, waste facility permit, certificate of registration or none of these.

I certify that the information given in this application is truthful, accurate and complete.

I give consent to the EPA to copy this application for its own use and to make it available for inspection and copying by the public, both in the form of paper files available for inspection at EPA and Local Authority offices, and via the EPA's website. This consent relates to this application itself and to any further associated information whether provided by me, any person acting on my behalf, or any other person.

Signature _____ **Date** _____

Print name _____

Position _____

Cumann Lucht Bainistíochta Contae agus Cathrach
County and City Management Association

connacht-ulster waste region

eastern - midlands waste region

southern waste region