

Mining Waste Directive (MWD)

GUIDANCE DOCUMENT

DOE PLANNING

MINERALS UNIT

<b>CONTENTS</b>	<b>Page</b>
<b>1.0 Scope and Definition</b>	<b>4</b>
<b>2.0 Classification of Extractive Waste</b> <b>For operators who deal with <u>inert extractive waste on site</u> please follow instructions in this section on what information to submit to the Department.</b>	<b>9</b>
<b>3.0 Categorisation of Areas</b>	<b>19</b>
<b>4.0 Preparing Waste Management Plans</b>	<b>25</b>
<b>5.0 Preparing information for submission to the Department</b>	<b>30</b>
<b>6.0 Guidance for particular sectors</b>	<b>37</b>
<b>7.0 Preparing information for submission to the Department</b>	<b>41</b>

#### LIST OF ANNEXES

**Annex A - Extract from European Waste Codes set out in decision 2000/532/EC**

**Annex B - Category A categorisation process**

**Annex C – Waste Management Plan (WMP) Objectives**

**Annex D - WMP for Extractive Waste Areas**

**Annex E - WMP (Extractive Waste Placed in Void for Rehabilitation (Restoration) or Construction**

**Annex F - WMP for Waste Facility (Inert)**

**Annex G - WMP For Waste Facility (Non-inert)**

**Annex H – Soil Waiver**

**Annex I – Non Waste waiver**

**Annex J Waste Management Plan for Inert Waste**

## PREAMBLE

### **Mining Waste Directive**

The European Parliament and the Council of the EU adopted Directive 2006/21/EC on the management of waste from the extractive industries, the Mining Waste Directive<sup>1</sup> (MWD), on 15th March 2006. It introduces measures to prevent or minimise adverse effects on the environment and risks to health from the management of waste from the extractive industries. It applies to waste resulting from the extraction, treatment and storage of mineral resources and the working of quarries.

It was prompted by accidents in Spain and Romania where cyanide rich liquid suspensions were released from mines after breaches to retaining dams. These accidents caused significant environmental damage to the river ecosystem and its animal life and also threatened human health.

However, the MWD properly recognises that the vast majority of mining operations do not present similar risks and sets out a proportionate and risk-based approach to dealing with extractive waste. This is particularly relevant to Northern Ireland where most extractive waste is inert and therefore benefits from lighter controls. In addition current good practice in the industry already addresses many of the MWDs requirements and in conjunction with existing regulatory requirements, will limit the effect of any new obligations placed upon operators.

This document should be read in conjunction with the provisions of the Planning (Management of Waste from Extractive Industries) Regulations (Northern Ireland) 2010<sup>2</sup>

---

<sup>1</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32006L0021:EN:NOT>

<sup>2</sup> <http://www.legislation.gov.uk/nisr/2010/64/contents/made>

## **1.0 Scope and Definition**

### **Scope**

Member states were required to transpose the directive by 1 May 2008 to ensure that no extractive industry waste facility operated without a permit by 1 May 2012.

The Planning (Management of Waste from Extractive Industries) Regulations (Northern Ireland) 2010 set out specific requirements on operators for the management of waste material arising from the on-shore prospecting, extraction, treatment and storage of mineral resources and the working of quarries for the purposes of preventing harm to the environment and human health.

The Regulations came into effect on 1 April 2010 and apply to both new and existing sites where the management of extractive waste takes place. The requirements set out in the Regulations are intended to ensure that all extractive waste is managed in a way which is compliant with the Directive.

### **Definition**

The Regulations define “extractive waste” as “waste produced from an extractive industry and resulting from the winning, working, treatment and storage of minerals”. The Regulations only cover material directly linked to the extraction and treatment of minerals. This will typically include tailings (i.e. the waste solids or slurries that remain after the treatment of minerals by processing), rock which is weathered, below specification or otherwise unsalable, overburden (i.e. the material moved to access the mineral), and soil.

The definition of extractive waste is intended to cover only natural materials excavated at that site. It excludes any other waste arising at mines or quarries such as that from other manufacturing processes (including production of asphalt, concrete or concrete products), construction, service of machinery or other operations. This material will remain under the control of the Waste Management Licensing regime and there should be no overlap between practices or regulation including any waste management plans for non extractive waste. Any soils or other materials brought onto site for restoration, construction or recycling, including those under a waste management license or exemption, should also be excluded from the extractive waste regime.

In certain circumstances some extractive materials with definite future use may not amount to “waste” as defined in the Waste Framework Directive<sup>3</sup>. This position is discussed later in the document.

### **Implications**

Regulation 4 confirms that, subject to transitional provisions, no operator can commence or continue extractive waste operations without planning permission after 1 April 2010. All planning applications for mineral extraction decided after that date should include, as part of the accompanying

documentation, a WMP demonstrating how the operator intends to ensure compliance with the Regulations.

Operators with planning permission on 1 April 2010 can undertake extractive waste operations until 30 April 2012. To continue after that date, they will need to have obtained approval from the planning authority of a Waste Management Plan (WMP) that demonstrates compliance with the Regulations. For inert waste, the submission and approval will be by letter. Where extractive waste is non-inert (and is managed in waste facility rather than an extractive waste area), or qualifies as a Category A waste facility a planning application is required and permission must be in place by 30 April 2012 to enable the operator to continue to manage extractive waste.

The main requirements of the Regulations are:

- WMPs to be prepared by operators for all sites that manage extractive waste;
- Where the material involved is not inert operators will also need to demonstrate compliance with appropriate environmental and health and safety regulation before commencing extractive waste operations;
- Financial guarantees, major accident prevention policies, safety management plans and internal emergency plans to be prepared for the most hazardous facilities (Category A waste facilities);

The requirements in the Regulations are proportionate to the risks involved at individual sites. Since most sites in Northern Ireland generate waste which is inert they should be able to benefit from lighter regulatory controls. In most instances, this will mean the preparation of WMPs only. Where the only extractive waste is unpolluted soil and peat and the MWD requirements are met there may be no need for a WMP.

## **Aims and Objectives**

### **The Mine Waste Directive**

The MWD aims for the management of extractive waste are wide: to prevent or reduce as far as possible any adverse effects on the environment, in particular water, air, soil, fauna, flora and any resultant risks to human health. Noise and landscape are also considered. The key requirements of the Directive are ;

- The physical stability of tips and lagoons and their failure may impact on human health and safety or the environment
- The susceptibility of surface and groundwater to the dangerous substances in waste, the creation of leachate or sediment run off
- The potential for soil pollution from contaminated water
- The potential for air pollution from gases or particulates

## **Waste Management Plans**

The Directive also takes account of the wider imperatives of the principle of sustainable development, the principles of good waste management and the application of best available techniques.

The objectives of the Mine Waste Directive are set out in Schedule 1 of the Regulations. The objectives promote designs for waste management which ensures its long term stability and ideally requiring no future monitoring, control or management. The general position of the Directive is that extractive waste should be reused on site with emphasis on placing the waste back into the excavation void where appropriate so long as this is technically possible, economically feasible and environmentally sound. The excavation void is thus deemed to be the safest location for the placement of extractive waste with minimal scope for movement or pollution.

The restoration plans for the site should link to the objectives of a WMP. The restoration plan could include proposals for the placement of waste into the void. It could also identify the use of extractive waste for final landscaping, biodiversity and site after use.

While schemes for the after use should be suitably stable and free from adverse environmental impacts in the long term, operators will also need to consider the temporary effects of the storage of material before being utilised in the future. For new sites, these aspects should be considered as a normal part of consideration of site proposals and an environmental impact assessment, where required under the Planning (Environmental Impact Assessment) Regulations (Northern Ireland) 1999<sup>3</sup> around the design, taking into account compliance with geotechnical requirements under the Quarry Regulations (Northern Ireland) 2006<sup>4</sup>. When an Environmental Statement is not required, the potential effects could be considered as part of the main proposals and restoration plan.

### **Existing Controls**

It is considered that neither the Planning Authority nor mineral operators will encounter any new technical aspects as a result of the Regulations. In many cases, the only changes to new applications will be the bringing together of information to confirm that the Regulations are fulfilled.

For existing sites that have restoration plans that meet the Regulations, work required for these will be reduced.

Many of the issues that are requirements of the Regulations are already considered when determining mineral proposals. The Planning Authority put controls in place by way of conditions attached to decision notices, where

---

<sup>3</sup> <http://www.legislation.gov.uk/nisr/1999/73/contents/made>

<sup>4</sup> <http://www.legislation.gov.uk/nisr/2006/205/contents/made>

possible, to ensure that there is little or no impact on local residents and the environment. These impacts are often identified by the EIA which means the environmental issues are considered as part of the proposals as a whole.

### **Environmental Impact Assessment (EIA)**

Projects may require an EIA if they fall within a description listed in the Planning (Environmental Impact Assessment) Regulations (Northern Ireland) 1999. These Regulations provide a systematic procedure for assessing the environmental implications of development likely to have significant environmental effects.

Projects listed in Schedule 1 to the Regulations must always be subject to an EIA; those applications which fall within Schedule 2, 2(A) Extractive Industry; quarries, open cast mining and peat extraction (unless included in Schedule 1) of the Regulations, require an EIA if they are likely to have significant effects on the environment by virtue of factors such as size, nature or location.

### **The Northern Ireland Environment Agency (NIEA)**

NIEA is an expert agency within the Department of the Environment tasked, among other functions, with the identification, protection and promotion of Northern Ireland's environment. NIEA take the lead in advising on and in implementing, the Government's environmental policy and strategy in Northern Ireland. NIEA carries out a range of activities, which promote the Government's key themes of sustainable development, biodiversity and climate change.

NIEA overall aims to:

- Protect and conserve Northern Ireland's natural heritage and built environment for the benefit of present and future generations;
- Control pollution; and
- Promote the wider appreciation of the environment and best environmental practices

In view of their expert role, advice from NIEA will be especially relevant when there is perhaps uncertainty with the classification of materials and potential impacts on receptors such as the water environment.

In relation to the water environment, the requirements of the regulations are already provided through the Water (Northern Ireland) Order 1999<sup>5</sup>.

Compliance with these Regulations will continue to be the responsibility of NIEA, though certain aspects may require specification in documentation submitted to the Planning Authority for confirmation of compliance with the requirements of the Mine Waste regulations.

---

<sup>5</sup> <http://www.legislation.gov.uk/nisi/1999/662/contents/made>

## **DETI Health and Safety Executive (HSENI)**

The Health and Safety Executive for Northern Ireland is an executive Non-Departmental Public Body sponsored by the Department of Enterprise, Trade and Investment (DETI). HSENI is the lead body for the promotion and enforcement of health and safety at work standards in Northern Ireland.

The Quarries Regulations (Northern Ireland) 2006 are intended to protect the health and safety of people working at a quarry and others who may be affected by quarrying activities. They apply to both employee and to the self employed. They are also intended to safeguard people not working at the quarry (e.g. those living, passing or working nearby, or visiting, for example to buy materials<sup>6</sup>

In relation to the stability excavations and tips, the requirements of the regulations are already provided through the Quarries Regulations (Northern Ireland) 2006. Compliance with these Regulations will continue to be the responsibility of HSENI, though certain aspects may require specification in documentation submitted to the Planning Authority for confirmation of compliance with the regulations.

### General duty to ensure safety of excavations and tips.

The operator shall ensure that excavations and tips are designed, constructed, operated and maintained so as to ensure that-

- Instability;
- Movement,

Which is likely to give rise to a risk to the health and safety of any person is avoided.

### Excavations and Tips Rules<sup>7</sup>

The operator shall ensure that suitable and sufficient rules (known in these Regulations as the “excavations and tips rules” are made to ensure the safe construction and operation of excavations and tips and such rules shall in particular specify the following matters-

The manner in which such activities are to be carried out;  
The nature and extent of supervision of such activities; and  
The precautions to be taken during such activities to ensure the health and safety of any person and the safety and stability of the excavation or tip.

---

<sup>6</sup> Other specific legislation will take precedence in some cases. This includes the Road Traffic Act 1998 for vehicles on public roads and the Environment Protection Act 1999 for off-site noise, dust and vibration.

<sup>7</sup> The Quarries Regulations (Northern Ireland) 2006

## 2.0 CLASSIFICATION OF EXTRACTIVE WASTE

The classification of waste should be the first step in clarifying which requirements of the regulations will be applicable to individual sites.

### Possible classifications

All extracted waste material is likely to fall into one of the following classes:

- a) unpolluted soil and peat (if there is no danger to human health or harm to the environment, operators can make a case to Planning Service that the requirements of the Regulations should be waived (Regulation 5 (6));
- b) non-waste (where operators can seek agreement that the material is not extractive waste and is therefore excluded from the scope of the Regulations);
- c) inert;
- d) hazardous;
- e) non-hazardous non- inert (i.e. being neither inert nor hazardous).

Operators can therefore request a waiver of the requirements of the Regulations for unpolluted soil and peat and can make the case that certain material is a non-waste by product. Operators may seek the necessary agreements in advance or along with a mine waste plan that may be required for other material.

If the operator decides not to make a case in relation to unpolluted soil, peat or a non-waste by product or cannot do so to the satisfaction of DOE Planning, then the operator should proceed to classifying the material in accordance with c) to e). Subsequently, the areas in which the extractive waste (which includes waste placed in the void for restoration or construction) is stored or placed will need to be categorised as;

- extractive waste area
- waste facility
- Category A waste facility

### **Unpolluted soil**

The Regulations refer to unpolluted soil as “Soil that is removed from the upper layer of the ground during extractive activities and that is not deemed to be polluted under national or community law”.

It is anticipated that typical soils removed from Northern Irish quarries will be unpolluted and this may be accepted as the norm unless there is conflicting information to prove otherwise for example a previous industrial development on the site or in the vicinity.

In recognition of the relative harmlessness of soil, when properly managed, the Department has the power to waive any further requirements of the Regulations, for both existing and new sites. Operators must confirm that the material will be managed without endangering human health and without using processes or methods which could harm the environment as noted below:

- risk to water, air, soil, flora and fauna,
- causing a nuisance through noise or odours,
- unacceptably affecting the landscape or places of special interest; or
- resulting in the abandonment, dumping or uncontrolled depositing of extractive waste.

For new sites, such risks should be addressed through the standard application process or through the EIA. For existing sites such risks are likely to have been addressed in processing of the application.

### **Peat**

According to the Northern Ireland Environment Agency, peat is a type of soil that contains a high amount of dead organic material, mainly plants that have accumulated over thousands of years<sup>8</sup>.

In the first instance there is provision within the Regulations for waiver of any further requirements (in the same way as soil) for all extractive waste resulting from peat working i.e. waste from the commercial extraction of peat. The scope for extractive waste generation at such sites is thought to be limited.

Peat is also encountered as overburden which is removed to access other mineral deposits. Thinner layers can sometimes be described as “peaty soil” or “soily peat” and can simply be treated under the Regulations in the same way as soil. Sometimes thicker peat deposits are removed in part or whole to be directly re-spread or “trans-located” elsewhere on site as part of restoration. This may involve prepared gradients to achieve desired containment and water retention. Such material can also be treated under the same waiver. On some sites there can be a thin layer of peaty silt between peat and underlying rock or clay; this can also justifiably be treated as a single layer where it does not serve any purpose to distinguish it.

Elsewhere, several metres thicknesses of wet peat may need to be excavated and managed in a contained cell. Where this is a planned and considered element of restoration it should be possible to address all of the tests for waiver. Where, however, it is stored temporarily or as an unplanned part of restoration addressing the tests will require more attention. Deep temporary stores of wet material may be more appropriately and simply covered under the other provisions for inert materials. The Planning Authority should seek the advice of NIEA in such cases. Regardless of the particular waiver or

---

<sup>8</sup> <http://www.ni-environment.gov.uk/biodiversity/habitats-2/peatlands-2.htm>

categorisation, planning controls should ensure peat is managed without detriment to the surrounding environment.

For new sites, operators who wish to take advantage of the waiver, it is recommended that they identify on a plan of the site the areas where the material will be stored together with supporting information setting out how the material will be managed to ensure compliance with Regulation 5 (6). This is unlikely to amount to anything beyond that already submitted in good quality applications.

In order to take advantage of any waiver, the operator will have to reasonably satisfy the planning authority that unpolluted soil and/or peat is already being managed in accordance with Regulation 5 (6). As a minimum, this would involve referring planning authorities to existing plans and/or planning conditions or providing a new plan identifying the areas where the material is being stored under the existing planning permission and how this consent secures compliance.

### **Waiving requirements for unpolluted soil and peat**

The power to waive the requirements of the Regulations reflects the generally low risk of unpolluted soil and peat to the environment and human health. However, this does not reduce the importance of ensuring that proposals to extract minerals satisfactorily consider soil and peat issues. Indeed, there will likely be particular attention to loss or damage to certain peat resources through EIA.

### **Reducing requirements**

Regulations allow planning authorities to reduce, rather than waive, the requirements for unpolluted soil and peat and use of this power would need to be discussed and justified on a case by case basis. A preferable route would be to ask the operator to re-design those aspects causing concern. This should be the norm for new sites and is also possible for existing sites provided the design remains within the scope of the existing planning permission. It should not however lead to re-handling of materials already stored.

### **Non Waste By- Products**

The majority of material produced in extraction sites in Northern Ireland remains on site and will be used as part of the restoration process. This is an important objective of the Mine Waste Directive and should continue to be a primary objective for mineral operators.

However, this leads to the debate as to whether this material is considered waste under the Waste Framework Directive. This debate should not effect how this material is dealt with under planning controls as the land use implications will be the same no matter whether it is waste or not. However in terms of the Mine Waste Regulations, the debate may influence whether the material is controlled by these Regulations.

EC case law <sup>9</sup> recognises that there are circumstances where residues from mining operations can be classified as non-waste by-products if they are used to fill the excavation void.

The circumstances are where:

- The mining operator physically identifies the residues which will actually be used to fill the galleries/voids;
- The mining operator provides the competent authority with sufficient guarantees of that use: and
- The competent authority assesses whether the period during which the residues will be stored before being returned to the void is so long that those guarantees cannot be provided.

Other relevant consideration which the EC identified in its judgement are that:

- The use of the residues to fill the void is necessary and lawful.
- That the residues used for this purpose have not been processed.

This position is expected to be relevant to many mineral sites in Northern Ireland where the use of certain materials which would otherwise be extractive waste are shown to be necessary to the mining operation and meet all of the tests to be considered “non waste”. It is the Department’s view that in addressing the tests on whether a material is a waste there should also be no interpretation or application which undermines the aims or application of the Mining Waste Directive. This question must be born in mind in each situation.

It is expected that operators will be able to satisfactorily address all of the tests for certain common parts of typical mining and quarrying processes in Northern Ireland. This would include overburden excavated and/or stored where the material has been identified and is clearly planned for necessary restoration of the excavation void, its periphery and in some cases the remaining parts of the site (all without any processing or treatment). It should also often be possible to show that mounds or landscaping which are expressly required for essential landscaping (e.g. for visual or noise screening) do meet the relevant tests.

Necessary mounds or landscaping should however be distinguished from those whose primary purpose is simply or primarily storage of material (whether landscaped or not). Where an overburden storage mound is to be permanently left in place instead of being returned to the void it would not appear to meet the relevant tests. It may be a good design choice in limiting material handling and it may be acceptable in landscape terms but it is unlikely to be necessary to the mining operation and its exclusion incompatible with the aims of the Mining Waste Directive. Where part but not

---

<sup>9</sup> Avesta Polaris Decision 2003

all of a mound is planned to be removed for restoration elsewhere there could be difficulty with clear identification and regulation. It is recommended therefore that it is inappropriate to try to deal with only a portion of material within a mound, tip or area which has been categorised under the regulations, as non-waste.

Another common situation will involve plant process settlement ponds identified as part of the restoration scheme for the quarry void. They would not appear to meet the relevant tests for non-waste firstly since settlement is regarded as a process required before the material is suitable for use. The management of process waste in tailings lagoons lies at the heart of the Directive but where this is undertaken within the void for rehabilitation then the requirements are much reduced as described in the next chapter.

It would be possible in many cases to show that some or all topsoil and peat materials also meet the requirements for non-waste but the Department's view and advice is that all such materials are more appropriately and uniformly dealt with by all parties in accordance with paragraphs dealing with soil and peat above.

#### **Non-waste by product confirmation**

It is essential that operators obtain the written approval of the planning authority on the identification of material as non-waste by products; there is no scope for self-declaration. This can be done in advance or more likely in tandem with the submission for remaining materials (i.e. those which are extractive waste).

The Department must satisfy itself that the material can be regarded as non-waste by product and that the necessary identification and guarantees are provided.

Where planning permission is being granted, planning conditions shall be imposed to ensure that such material is returned to the excavation void i.e. through compliance with a restoration plan. The Department shall satisfy itself that:

- The replaced material is physically stable
- Pollution of soil and water is prevented
- Appropriate monitoring of the void and the material take place for as long as necessary<sup>10</sup>

If an operator applies for the material to be excluded from the Regulations, it shall be considered by the Planning Authority on a case-by-case basis. If there is reasonable and justifiable doubt whether the material can meet the tests in order to be regarded as a non-waste by product, the Planning Authority shall request information to meet the requirements of the Regulations.

---

<sup>10</sup> Little or no monitoring will be required where the material is inert.

Despite the genuine possibility that soil could also be treated as a non waste by product, it should be dealt with under the waivers that can be afforded under Regulation 5(6). Where an operator does not follow this advice and instead makes a case that soil is treated as non waste the Planning Authority will have to deal with this on its own merits having regard to the general test set out above, the advice of NIEA and any other relevant considerations.

For new sites, it is recommended that they identify on a plan the areas where the material will be stored; with supporting information on how it will be managed to ensure compliance with the non-waste circumstances detailed above.

For operators who possess an existing permission for extraction, the onus is on them to provide the necessary identification and guarantees to the Planning Authority. In many cases, the extraction and restoration plans should identify the material to be returned to the excavation void for restoration or landscaping. Where compliance with the approved plans is secured by planning conditions attached to a decision notice for extraction, the Planning Authority can agree that the identification and guarantee requirements indicated by the EC ruling are met and they are satisfied that the material can be considered as a non-waste by product.

It is thus the case that this material would be considered exempt from the Regulations but would continue to be controlled by the planning conditions and other relevant Regulations.

### **Inert**

Inert waste is defined in these Regulations as waste “that does not undergo any significant physical, chemical or biological transformations; inert waste will not dissolve, burn or otherwise physically or chemically react, biodegrade or adversely affect other matter with which it comes into contact in a way likely to give rise to environmental pollution or harm human health; the total leachability and pollutant content of the waste and the ecotoxicity of the leachate must be insignificant, and in particular not such as to endanger the quality of either surface water or groundwater.”

Further guidance on this definition has been provided by the EC<sup>11</sup>. This states that extractive waste shall be considered as being inert waste where all of the following criteria are fulfilled in both the short and the long term:

(a) the waste will not undergo any significant disintegration or dissolution or other significant change likely to cause any adverse environmental effect or harm human health;

(b) the waste has a maximum content of sulphide sulphur of 0,1 %, or the waste has a maximum content of sulphide sulphur of 1% and the neutralising potential ratio, defined as the ratio between the neutralising potential and the

---

<sup>11</sup> Decision 2009/359/EC Article 1

acid potential, and determined on the basis of a static test prEN 15875 is greater than 3;

(c) the waste presents no risk of self-combustion and will not burn;

(d) the content of substances potentially harmful to the environment or human health in the waste, and in particular As, Cd, Co, Cr, Cu, Hg, Mo, Ni, Pb, V and Zn, including in any fine particles alone of the waste, is sufficiently low to be of insignificant human and ecological risk, in both the short and the long term. In order to be considered as sufficiently low to be of insignificant human and ecological risk, the content of these substances shall not exceed national threshold values for sites identified as not contaminated or relevant national natural background levels; and

(e) the waste is substantially free of products used in extraction or processing that could harm the environment or human health

The EC decision further confirms that waste may be considered as inert waste without specific testing if it can be demonstrated, to the satisfaction of the competent authority, that the criteria set out above have been adequately considered and are met on the strength of existing information or valid procedures or schemes.

The EC decision further confirms that waste may be considered as inert waste without specific testing if it can be demonstrated, to the satisfaction of the competent authority, that the criteria set out above have been adequately considered and are met on the strength of existing information or valid procedures or schemes.

The EC decision also provides that member states may draw up lists of wastes which may be regarded as inert in accordance with the above criteria. The table below sets out extractive waste materials that can be assumed to be inert together with reference to the relevant entry from the extract of the European List of Waste Codes at Annex A. The table confirms that virtually all extractive waste from aggregates and certain other quarrying in Northern Ireland can be regarded as inert without further enquiry.

**List of de facto inert waste**

Nature and source:

Extractive waste<sup>12</sup> in the form of natural overburden, interburden or leftover components consisting clay, silt, sand, gravel, pebbles, cobbles, boulders or rocks from physical disturbance, excavation or processing of the following:

Superficial deposits of sand and gravel, pebbles, cobbles, silt, clay or boulder clay. Igneous rocks worked for aggregates or building stone including dolerites, granites, basalts and volcanic rocks of lava, tuff, breccia, vent agglomerate and the like.

<sup>12</sup> As defined in the 2010 Regulations

Sedimentary rocks encountered in quarrying (a) for aggregates (b) for building stone or (c) for silica sand; including sandstones or gritstones, limestone and conglomerate; but excluding (i) coal or lignite<sup>13</sup> (ii) any sedimentary rock uncovered as overburden or interburden in the course of extraction<sup>14</sup> of surface or underground coal or other coal measures sediments or (iii) coaly shale or shale deposited with coaly matter as a result of coal processing.

Metamorphic rocks worked for aggregates or building stone including schist, gneiss or slate

### **EWC Codes**

Excavation waste (including overburden) 01 01 02

Waste gravel or crushed rock from processing 01 04 08

Waste sand and clay from processing 01 04 09

Dusty and powdery wastes from processing 01 04 10

Tailings/other wastes from washing and cleaning<sup>15</sup> 4 01 04 12

Waste from stone cutting 01 04 13

### **Exceptions**

Extractive waste included in the list above will be regarded as inert, unless there is reason to consider that it may not be inert on the basis of:

(a) dangerous substances inherent in the mineral resource; or,

(b) site specific conditions, - for example by hydrothermal/vein mineralisation (other than the kaolinisation of igneous intrusions). Depending on the nature of the mineralised extractive wastes and its proportion relative to unmineralised extractive wastes, the mineralised extractive wastes may not be inert extractive waste; or,

(c) human activity. The extractive waste must not contain dangerous substances used in the physical and chemical processing of non-metalliferous minerals wastes from potash or rock salt processing or contamination from any other activity or spillage.

### Waste Management Plan for Inert Waste

Under Regulation 5(4) of the Planning (Management of Waste from Extractive Industries) Regulations (Northern Ireland) 2010 a waste management plan is not required under Regulation 6, if the extractive waste is inert and is not deposited in a Category A waste facility. As it is likely that the majority of quarries in Northern Ireland will produce extractive waste that is inert and will not be deemed to be a category A facility, then they will fall under this exemption. However in order for the Department to deem the extractive waste as exempt, it would firstly require the

<sup>13</sup> The reference to lignite is not intended to exclude superficial sands and gravels, sandstones or conglomerates where the concentration of lignite is and remains negligible for the purpose of this classification

<sup>14</sup> Surface coal overburden is complicated by the presence and exposure of sulphide minerals and potential for dissolved metal pollution. It is therefore excluded from the list of de facto inert waste.

<sup>15</sup> Other than those mentioned in 01 04 07 (waste containing dangerous substances) and 01 04 11 (waste from potash and rock salt processing) of the European Waste Catalogue.

submission of information to confirm that the waste at the site is inert and a non-category A waste facility.

In addition, inert waste is not exempt from the rest of the Regulations and documentation is required to satisfy the conditions in other Regulations, other than those listed in Regulation 5(4).

Therefore to ensure compliance with the Regulations, if an operator is producing inert waste the Department shall require the completion of the forms at **Annex J**.

Should the department deem that the information supplied in this form is insufficient it may require the submission of a full waste management plan as per Regulation 6. The rest of this guidance document will thus apply.

### **Hazardous Waste**

The Hazardous Waste Directive (HWD) defines hazardous waste as those featuring on a list drawn up by the EC, because they possess one or more of the hazardous properties set out therein. This list is called the European Waste Catalogue (now the consolidated EWC 2002)<sup>16</sup>. Extractive wastes are contained in Chapter 1 of the catalogue (reproduced in a table at Annex A of this guidance). Some of the six-digit codes have an asterisk, denoting hazardous wastes. Those without an asterisk are not hazardous wastes. Of the hazardous wastes, some are coloured red (“Absolute” hazardous entries) and some are coloured blue (“Mirror” hazardous entries). The absolute hazardous entries are automatically considered hazardous and their description does not have a reference to “dangerous substances”. Therefore, operators do not need to find out what chemicals are in the waste in order to find out if it is hazardous or not. There is only one absolute hazardous entry within Chapter 1 (extractive wastes): this relates to acid-generating tailings from processing of sulphide ore. The mirror hazardous entries are those which can be either hazardous or not, depending on whether they contain “dangerous substances” at or above certain levels<sup>17</sup> and their hazardous properties.

The technical guidance document WM2 (jointly produced by SEPA, EA and Northern Ireland Environment Agency) can be found on NIEA’s web page and is particularly helpful. It may be noted firstly that wastes from mineral excavation of all types (i.e. natural overburden and interburden) is not listed as hazardous (Codes 01 01). This includes aggregates and surface coal overburden (Code 01 01 02). The next headings cover processing wastes and although there is one known prospective metalliferous mining operation all other extraction operations are non-metalliferous (Codes 01 04). As described above aggregates silica sand and building stone wastes on the de facto list are inert. Processing wastes from these operations will fall under one of the non hazardous codes (01 04 08 to 01 04 13). The scope for hazardous mining waste in Northern Ireland therefore appears to be very limited at present.

### **Non -hazardous non- inert waste**

---

<sup>16</sup> Decision 2000/532/EC

<sup>17</sup>[http://www.doeni.gov.uk/niea/waste/home/regulation/regulations\\_hw/further\\_information.htm](http://www.doeni.gov.uk/niea/waste/home/regulation/regulations_hw/further_information.htm)

Non-hazardous non-inert waste is not defined in the Regulations but can be considered to be waste that is neither inert nor hazardous. The scope for such waste from current Northern Irish mineral sites also appears to be limited.

### **3.0 CATEGORISATION OF AREAS**

Following classification of extractive waste, the categorisation of areas within a site should be relatively straightforward. Categorisation applies to the areas where material is stored or placed; not the source of the material. There may be one or more of each of the four categories within a site:

- extractive waste area (including waste returned to the void for rehabilitation or construction) ; or
- waste facility (inert); or
- waste facility (non-inert); or
- Category A waste facility.

#### **Extractive waste area**

##### Extractive waste area

The Regulations define extractive waste areas as those designated for the accumulation or deposit of extractive waste, whether in solid or liquid state or in solution or suspension, for the following time periods

- a period of six months or less for areas for hazardous waste generated unexpectedly; or
- a period of one year or less for areas for non-hazardous non-inert waste; or
- a period of three years or less for areas for unpolluted soil, non-hazardous prospecting waste, waste resulting from the extraction, treatment and storage of peat and inert waste, (where requirements have not been waived)

The area includes any dam or other structure serving to contain, retain, confine or otherwise support such a facility and is not limited to heaps and ponds.

If the intention of the operator is to return the extractive waste to the void for restoration or construction, the voids are considered as extractive waste areas. The MWD promotes the placement of waste into the void as it is considered less of a risk to the environment or human health than placing it at the surface. The regulations limit WMP requirements for extractive waste placed in the void namely ensuring stability, prevention of pollution and monitoring.

##### Waste facility for inert waste only

This categorisation applies to inert waste that is accumulated and deposited for a period of more than 3 years. It would also apply to unpolluted soil, non-hazardous prospecting waste, waste resulting from the extraction, and treatment and storage of peat stored for the same period where requirements have not been waived.

### Waste facility for non inert waste

This categorisation applies where accumulation or deposit exceeds the following time periods:

- six months for facilities for hazardous waste generated unexpectedly; or
- one year for facilities for non-hazardous non-inert waste

### Category A waste facility

These are waste facilities<sup>18</sup>

- where a failure or incorrect operation, e.g. the collapse of a heap or the bursting of a dam, could give rise to a major accident, on the basis of a risk assessment taking into account factors such as the present or future size, location and environmental impact of the waste facility; or
- which contains waste classified as hazardous above a threshold; or
- which contains substances or preparations classified as dangerous, above a threshold;

Category A waste facilities will be subject to substantial controls under the Regulations but very few sites in Northern Ireland are expected to contain qualifying facilities. Separate advice can be provided on this aspect where a site qualifies or appears likely to qualify. In all cases however operators and the planning authority need to be satisfied that Category A does not apply. In general, this should be quickly achievable by following the questionnaire set out in Appendix B

In the first instance, the latter two bullet points above can be disregarded for those mines or quarries which do not encounter or use dangerous substances or result in hazardous waste - this is expected to be the norm in Northern Ireland.

This leaves the first bullet point which refers to the risk of a major accident on two distinct grounds and two possible areas of impact:

- structural failure or
- incorrect operation

resulting in serious danger to:

- human health or
- the environment.

---

<sup>18</sup> The definition in the Regulations has been further explained by EC Decision 2009/337/EC

In Northern Ireland, The Quarry Regulations 2006 already require that structures, including tips and ponds, at all quarries and surface coal mining sites, are designed and operated to be safe and stable.

Key aspects are (i) a general duty on the operator to operate without endangering the health and safety of others (Regulation 6) and (ii) an operator obligation that tips (including lagoons) are designed, constructed, operated and maintained to ensure that instability or movement which is likely to give rise to a risk to the health and safety of any person is avoided (Regulation 24). This expressly includes people outwith the site.

There is a statutory system for operator identification of possible hazards. These include any failure:

- liable to endanger premises, roadways or other places where people are likely to be found offsite or
- likely to kill or seriously injure someone

“Significant hazards” are also assumed under the Quarries Regulations, where basic criteria relating to the size and location of tips and lagoons are met; classification does not necessarily therefore infer danger. An operator must undertake regular appraisal and where there appears to be a danger if the tip failed expert geotechnical assessment must be undertaken. An ongoing assessment procedure applies including notification to the HSE. However the responsibility under Regulation 30 to avoid any risk to the health and safety of any person remains. This legislation, which is not replicated throughout the EC, means that tips and ponds at Northern Ireland’s sites are already designed and operated such that risk to human beings within or outwith the site from structural failure or incorrect operation is avoided.

Decision 337/2009/EC expands serious danger to human health into potential for loss of life and serious danger to human health:

“The potential for loss of life or danger to human health shall be considered to be negligible or not serious if people other than workers operating the facility that might be affected are not expected to be present permanently or for prolonged periods in the potentially affected area. Injuries leading to disability or prolonged states of ill-health shall count as serious dangers to human health

It also gives criteria where lives must be deemed to be threatened. This includes for water or slurry where it is above 0.7 metres high or moving at a speed of 0.5m/s or more. Where the waste is solid, lives are deemed to be threatened if the predicted waste movement reaches where people live or are present for prolonged periods. Where these criteria are met a detailed risk assessment is required considering the source waste failure types, the material flows and pathways to receptors.

The Quarries Regulations go somewhat further than the EC requirements as regards footpaths and roads around the site. They do not guarantee that there can never be a structural failure or incorrect operation. However, there should be little or no question of an operator establishing or continuing with tips or lagoons where failure continues to threaten human beings as described in the MWD and Decision 337/2009/EC.

Operators should confirm:

- the site is covered by the Quarries (Northern Ireland) Regulations 2006 (or, for mines, The Mines and Quarries (Tips) Act 1969 and Regulations);
- that where the facility is, or would qualify, as a significant hazard, geotechnical assessment work for the waste facility has been undertaken;
- any notifiable tips have been notified to the HSENI;
- there is, in their opinion, no serious danger to human health of persons outwith the site as defined in Decision 337/2009/EC.

Where an operator is seeking approval of a WMP for an existing site with one or more waste facilities and is unable to give such confirmation it might pose serious questions about core compliance with the Quarries Regulations. He should seek the assistance of a geotechnical specialist in this respect. Meantime, he is unable to adequately complete a submission for approval of a WMP. The planning authority cannot make any assumptions that a facility does or does not qualify as Category A and cannot process the request. Where an operator is preparing a WMP as part of a planning application for a new site this requirement should already be incorporated through design. It will now be necessary to ensure that design work for new waste facilities, including where necessary geotechnical input, allows the operator to make this confirmation.

The scope for serious danger to the environment must be considered in the same way but this is not purposely addressed by the Quarries Regulations. The EC have however issued minimum criteria that the danger to the environment would not be considered serious where:

- (a) the intensity of the potential contaminant source strength is decreasing significantly within a short time;
- (b) the failure does not lead to any permanent or long-lasting environmental damage;
- (c) the affected environment can be restored through minor clean-up and restoration efforts.

It should be borne in mind that the aim of Category A categorisation is intended to ensure special controls are in place to deal with the most

significant risks to human health or the environment. These controls are above and beyond the normal controls applied to waste facilities through the MWD; this already requires prevention and minimisation of environmental impact. Category A facilities merit internal emergency plans for implementation by the operator and external response plans for implementation by the planning authority.

The task at categorisation stage is therefore to identify particular instances where failure would result in a major accident causing serious danger to the environment of this nature; this certainly excludes minor spills and those fitting the criteria above. More attention would be justified by high sensitivity environments but even where designated habitats are involved the impact of any damage, which cannot be cleaned up, and is long lasting, would normally need to affect the integrity of the designated area. At the same time, nothing in the MWD affects the protection offered to designated areas or species through existing legislation or planning decision on new developments

The system for categorisation requires the assumption that loss of structural integrity or incorrect operation might occur. However, given the controls already in place in the UK under the Quarries Regulations slopes and structures will be designed and built with a factor of safety built in. Although failure must still be assumed, the type and scope of failure which might be possible should be restricted. Most extractive waste in Northern Ireland will be inert; and where a particular type of failure is identified that could in principle result in movement of material outwith the site, the scope for long lasting environmental damage which cannot be easily cleaned up should also be limited. Accordingly, the numbers of existing sites in Northern Ireland categorised in this way is expected to be few and new sites should be designed to avoid Category A categorisation wherever possible.

There may, however, be certain situations where an existing tip or lagoon is located at the boundary of a quarry and while there are no neighbouring human beings there is a particularly sensitive environmental feature. There is protection for the environment because precautions taken at source should ensure that every tip is stable and secure so as not to threaten human beings, but this protection is arguably implicit. The possibility of a particular type of failure or incorrect operation should therefore be considered for completeness. To address this, operators should firstly identify any tips or lagoons which are classed under the Quarries Regulations as significant hazards and where loss of structural integrity or incorrect operation could result in solid waste or slurry leaving the site. This will normally, but not always, involve attention to those identified as significant hazards under the Quarries Regulations. If there are no such situations no further work will be needed. Where there is such scope, the operator should state whether he considers there is potential for serious danger to the environment as qualified above. This will be based on the predicted maximum reach of any waste and the sensitivity of the receiving land. Where waste is non hazardous and there are no designated habitats it is reasonable to assume in the absence of any other information that the impact would not amount to serious danger.

Where a facility which would qualify as Category A is already part of a development covered by the Control of Major Accident Hazards Regulations 1999, the 2010 Regulations do not apply.

#### Non-extractive waste

It should be noted that the filling of excavation voids or any part of a mine or quarry with any non-extractive waste e.g. landfill (whether inert or not) or restoration/improvement under a waste management exemption remains wholly regulated under existing waste regimes and distinct from extractive waste management regulations.

#### Other areas

Although there is no requirement to do so, it is likely to be useful in future if operators delineated on the WMP drawing or other plan any other materials on a site which will not form part of the WMP. This could include

- (i) soils where further requirements are waived,
- (ii) non waste by products such as those discussed in Chapter 2,
- (iii) historical materials placements (see closed facilities below) or settling ponds whose sole purpose is to treat surface run off water prior to discharge or reuse. Such ponds can be distinguished from those used for the treatment of silt laden process effluent and will not generally be affected by the Regulations. This is based on the assumption that any sediment collected and required to be cleaned out is de minimis in the context of the site or can be suitably dealt with within another extractive waste area or facility on site. Where this is not the case, the operator should designate the area following the principles above. Where flocculants or other chemicals are used it may be necessary to consider any issues arising from use of the sediment in restoration

## **4.0 PREPARING WMPs**

Operators should prepare only one WMP for a mine or quarry. Where there is more than one extractive waste area or waste facility within the site the plan should contain necessary plans, documents or references for the whole site and a completed form for each area or facility with relevant cross references. This approach should avoid unnecessary repetition or copying of details.

The appropriate requirements for each category of waste are described below in some detail but it will be evident that there is overlap in places. Use of the forms provided at Annexes C to G of this guidance should simplify the process for operators.

Operators should set out in their WMP, proposals for prevention or minimisation, treatment, recovery and disposal of extractive waste employing best available techniques (BAT) and taking account of the principles of sustainable development. Waste management options should be selected with a view to minimising waste generation and its harmfulness, and encouraging waste recovery. Once approved, plans should be considered as a basis for operators to maintain or improve their environmental performance, meet regulatory controls and reduce waste.

Schedule 1 confirms that the objectives of all plans should be as follows:

(a) to prevent or reduce waste production and its harmfulness, in particular by considering:

(i) waste management in the design phase and in the choice of the method used for mineral extraction and treatment;

(ii) the changes that the extractive waste may undergo in relation to an increase in surface area and exposure to conditions above ground;

(iii) placing extractive waste back into the excavation void after extraction of the mineral, as far as is technically and economically feasible and environmentally sound in accordance with existing environmental standards at Community level and with the requirements of these Regulations where relevant;

(iv) in respect of a waste facility, putting topsoil back in place after its closure or, if this is not practically feasible, reusing topsoil elsewhere;

(v) using less dangerous substances for the treatment of mineral resources;

(b) to encourage the recovery of extractive waste by means of recycling, reusing or reclaiming such waste, where this is environmentally sound in accordance with existing environmental standards at Community level and with the requirements of these Regulations where relevant; and

(c) to ensure short and long-term safe disposal of the extractive waste, in particular in respect of a waste facility by considering, during the design phase, management during the operation and after-closure of the facility and by choosing a design which:

- (i) requires minimal and, if possible, ultimately no monitoring, control and management of the closed waste facility;
- (ii) prevents or at least minimises any long-term negative effects, for example attributable to migration of airborne or aquatic pollutants from the waste facility; and
- (iii) ensures the long-term geotechnical stability of any dams or heaps rising above the pre-existing ground surface

When considering WMPs, the Department will evaluate whether these objectives will be met. When preparing plans, operators should consider the checklist at Annex C. This sets out the issues that planning authorities will need to take into account when considering WMPs and operators should use this Annex to demonstrate how they are addressed.

### **Waste Characterisation**

Once the classification and categorisation process is complete, the behaviour of waste to be stored within each extractive waste area or waste facility needs to be characterised (unless the waste is being placed back in the void for rehabilitation or construction). Decision 2009/360/EC<sup>19</sup> confirms that the purpose of characterisation is to obtain the relevant information on the waste to be managed in order to be able to assess and monitor its properties, behaviour and character. This decision clarifies the requirements in the MWD and Schedule 2 of the Regulations and is intended to ensure that it is managed under environmentally safe conditions in the long term. Characterisation should assist the determination of the options for managing extractive waste and the related mitigation measures in order to protect human health and the environment.

#### Collection and evaluation of information

Characterisation should, where possible, be based on existing relevant and appropriate information. Only in cases where the information necessary for the characterisation is unavailable or insufficient should operators be expected to undertake sampling and testing. The information and data for waste characterisation should be appropriate to the risks involved, of adequate quality and representative of the waste. It should be collected as follows:

- (i) existing investigations and studies; existing applications for permits/authorisations i.e. planning permissions or extraction licenses; geological surveys; information from existing sites and the list of inert extractive waste;

---

<sup>19</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:110:0048:0051:EN:pdf>

(ii) the quality and representativity of all information shall be evaluated and possible missing information shall be identified.

(iii) where information necessary for the characterisation of the waste is missing, a sampling plan should be drawn up in accordance with standard EN 14899 and samples shall be taken in accordance with that sampling plan. Sampling plans shall be based on identified information as necessary, including:

- (a) purpose of data collection,
- (b) testing programme and sampling requirements,
- (c) sampling situations, including sampling from drill-cores, excavation face, conveyor belt, heap, pond, or other relevant situation,
- (d) procedures and recommendations for sample numbers, size, mass, description and handling.

Where appropriate, operators should evaluate the reliability and quality of the sampling results and the results of the characterisation process. If necessary, additional information shall be collected following the same methodology. The final result shall feed into the WMP.

#### Technical requirements for waste characterisation

Waste should be characterised under the following headings:

- background Information;
- geological background to the deposit being worked;
- nature of the waste and its intended handling;
- geotechnical behaviour of the waste; and
- geochemical characteristics and behaviour of the waste.

The details required by Decision 2009/360/EC<sup>20</sup> under each of the above headings is shown in the boxes below. As confirmed above, information and data should, wherever possible, be collected on the basis of existing sources. A proportionate approach should be applied, in particular, to extractive waste which is inert.

#### Background Information

Review and understanding of the general background and objectives of the extractive operation. Collection of general information about:

- (a) prospecting, extraction, or processing activity
- (b) type and description of method of extraction and process applied
- (c) nature of the intended product.

<sup>20</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:110:0048:0051:EN:pdf>

For typical aggregates quarries a very brief description of the type of investigation, proposed extraction method and processing will address the requirement for background information.

#### Geological background of deposit to be exploited

Identification of the waste units to be exposed by extraction and processing by providing relevant information on:

- (a) nature of surrounding rocks, their chemistry and mineralogy, including hydrothermal alteration of mineralised rocks and barren rocks
- (b) nature of deposit, including mineralised rocks or rock-bearing mineralisation
- (c) mineralisation typology, their chemistry and mineralogy, including physical properties such as density, porosity, particle size distribution, water content, covering worked minerals, gangue minerals, hydrothermal newly-formed minerals
- (d) size and geometry of deposit
- (e) weathering and supergene alteration from the chemical and mineralogical point of view.

For aggregates quarries a very brief description of the deposit type, location and immediately surrounding geology will address this requirement.

#### The waste and its intended handling

Description of the nature of all the wastes occurring in each prospecting, extraction and processing operation, including overburden, waste rock and tailings, by providing information on the following elements:

- (a) origin of the waste in the extraction site and the process generating that waste such as prospecting, extraction, milling, concentration
- (b) quantity of the waste
- (c) description of the waste transport system
- (d) description of the chemical substances to be used during treatment
- (e) classification of the waste according to Commission decision 2000/532/EC (1) (the European Waste Codes), including hazardous properties
- (f) type of intended waste facility, final form of exposure of the waste and method of deposition of the waste into the facility.

Information under the heading above should be given for the waste being placed in each area or facility. Classification of the waste material and coding in line with the European Waste Code is described in chapter 2 above. For aggregates quarries, this section should be a short and straightforward matter.

#### Geotechnical behaviour of waste

Identification of the suitable parameters for assessing the intrinsic physical characteristics of the waste taking into account the type of waste facility.

Relevant parameters to be considered are: granulometry, plasticity, density and water content, degree of compaction, shear strength and angle of friction, permeability and void ratio, compressibility and consolidation.

This requirement may be assumed to be fully addressed where the facility is covered by the Quarries Regulations 2006 or the Mines and Quarries Tips Act 1969. This would be the case for all operations except tips or lagoons at underground mines falling below the minimum size/location criteria.

#### Geochemical characteristics and behaviour of the waste

Operators characterising waste which is classified as inert will not require to address the following details unless there is reason to suspect sulphide containing waste and potential acid rock drainage. This would exclude from the requirement all waste included in the list of de facto inert waste. It would also exclude other waste that has been shown to be inert.

Specification of the chemical and mineralogical characteristics of the waste, and of any additives or residuals remaining in the waste. Prediction of drainage chemistry over time for each type of waste, taking into account its intended handling, in particular:

(a) evaluation of metals, oxyanion and salt leachability over time by pH dependence leaching test, and/or percolation test and/or time-dependent release and/or other suitable testing,

(b) for sulphide-containing waste, static or kinetic tests shall be carried out in order to determine acid-rock drainage and metal leaching over time.

## 5.0 PREPARING INFORMATION FOR SUBMISSION TO THE DEPARTMENT

Before submitting information to the Planning Authority, the first step for an operator of a mineral site is to prepare an inventory of all extractive materials on site. Consider in particular:

- existing soil storage areas;
- existing placements in the void for rehabilitation or construction;
- existing overburden storage areas;
- existing silt ponds (but not ponds for treatment of surface run off water);
- existing temporary landscape mounds;
- soil and overburden still to be removed and its future management/destination
- further depositions at existing or new areas for storage or restoration;
- completed restoration or closed tips with no further placements.

### **Waste Management Plan**

**AS DETAILED IN CHAPTER 2.0 A FULL WASTE PLAN AS DETAILED BELOW DOES NOT NEED TO BE SUBMITTED IF THE WASTE MANAGED ON SITE**

- **IS INERT**
- **NOT STORED IN A CATEGORY A FACILITY AND**
- **THE FORMS AT ANNEX J ARE COMPLETED TO THE SATISFACTION OF THE DEPARTMENT.**

One comprehensive Waste Management Plan should be prepared for the extraction site. The steps below should be followed to produce a WMP:

1. Consider whether the proper treatment of unpolluted soil is already managed through an approved working scheme and/or conditions. Confirm that existing and future storage will not endanger human health and or environment. If satisfied, draft or submit a request to planning authority seeking waiver under Regulation 5(6) (Annex H).

A waste management plan does not need to be submitted for planning approval where the only extractive waste is:

- non-hazardous

- unpolluted soil
- where the extracted waste is waste resulting from the working, treatment and storage of peat.

(Unless deposited in a Category A waste facility)

**If:**

It is demonstrated to the Department that the above extractive wastes will be managed using the best available techniques without endangering human health and without using processes that could harm the environment, in particular without

- i) risk to water, air, soil and fauna and flora
- ii) causing a nuisance through noise or odours
- iii) adversely affecting the landscape or places of special interest
- iv) resulting in the abandonment, dumping or uncontrolled depositing of extractive waste.

2. Identify on a plan any non-waste materials necessarily and lawfully to be used for construction or rehabilitation within extraction area. Also identify the location for future use, timescale and guarantee of use upon which the planning authority may rely. The guarantee may be the approved extraction and restoration plans, planning conditions and/or Article 40 agreement or financial bond but the latter is not essential. Prepare text and seek agreement of planning authority (Annex I)

3. Distinguish and highlight on a plan any historical placements (closed facilities) excluded under Regulation 5(1). Where applicable refer to the site restoration plan.

4. Classify the nature of the extractive waste materials (i.e. inert, hazardous or non inert non hazardous). For potentially inert waste, refer to the de facto list or to other available information which justifies it being considered inert. Testing would only be required after that. For potentially hazardous waste, refer to NIEA for guidance. Note the appropriate European Waste Code (EWC) using Annex A. Consultation with NIEA may be merited for non-straightforward materials.

5. Categorise all extractive waste areas, voids where waste is to be placed for rehabilitation or construction, waste facilities or Category A waste facilities. Operators should explicitly confirm that waste facilities do or do not qualify as Category A based on the questionnaire in Annex B and if necessary further assessment in line with the separate detailed guidance note.

6. Demarcate the boundary of each waste facility or extractive waste area to be included in the WMP including where appropriate areas of the void where waste is to be place for rehabilitation. Consider how the WMP objectives are

met by the existing operational/restoration plans and complete Table 1 (Annex C). Characterise the behaviour of the waste in line with Chapter 4. Use the appropriate tables (2-5, Annex D-G) for each extractive area or waste facility to confirm all appropriate details. Include an overview and any necessary plans or studies which you refer to. This will form the WMP for the mine or quarry. Submit to planning authority for approval.

The content of the waste management plan will depend on the categorisation of each area on site. Least requirements are placed on extractive waste areas, particularly where waste is placed back in the void for rehabilitation and construction. Additional requirements apply to waste facilities (inert) which are, in turn, supplemented by further requirements for waste facilities (non-inert).

### **Extractive Waste Areas**

Regulation 6 sets out what should be included in a waste management plan. As stated above, the content of the plan will depend on the category of areas where extractive waste is to be managed. Minimum requirements are applied to extractive waste areas because of the level of control required for such areas.

Such areas will be subject to the requirements a) to g) below with only a) and b) applying to extractive waste which is to be placed in the void for restoration and construction purposes:

- a) whether or not the operator intends to place the extractive waste into the void for rehabilitation and construction void. If this placing is intended, then further requirements may be ignored other than the provision of details on proposed control and monitoring procedures:
  - I. to secure the stability of the extractive waste;
  - II. to prevent the pollution of soil, surface water and groundwater
  - III. to ensure the monitoring of the extractive waste and the excavation void [Regulation 6 2 (h)]
- b) sufficient information and identification to enable the planning authority to evaluate the operator's ability to meet the objectives of the waste management plan and explaining in particular how the option and the method chosen fulfils those objectives [Regulation 6 2 (c)].
- c) Classification of the location where extractive waste will be accumulated or deposited with appropriate assessment to allow the planning authority to consider whether it agrees with that, including an identification of possible accident hazards [Regulation 6 2 (d)]
- d) Waste characterisation and a statement of the estimated total quantities of extractive waste to be managed during the operational phase [Regulation 6 2 (e) and Schedule 2].

- e) A description of the operation generating such waste and of any subsequent treatment to which it is subject [Regulation 6 2 (f)].
- f) A description of how the environment and human health may be adversely affected by the deposit of such waste and the preventative measures to be taken in order to minimise the environmental impact during operation and after closure. For extractive waste areas this need not include a description of the aspects relating to construction and management at Regulation 9 which applies to waste facilities only. [Regulation 6 2 (g)].
- g) Measures for the prevention of water status deterioration in accordance with Directive 2000/60/EC and for the prevention or minimisation of air and soil pollution. These requirements are set out in Regulation 10 [Regulation 6 2 (j)].

**A checklist for waste management plans for extractive waste areas is given in Table 2 at Annex D and for waste placed back in the void at Table 3 at Annex E.**

#### **Waste Management Plan for Excavation Voids**

Extractive waste put back into the excavation void for either restoration or for construction purposes related to the mineral extraction process are only subject to the requirements of a) and b) above. A waste management plan for this type of waste should only demonstrate compliance with requirements in relation to stability, prevention of pollution and monitoring. An example would be a settlement pond which will ultimately form a permanent feature, wetland or improved profile within the void as part of the restoration scheme.

Waste placed in the void for construction refers to its use to create features that are not part of the restoration scheme. For the most part, these features are small in scale, typically only 1 to 2 metres in height and it is neither meaningful nor feasible for operators to include these in a MWP. MWPs should include any permanent or long term features of significant scale where this is necessary to ensure the aims of the Regulations are not compromised. In some cases temporary construction features such as ramps will be made with saleable mineral which will be sold within the life of the quarry and thus is not a waste.

Where material is stored in a temporary position within the void to be eventually used in restoration or construction, the initial storage area would be subject to wider waste management controls. This is unavoidable where the storage and the final use are quite distinct in time and area. Where however the storage is a preliminary stage of restoration it would be simpler to recognise it as such and thus describe the management of waste within the table for extractive waste to be returned to the void. An example of such would be waste located in a pile within the void which is to be dozed and shaped over the larger area when space is available and the area is prepared.

**Where an area of the void would be used for the distinct storage of extractive waste that would subsequently be used for restoration it would be necessary to complete two templates: Table 2, 4 or 5 as appropriate to the storage area and Table 3 for the restoration placement.**

### **Waste Management Plan for Waste Facilities (Inert)**

For inert waste that is stored in a waste facility, waste management plans must also include:

- The proposed location of the waste facility and possible alternative locations [Regulation 6 2 (b)]
- when addressing how human health and the environment may be adversely affected by the deposit of the waste, wmp must also include information on how issues relating to construction and management will be addressed in accordance with Regulation 9 (1) (a), (b), (c), d (i) (e) and (f) and Regulation 6 (2) (g).
- a survey of the condition of the land to be affected by the waste facility

### **Waste Management Plan for Waste Facilities (Non hazardous non inert)**

For non hazardous non inert waste that is stored in a waste facility, waste management plans must also include:

- the identity of the operator [Regulation 6 (2) (a)]
- In addition to the proposed location of the waste facility, any possible alternative locations [Regulation 6 (2) (b)]
- The proposed plan for the closure including rehabilitation, after closure procedures and monitoring in accordance with Regulation 11 and 12 and Regulation 6 (2) (i)

Operators should be aware that Regulation 9 (d) requires them to ensure that for waste facilities (non-inert) there are suitable plans and arrangements for regular monitoring and inspection of the facility by competent persons and for taking action in the event of results indicating instability or water or soil contamination. In relation to such monitoring and inspections:

- Reports of the monitoring and inspections are kept in order to ensure appropriate handover should there be a change in operator
- Reports are made to the Department, at a frequency to be determined by it, but in any event, no less than once a year, of all monitoring results on the basis of aggregated data;
- Where the Department decides that such reports need to be validated by an independent expert, such expert shall be allowed access to the

facility to conduct appropriate monitoring and all reasonable requirements of the expert shall be complied with.

### **Waste Management Plans for Waste Facilities (Hazardous)**

Mining wastes in Northern Ireland which are hazardous are expected to be rare. Should they arise, they may be candidates for Category A facilities should it meet the criteria set out in Schedule 3 of the Regulations. Operators should contact the Planning Authority for specific advice should they have hazardous waste that qualifies as Category A on their site.

### **Construction and Management**

Part 4 of the Regulations deals with the construction and management of the waste facilities. Regulation 9 sets out the operators duties for construction and management of waste facilities. It applies to inert and non-inert waste facilities, but not to extractive waste areas. Various aspects are required to be addressed at the WMP stage by virtue of Regulation 6 and these have been included in the checklist tables. Regulation 9 (1) requires the operator to ensure:

a)the facility is suitably located taking into account in particular European Community or national obligations relating to protected areas, and geological, hydrological, hydrogeological, seismic and geotechnical factors;

(b)the prevention of pollution of the soil, air, groundwater or surface water in the short and long term, ensuring efficient collection of contaminated water and leachate and reducing erosion, caused by water or wind, as far as it is technically possible and economically viable;

(c)the facility is suitably constructed, managed and maintained to ensure its physical stability and to prevent pollution or contamination of soil, air, surface water or groundwater in the short and long term perspectives as well as to minimise as far as possible damage to landscape;

(d)suitable arrangements are made for the rehabilitation of the land and the closure of the facility;

(e)suitable arrangements are made for the after-closure phase of the facility.

In relation to stability requirements, these are secured through the health and safety regulations and where appropriate, compliance should be confirmed in the MWP. Issues in relation to water may also be covered through NIEA Water Management Unit requirements and again the compliance should be confirmed in the MWP where this is the case.

### **Prevention of water status deterioration, air and soil pollution.**

Regulation 10 sets out the requirements for the prevention of water status deterioration, air and soil pollution. The requirements in relation to water deterioration are discussed later in this document and only brief confirmation is likely to be required. Therefore the only issue to be covered in the MWP is

the measures to be taken to prevent or minimise the contamination of soil by extractive waste and the measures to prevent dust and gas emissions.

It should be noted here that there are requirements to address certain environmental aspects within more than one regulation. These can be grouped together in one section in the MWP, as shown in the MWP proformas in the annex to this document.

### **Existing regulatory controls**

Operators may satisfy the requirements of the WMP by reference to other documents or regulatory controls that secure appropriate compliance. As stated above, it will be sufficient for operators to confirm compliance with the legislation involved, any specific consents and the parts of the WMP which will be satisfied in that way. The Quarries Regulations 2006, the Mines and Quarries (Tips) Act 1969 (for waste at underground mines)

### **Existing aspects of the Planning System**

Planning procedures will continue to be the principal control for extractive waste management; operators and the planning authority will be familiar with the limitations placed by site consents and the environmental consideration given through EIA and decision making. Where WMPs are developed for new mineral extractions, or the statutory periodic reviews of such sites, they will be scrutinised and consulted on in the normal way such that the requirements of the Regulations with regard to environmental aspects will likely be met. Operators can confirm this by cross referencing the Regulations or using the WMP checklists annexed to this document. For many existing sites information will likely be available from previous assessment and design work.

## 6.0 GUIDANCE FOR PARTICULAR SECTORS

This chapter highlights the materials classification and area categorisation which will typically inform WMPs for certain mineral sectors.

### **Aggregates**

#### General inert classification

The list of de facto inert waste in Chapter 2 indicates that, subject to certain qualifications, all extractive waste encountered on aggregates sites, including limestone quarries can be regarded as inert. This means amongst other things, that approval of WMPs at existing sites and future reviews will be undertaken by letter (rather than a planning application).

#### Waiver for soil and peat

Many quarries, particularly sand and gravel pits, encounter only a layer of soil or thin peat above the deposit. Hard rock quarries will involve soil and peat in the same way although original soil can sometimes be significantly thinner. Some quarries have been in operation for a long number of years and the original soil may not have been preserved. At many small or short term sites the material is processed dry with no other extractive waste. At those sites topsoil or peat would be the only extractive waste to be dealt with and, provided conditions could be met any further requirements will likely be waived. No WMP would be needed. This applies to all soil whether stored in the site or used for peripheral landscaping. Where deeper wet peat needs to be excavated and contained on site temporarily it may however be necessary or more appropriate to treat the area within a WMP rather than under waiver.

#### Landscaping

There may be a need for landscaping such as for visual or noise screening. Where this created with soil the materials will likely be considered for waiver as described above. Where a mound requires to be created with other materials this may qualify as non waste by product as described in Chapter 2. The Department must agree that the feature is explicitly required for such a purpose other than simply storage of material.

#### Good use of materials in restoration

Whereas the superficial deposits worked for sand and gravel are typically thin and wide, hard rock quarries are often relatively deeper and more concentrated in area. This often results in a deeper more distinct void, less materials for restoration, limited scope for progressive restoration and a final landform quite different to the original. In both cases good use should be made of the materials available for restoration including clay silt or weathered rock or reject stone; this fits very well with the MWD objectives. Where this has been planned as part of the restoration scheme the material will likely qualify as non waste by product and will not be covered by the regulations. If, for some reason, the non waste by product tests are not met the void should

be demarcated as an extractive waste area for rehabilitation and covered in a WMP following Table 3; there are only limited requirements for such use.

#### Overburden tips

At some hard rock quarries, especially during early years, it may not be possible to place overburden directly in the void without compromising future extraction at depth. A tip outside the excavation area will be required for storage, sometimes for many years, but if the material is designated for later restoration in the void at a specific stage or date it may qualify as non waste by product. Neither the tip nor the final placement area would be included in a WMP or covered by the Regulations. Where the tipped material is not to be returned to the void but is to be left permanently in place and perhaps landscaped it would be categorised as a waste facility with requirements following Table 4. Old tips in or out of the void comprising overburden or reject stone, which will not accept any more waste and will not be reworked, are not covered by these Regulations but will continue to be subject to the Quarries Regulations, the Water Management regime and normal planning controls

#### Processing waste

Many quarries, particularly sand and gravel operations, involve wet processing. This will normally require settling ponds where silt from the plant settles out. Ponds may be created with raised embankments within excavation areas. The rate of filling and capacity needed depends on the proportion of silt in the deposit and may be irregular.

If ponds are periodically cleaned out and if the period is less than 3 years the area would be categorised as an *extractive waste area* following the requirements of Table 2. In this case, the categorisation would be the same whether the ponds are located in or out of the excavation void. The cleaned out sediment may be used in restoration of the void and, if so, the final placement area in the void (or all of it) should be categorised as an *extractive waste area* (rehabilitation of the void) with the limited requirements of Table 3 followed.

Ponds can be located in the void and their contents left in place as part of the approved restoration scheme - raising levels or creating ponds or wetland areas. Where this is the case, the area of the void encompassed by the current and future ponds (including embankments) should be categorised as an *extractive waste area for rehabilitation of the void* and included in the WMP with Table 3 followed for the demarcated area. If they are located wholly outwith the void they must be categorised as inert *waste facilities* following Table 4. As part of the restoration scheme they should have been designed to be safe and stable in the long term with little or no future monitoring.

#### Discharge ponds

Settling ponds whose sole purpose is to treat surface run off water prior to discharge or reuse (rather than those used for the treatment of silt laden process effluent) will not generally be affected by the Regulations. This is based on the assumption that any sediment collected and required to be cleaned out is *de minimis* in the context of the site or can be suitably dealt

with within another extractive waste area or facility on site. Where this is not the case the operator can designate the area in the same way as above. Where flocculants or other chemicals are used it may be necessary to consider any issues arising from use of cleaned out sediment in restoration.

#### Minor construction features and other minor arisings

Extractive waste materials or as yet unprocessed mineral may be used for very minor features such as temporary edge protection. These features or the areas containing them will not normally justify categorisation unless the aims of the regulations are compromised. However operators may chose to provide for small quarry arisings (e.g. floor scrapings) in a quarry tip, possibly as an ultimate element of restoration; this should be categorised and dealt with in the normal way likely as an inert waste facility.

#### **Silica sand and building stone**

Extractive waste at silica sand and building stone operations is also included on the list of de facto inert waste. These sites will typically encounter some or all of the aspects described for aggregates quarries.

#### **Old Bings**

Old bings (or mining waste heaps) such as those from oil shale working or colliery spoil which are long closed will not normally be covered by any planning permission for deposition; owners will not be affected by the Regulations. If the bings cause serious environmental impacts or have potential to cause a serious threat to human health or the environment they must be included on an inventory to be prepared by the Department under Regulation 20. If planning permission has been granted to rework an old bing, (e.g. for fill, recovery of secondary aggregates) the material would be treated, under these regulations in the same way as a mineral deposit. The source material would not be treated as extractive waste but any which flows from that working would be. If for example material is processed or separated, the reject material should be classified categorised and included in a WMP in the same way as a quarry working a virgin deposit.

#### **Borrow Pits**

The term 'borrow pit' is commonly used to refer to short term, often (but not always) small excavations opened as part of a particular project. Longstanding examples include forest tracks or new road projects where the excavation may be an inevitable part of or a direct extension to a road cutting. More recently wind farms have included excavations of various sizes within the project to provide stone for internal access roads. There are other examples however of quarries being opened or reopened for projects in the locality and termed borrow pit by a developer. This is presumably based on the temporary nature or scale or both but the development would be subject to planning regulation in the normal way.

Extractive waste is defined in Regulation 2 and is firstly restricted to “*waste produced from an extractive industry*” This is further defined in the MWD Article 3 as extraction for ‘commercial purposes’. The Planning Authority view is that this is intended to reflect the commerce of working minerals for sale

rather than as an integral part of another project (commercial or not) using those minerals. The Regulations are not therefore taken to apply to borrow pits whose purpose is solely for use in the forests, motorways or wind farms in which they are located.

### **Underground Mining**

Where a mine proposal comes forward which generates significant quantities of waste there are three likely routes. Where it can be shown to be necessary to backfill such material in voids for restoration there will be an argument for stating it to be non waste by product. Where this is not the case but the material is kept within the mine void it could be treated as waste placed for rehabilitation or construction. Where the material is brought to the surface its eventual store or tip would be treated in the same way as at quarries.

Extractive waste from processing may arise and any ponds or tips at the mine surface would be dealt with in the same way as at quarries.

## **7.0 SUBMITTING DOCUMENTS TO THE DEPARTMENT**

### **Applications for planning permission (new sites)**

The WMP should ideally form an integral but distinguishable part of all applications for mineral extraction submitted after the Regulations come into force. Such applications will involve public advertisement<sup>21</sup> and consultation which ensures that plans are afforded the scrutiny required by the MWD. Where EIA is required, extractive waste issues and waste management plans should be treated as part of the development and assessed in the usual way. If the WMP objectives are followed this should not raise any negative issues and may help explain some positive intentions of a design (e.g. waste reuse).

### **Undetermined applications**

Where a planning application involving only extractive waste areas or waste facilities (inert), has been submitted but has not been determined operators should formulate and submit a WMP to enable fulfilment of the Regulations before final determination<sup>22</sup>. This would include applications which have been approved at council but consent has not yet been issued. Where a WMP is required, NIEA and HSENI will be re-consulted but provided there is no change to the development proposals there should be no need to re-advertise unless a non-inert waste facility is involved.

Where an outstanding application involves a waste facility (non-inert) there is a distinct requirement in the Regulations for public consultation before the WMP can be approved<sup>23</sup>. Accordingly there are two options for undetermined applications involving such waste facilities:

(i) the WMP could be submitted and publicised as an amendment to the application with appropriate consultation taking place with NIEA and HSENI; or

(ii) the application may be determined subject to a condition that no aspects relating to the management of extractive waste can commence unless (a) a subsequent planning application under Article 28 of the Planning (Northern Ireland) Order 1991, containing a WMP, is approved and (b) compliance with environmental and health and safety regulation confirmed.

### **Existing sites**

Operators of sites covered by a planning permission issued before the Regulations come into force must ensure that they have the required approvals in place by 1 May 2012. Issues to consider are set out in Section 5 in relation to carrying out an inventory. In the first instance, they will need to consider whether they wish to make a case to planning authorities that requirements for unpolluted soil/peat should be waived and whether

---

<sup>21</sup> Regulation 7 of the Planning (Management of waste from Extractive Industries) Regulations 2010

<sup>22</sup> Regulation 4 of the Planning (Management of waste from Extractive Industries) Regulations 2010

<sup>23</sup> MWD Article 8 but disapplied for inert waste by Article 2.3

necessary arrangements are in place for other material to be considered a non-waste by product. Where the operator intends to manage waste in an extractive waste area or a waste facility (inert), these should be encompassed in a single WMP which complies with the appropriate requirements for each site (i.e. each extractive waste area or waste facility). The WMP should be submitted under a simple cover letter. It will not constitute a planning application and does not need to be considered for EIA.

Where, however, a non- inert or Category A waste facility is to be operated then planning permission should be sought through an application under application under Article 28 of the Planning (Northern Ireland) Order 1991. This should be restricted solely to the management of extractive waste and will be subject to normal consultation requirements. There is a distinct requirement in the Regulations for public consultation before the WMP can be approved. The application will be a candidate for EIA. A screening opinion may be requested in advance or can be adopted by the planning authority when deciding the application. Given that change to development is unlikely to be envisaged within the application, EIA should not be required.

### **Closed facilities**

Any waste facility closed before 1 May 2008<sup>24</sup> is not affected by these Regulations. “Closed” is not defined in the Regulations but is taken to mean those where no further waste is to be placed or moved. Any soils or overburden that have been put to final restoration, and in final use without any further treatment (other than aftercare) would not be covered by the Regulations. There may also be old overburden mounds within quarries which are less clearly restored but (i) the area is no longer being used for deposition and (ii) there is no current planning obligation, programme or other requirement (e.g. safety) to disturb any materials. If at a later date there is a new proposal which affects these materials e.g. a revised restoration plan or a ROMPs application, the extractive waste would need to be reconsidered as part of a revised WMP within the necessary planning application.

There is no statutory requirement to highlight such areas but it may be helpful to the operator to prepare a plan recording the position of the closed facility on site. In any event, the requirements of the Quarries Regulations 2006 as regards stability or other danger to health and safety will continue to apply to all tips within working quarries including identification and appropriate management of significant hazards. Similarly, regulation of the water environment, including pollution, will continue to be subject to the Water NI Order 1999.

Extractive waste tips at non-operational quarries with current planning permission would be dealt with in the same way as those at operational quarries. If an operator wishes to maintain all necessary permissions to enable recommencement at any time he should treat the site as operational and make any necessary submissions to obtain permission under Regulation

---

<sup>24</sup> Regulation 5(1) of the Planning (Management of waste from Extractive Industries) Regulations 2010

4 by 1 May 2012. Otherwise while the principal planning permission remains unaffected operations affecting extractive waste could not be undertaken until planning permission, where relevant, is obtained for that aspect. That would need an application under Article 28 of the Planning (Northern Ireland) Order 1991 as a stand alone proposal, part of a future statutory review or part of a wider development proposal. Extractive waste tips at old quarries where the consent is classed as dormant require a WMP to be included as part of the submission for reactivation of the consent.

Extractive waste at non-operational sites where no live planning permissions apply would be treated as closed facilities and there would be no requirements on the owner. The Quarries Regulations 2006 do not apply to such sites but there are certain obligations on local authorities with regard to public safety. The MWD acknowledges that some closed facilities, including abandoned facilities, could cause serious negative environmental impacts, have potential for threat to human health or the environment (or have the potential of becoming so in the medium or short term). This is transposed in Regulation 20 which requires the Department to prepare an inventory of facilities with such threats by 1 May 2012. Operators aware of any such facilities within closed or abandoned quarries in which they retain an interest should advise the Planning Authority accordingly.

**ANNEX A - Extract from European Waste Codes set out in decision 2000/532/EC**

<b>Chapter 01:</b>	<b>Wastes Resulting from Exploration, Mining, Quarrying, and Physical and Chemical Treatment of Minerals</b>
<b>01 01</b>	<b>Wastes from mineral excavation</b>
01 01 01	Wastes from mineral metalliferous excavation
01 01 02	Wastes from mineral non-metalliferous excavation
<b>01 03</b>	<b>Wastes from physical and chemical processing of metalliferous minerals</b>
01 03 04*	Acid-generating tailings from processing of sulphide ore
01 03 05*	Other tailing containing dangerous substances
01 03 06	Tailings other than those mentioned in 01 03 04 and 01 03 05
01 03 07*	Other wastes containing dangerous substances from physical and chemical processing of metalliferous minerals
01 03 08	Dusty and powdery wastes other than those mentioned in 01 03 07
01 03 09	Red mud from alumina production other than the wastes mentioned in 01 03 07
01 03 99	Wastes not otherwise specified
<b>01 04</b>	<b>Wastes from physical and chemical processing of non-metalliferous minerals</b>
01 04 07*	Wastes containing dangerous substances from physical and chemical processing of non-metalliferous minerals
01 04 08	Waste gravel and crushed rocks other than those mentioned in 01 04 07
01 04 09	Waste sand and clays
01 04 10	Dusty and powdery wastes other than those mentioned in 01 04 07
01 04 11	Wastes from potash and rock salt processing other than those mentioned in 01 04 07
01 04 12	Tailings and other wastes from washing and cleaning of minerals other than those mentioned in 01 04 07 and 01 04 11
01 04 13	Wastes from stone cutting and sawing other than those mentioned in 01 04 07
01 04 99	Wastes not otherwise specified
<b>01 05</b>	<b>Drilling muds and other drilling wastes</b>
01 05 04	Freshwater drilling muds and wastes
01 05 05*	Oil-containing drilling muds and wastes
01 05 06*	Drilling muds and other drilling muds containing dangerous substances
01 05 07	Barite-containing drilling muds and wastes other than those mentioned in 01 05 05 and 01 05 06
01 05 08	Chloride-containing drilling muds and wastes other than those mentioned in 01 05 05 and 01 05 06
01 05 99	Wastes not otherwise specified

## ANNEX B - Category A categorisation process

	<b>Operator assessment of Potential for Category A facilities</b>
	<b>Preliminary</b>
<b>Q1</b>	<b>Does the WMP include any waste facilities?</b>
	<b>Yes</b>
Yes	You should identify the facility and follow the questions below.
No	If you have no waste facilities no further consideration is needed.
Note	Categorisation as a waste facility is described in Chapter 3. Some sites will not have any. Some sites may have more than one facility
	<b>Identification of facility</b>
	<b>Area WF1 containing the western landscaping as shown on Plan R4/134A IGR Ref NT 138667</b>
Note	Insert Name or IGR ref above or state "None"
	<b>Hazardous waste or dangerous substances</b>
<b>Q2</b>	<b>Will the waste facility contain hazardous waste or dangerous substances?</b>
	<b>No</b>
Yes	Consider the thresholds in Decision 337/2009/EC. If exceeded the facility will be Category A.
No	The facility will not be Category A on account of material. Move on to question 3.
Notes	Chapter 2 describes the scope for hazardous waste.
	<b>Major Accident - serious danger to human health or loss of life</b>
<b>Q3</b>	<b>Does the existing facility (or would the planned facility) constitute a significant hazard under the terms of the Quarries Regulations 2006</b>
	<b>Yes-it automatically qualifies on account of the plan area of the mound</b>
Yes	You should continue to question 4
No	The facility should not pose a serious danger to human health or loss of life but you should still make the confirmation required in Question 4
<b>Q4</b>	<b>Can you, as operator, confirm the following?</b>
	(a) that in your opinion structural failure or incorrect operation of the waste facility would not result in potential for loss of life or serious danger to human health considering any human beings other than site workers, who are present outwith the site, permanently or for prolonged periods.  (b)(i) the operation complies with the Quarries Regulations 2006 (ii) that where the facility is or would qualify as a significant hazard the necessary geotechnical assessment work for the waste facility has been undertaken (iii) any notifiable tips have been notified to the HSENI.
	<b>Yes – give information</b>
Yes	The facility should not be treated as Category A on this count at this stage.
No	If you are not confident in certifying that your facility does not pose such a risk you should seek advice from a geotechnical specialist. Your WMP cannot be approved meantime.
Notes	See Chapter 3

<b>Major Accident-Serious danger to the environment</b>	
<b>Q5</b>	<b>In the event of a structural failure or incorrect operation of any waste facility (whether or not classed as a significant hazard under the Quarries Regulations), is there a type of event where solid waste or slurry material could spill over the site boundary or onto an undisturbed area of the site. If so it would be useful if you could estimate the maximum reach of any spill or state a distance beyond which it certainly would not reach, taking into account the surrounding landform.</b>
	<b>Yes/No</b>
Yes	Continue to Question 6.
No	The facility does not qualify as Category A on this basis.
Note	There is no question of considering the probability of the failure here. You should consider the effect any of the failures or incorrect operations which could conceivably occur at this facility. In many cases it will be possible to estimate from general principles the safe maximum extent of any spill. This information will assist the planning authority to confirm agreement on the impact under question 7 below.
<b>Q6</b>	<b>Are there any designated habitats which might be affected by the spill</b>
	<b>Yes/No</b>
Yes	Go to Question 7
No	Go to Question 7
Notes	This should certainly include any international or national designations. Local designations should be noted where known.
<b>Q7</b>	<b>Is it predicted that the impact of a spill would exceed the criteria for serious danger to the environment in Decision 337/2009/EC?</b>
	(a) the intensity of the potential contaminant source strength is decreasing significantly within a short time; (b) the failure does not lead to any permanent or long-lasting environmental damage; (c) the affected environment can be restored through minor clean-up and restoration efforts.
	<b>Yes/No</b>
Yes	If it is predicted (in the first instance) that these criteria would be exceeded you should confirm this through a specific evaluation in the context of a source pathway- receptor. In very clear circumstances this is expected to be a simple statement.
No	The facility does not qualify as Category A on this count. If the preceding questions have been properly followed the facility will not be Category A
Notes	You should provide the reasoning behind your conclusion (whether positive or negative). Where there is doubt you may be asked to provide a specific evaluation following Decision 337/2009/EC. However in the absence of any other information where waste is non hazardous and there are no high sensitivity habitats such as those with ecological designations it will generally be reasonable to assume that the impact would fall below the above criteria and would not amount to serious danger to the environment
<b>Q8</b>	<b>Is there any other risk of serious danger to the environment above the thresholds in Decision 337/2009/EC (i.e. those in Q7 above) which might result from incorrect operation such as unmitigated acid rock drainage?</b>
	<b>Yes/No</b>
<b>Yes</b>	You should undertake a specific evaluation in the context of a source pathway- receptor chain to demonstrate whether or not the facility qualifies on this count.
<b>No</b>	The facility is not identified at this stage as Category A on this account.
<b>Notes</b>	If the planning Authority or statutory consultees raise other significant considerations this aspect may need to be revisited. Impacts from extractive waste not already covered above (i.e. on account of hazardous waste, dangerous substances or physical movement) are however likely to be limited especially where the extractive waste is inert
	Operators Conclusion
	Category A / Not Category A

## Annex C

<b>Table 1</b>	<b>WMP OBJECTIVES- (APPLIES TO ALL PLANS)</b>
<b>(a)</b>	<b>Reduction of waste production and harmfulness</b>
(a)(i)	How was the design and method for waste management chosen within the context of the mine or quarry process?
(a)(ii)	How might the extractive waste change in relation to an increase in surface area and exposure to conditions above ground (e.g. excess snow)
(a)(iii)	Has placing the back waste in the excavation void been considered?
a(v)	Has replacement or reuse of topsoil been considered?
<b>(b)</b>	<b>Recovery of waste: recycle, reuse, reclaim</b>
(b)	Has the recovery of the extractive waste been considered by recycling, reusing or reclaiming the waste where environmentally sound?
<b>(c)</b>	<b>Design for safe disposal of waste – short and long term</b>
(c)(i)	Is the facility designed to minimise long term effects such as release of pollutants to air or water?
(c) (ii)	<b>Is the facility designed to require minimal and if possible no monitoring, control or management when closed?</b>
(c) (iii)	Is any facility above original ground surface and if so is it designed to ensure long term geotechnical stability?

## Annex D

Table 2	WMP for Extractive Waste Areas
Regulation	
6 (1)	<p><b>The WMP must plan for the minimisation, treatment, recovery and disposal of extractive waste, take account of the principle of sustainable development and have the objectives in Schedule 1 of Regulations (see Table 1).</b></p> <p>The headings below confirm the essential matters to be addressed in the WMP. Operators may add an overview and any other pertinent information not included below which informs the principal aims of the WMP and Regulations. Operators should firstly identify the area in the box below by description, plan and IGR coordinates</p>
6 (2) (c)	<p><b>Provide sufficient information and identification to enable the planning authority to evaluate the operators ability to meet the objectives of the WMP, as detailed in Schedule 1 of the Regulations, and explaining in particular how the option and method chosen as detailed in paragraph a (i) of that Schedule will fulfil those objectives.</b></p>
	Complete and refer to Table 1 (WMP Objectives)
6 (2) (d)	<p><b>State the Category into which the operator considers that the area or facility falls (i.e. extractive waste area, waste facility (inert or non-inert) or Category A waste facility) with appropriate assessment to allow the planning authority to consider whether it agrees with that categorisation, including an identification of possible accident hazards.</b></p> <p>This table applies to extractive waste areas which will most often concern inert waste. The prospects for classification as Category A will be limited to risk of major accident and in most cases reference to information gained through appraisal or assessment under the NI Quarries Regulations 2006 should enable confirmation of this aspect via the completion of Annex B.</p>
	Extractive Waste Area
6 (2) (e)	<p><b>Characterise the waste in accordance with Directive 2009/360/EC (see Chapter 4) and provide a statement of the estimated total quantities of extractive waste to be produced during the operational phase.</b></p>
	This will normally require reference to a separate note outwith the table
6 (2) (f)	<p><b>Describe the operation generating such waste and any subsequent treatment to which it is subject</b></p>

6 (2) (h)	<b>State whether or not the operator intends to place extractive waste into excavation voids for rehabilitation and construction purposes (whether the voids were created through surface or underground extraction).</b>
	The answer here should be negative – other wise Table 3 should be completed instead.
6 (2) (g)	<b>Describe how the environment and human health may be adversely effected by the deposit of waste and preventative measures to be taken</b>  For extractive waste areas this will normally merit only a general description of effects-reflecting the reduced potential of short term storage of inert materials. It need not include description of the aspects relating to construction and management at Regulation 9 which applies only to waste facilities
10 (1) (a) 10 (1) (b) 10 (1) (c)	<b>Confirm prevention of water status deterioration, the prevention or minimisation of leachate and any effect on water or soil and any necessary measures to be taken.</b>  Pollution of surface or groundwater in Northern Ireland is controlled by The Water Order and, unless there is any reason to suspect that pollution may occur outwith this control no further information will be required in this respect. For inert waste, with no potential for acid rock drainage, NIEA is unlikely to require the evaluation of leachate generation potential together with collection and treatment. Operators should confirm these requirements
10 (1) (d)	<b>Describe how pollution of air is to be prevented or reduced</b> On new sites any work on dust impacts should be cross referenced. On existing sites established good practice procedures for the waste area can be described
Plans	The WMP should include an overview and copies of appropriate plans and sections necessary to describe the extractive waste area, its operation, its context within the mine or quarry and the location of any human beings or environment that might be affected by. This may be fulfilled by existing site development and restoration plans which may be cross referenced or preferably copied as part of a coherent WMP
	List of plans included in WMP

## Annex E

Table 3	<b>WMP (EXTRACTIVE WASTE PLACED IN VOID FOR REHABILITATION (RESTORATION) OR CONSTRUCTION</b>
Regulation	
<b>6 (1)</b>	<p><b>The WMP must plan for the minimisation, treatment, recovery and disposal of extractive waste, take account of the principle of sustainable development, and have the objectives in Schedule 1 of Regulations.</b></p> <p>Operators should identify the relevant area, complete Table 1 (WMP Objectives) and refer to here.</p>
<b>6 (2) (h)</b>	<p><b>State whether or not the operator intends to place extractive waste into excavation voids for rehabilitation and construction purposes (whether the voids were created through surface or underground extraction)</b></p>
	Yes
<b>6 (2) (h) (i)</b>	<p><b>Confirm control and monitoring necessary to ensure stability of the waste.</b></p> <p>Any materials placed within the void of an operational quarry for rehabilitation will be subject to the NI Quarries Regulations 2006 and, barring exceptional circumstances, the operator should simply refer to this and confirm compliance.</p>
<b>6 (2) (h) (ii)</b>	<p><b>Give details of any proposed control and monitoring necessary to prevent pollution of soil, surface water and groundwater including, if appropriate, the collection and treatment of leachate during operation and closure</b></p> <p>Pollution of surface or groundwater in Northern Ireland is controlled by The Water NI Order 1999 and, unless there is any reason to suspect that pollution may occur despite this control, only brief confirmation of best practice will be required in this respect. By definition any material suitable for rehabilitation should not generate leachate and pose no risks to water or soil</p>

## Annex F

Table 4	WMP for Waste Facility (Inert)
Regulation	
6 (1)	<p><b>The WMP must plan for the minimisation, treatment, recovery and disposal of extractive waste, take account of the principle of sustainable development and have the objectives in Schedule 1 of Regulations (see Table 1).</b></p> <p>The headings below confirm the essential matters to be addressed in the WMP. Operators may add an overview and any other pertinent information not included below which informs the principal aims of the WMP and Regulations. Operators should firstly identify the area in the box below by description, plan and IGR coordinates</p>
6 (2) (c)	<p><b>Provide sufficient information and identification to enable the planning authority to evaluate the operators ability to meet the objectives of the WMP, as detailed in Schedule 1 of the Regulations, and explaining in particular how the option and method chosen as detailed in paragraph a (i) of that Schedule will fulfil those objectives.</b></p>
	Complete and refer to Table 1 (WMP Objectives)
6 (2) (d)	<p><b>State the Category into which the operator considers that the area or facility falls with appropriate assessment to allow the planning authority to consider whether it agrees with that categorisation, including an identification of possible accident hazards.</b></p> <p>This table applies to waste areas which will most often concern inert waste. The prospects for classification as Category A will be limited to risk of major accident and in most cases reference to information gained through appraisal or assessment under the NI Quarries Regulations 2006 should enable confirmation of this aspect via the completion of Annex B.</p>
	Waste Facility (inert)
6 (2) (e)	<p><b>Characterise the waste in accordance with Directive 2009/360/EC (see Chapter 4) and provide a statement of the estimated total quantities of extractive waste to be produced during the operational phase.</b></p>
	This will normally require reference to a separate note outwith the table
6 (2) (f)	<p><b>Describe the operation generating such waste and any subsequent treatment to which it is subject</b></p>

6 (2) (h)	<b>State whether or not the operator intends to place extractive waste into excavation voids for rehabilitation and construction purposes (whether the voids were created through surface or underground extraction).</b>
	The answer here should be negative – other wise Table 3 should be completed instead.
6 (2) (i) 9 (e) 9 (f)	<b>Describe the proposed plan for closure, including rehabilitation and after closure procedures.</b>
	Operators should include any reference to any existing or proposed restoration and aftercare plans.
6 (2) (k)	<b>Provide a topographic survey and description of the condition of the land affected or to be affected by the waste facility</b>
9 (1) (a)	<b>Confirm any European or National Designations affected.</b>
9 (1) (c)	<b>Confirm that the facility is suitably constructed, managed and maintained to ensure its physical stability?</b>
	Stability of all extractive waste tips (including lagoons) at operational quarries is covered by the NI Quarries Regulations 2006. <u>Tips and lagoons at mines above certain criteria are covered by the Mines and Quarries Tips Act 1969 etc.</u> Confirmation that the facility complies with such legislation will address this aspect.

<p>6 (2) (g)</p> <p>9 (1) (a)</p> <p>9 (1) (b)</p> <p>9 (1) (c)</p> <p>6 (2) (j)</p> <p>10 (1) (a)</p> <p>10 (1) (b)</p> <p>10 (1) (c)</p>	<p><b>Confirm how surface water or groundwater pollution or deterioration of water status is to be prevented or minimised in the short and long term where appropriate through:</b></p> <p>Location and design</p> <p>Construction, management and maintenance</p> <p>The prevention or minimisation of leachate, collection and treatment</p> <p>Any necessary measures to be taken.</p> <p>Pollution of surface or groundwater in Northern Ireland is controlled by The Water NI Order 1999 and, unless there is any reason to suspect that pollution may occur outwith this control no further information will be required in this respect. (DN NIEA requested to confirm whether additional confirmation from Operators is required)</p>
<p>6 (2) (g)</p> <p>9 (1) (a)</p> <p>9 (1) (b)</p> <p>9 (1) (c)</p> <p>6 (2) (j)</p> <p>10 (1) (b)</p>	<p><b>Describe how pollution of soil is to be prevented or minimised in the short and long term through:</b></p> <p>Location and design</p> <p>Construction, management and maintenance</p> <p>Any necessary measures to be taken</p> <p>Soil stripped from the excavation should in most cases have been dealt with under waiver including the soil on the site of the waste facility. This section then considers whether the waste facility results in pollution of any other soil through spillage or run off. For quarries it should be a straightforward and concise matter to confirm that slopes are located and designed not only so as not to endanger human health (as required under the Quarries Regulations) but also so as not to compromise any adjacent soil resources. The scope for run off from the typically inert materials at most Northern Ireland sites will also be limited but where appropriate any mitigating measures should be confirmed</p>
<p>6 (2) (g)</p> <p>9 (1) (a)</p> <p>9 (1) (b)</p> <p>9 (1) (c)</p> <p>6 (2) (j)</p> <p>10 (1) (d)</p>	<p><b>Describe how pollution of air is to be prevented or minimised in the short and long term through:</b></p> <p>Location and design</p> <p>Construction, management and maintenance</p> <p>Any necessary measures to be taken</p> <p>Any existing studies or scoping assessments can be cross referred. Other wise established preventative measures can be concisely confirmed.</p>

9 (1) (c)	<p><b>Describe how the facility is to be constructed to minimise as far as possible damage to the landscape</b></p> <p>Where planning permission has been granted this aspect should be assumed to be adequately addressed</p>
Plans	<p><b>The WMP should include copies of appropriate plans and sections necessary to describe the waste facility, its operation, its context within the mine or quarry and the location of any human beings or environment that might be affected by. This may be fulfilled by existing site development and restoration plans which may be cross referenced or preferably copied as part of a coherent WMP</b></p> <p>List of plans included in WMP</p>
	<p><b><u>Further requirements to consider and include in WMP if details are available at that stage</u></b></p>
9 (1) (d) (i)	<p><b>Arrangements for monitoring, inspection and remedial action</b></p> <p>In many cases operators will firstly be able to confirm their existing system inspection and monitoring practices under the NI Quarries Regulations</p>
9 (1)(d) (ii)	<p><b>Arrangements for records of waste management operations</b></p> <p>This might include the dates and periods of deposition operations. It will not normally be necessary to record quantities deposited but annual or other periodic surveys may be referred to record progress and the total quantity deposited</p>

## Annex G

Table 5	<b>WMP FOR WASTE FACILITY (NON-INERT)</b>
6 (1)	<p><b>The WMP must plan for the minimisation, treatment, recovery and disposal of extractive waste, take account of the principle of sustainable development, and have the objectives in Schedule 1 of Regulations.</b></p> <p>The headings below confirm the essential matters to be addressed in the WMP. It may also include an overview of the facility, its function within the site and any other pertinent information which informs the principal aims. Operators should firstly identify the area covered in this table by description, plan and IGR</p>
6 (2) (a)	<b>State identity of the operator</b>
6 (2)(b)	<b>State the location, or proposed location, of the waste facility, including any possible alternative locations</b>
6 (2) (c)	<p><b>Provide sufficient information and identification to enable the planning authority to evaluate the operators ability to meet the objectives of the WMP, as detailed in Schedule 1, and explaining in particular how the option and method chosen as detailed in paragraph a (i) of that Schedule will fulfil those objectives.</b></p> <p>Complete and refer to Table 1 (Waste Management [Plan Objectives])</p>
6(2) (d)	<p><b>State the category into which the operator considers that the area or facility falls( i.e. extractive waste area, waste facility or Category A waste facility) with appropriate assessment to allow the planning authority to consider whether it agrees with that categorisation, including an identification of possible accident hazards.</b></p> <p>This checklist applies to waste facilities for non-inert non-hazardous waste. The prospects for classification as Category A will be limited to risk of major accident and in most cases reference to information gained through appraisal or assessment under the Quarries Regulations 1999 should enable confirmation of this aspect via the completion of Annex B.</p>
	Waste Facility (non inert non hazardous)
6 (2) (e)	<b>Characterise the waste in accordance with Directive 2009/360/EC (see Chapter 4) and provide a statement of the estimated total quantities of extractive waste to be produced during the operational phase.</b>
6 (2) (f)	<b>Describe the operation generating such waste and of any subsequent treatment to which it is subject</b>

6 (2)(h)	<p><b>State whether or not it is intended to place extractive waste into excavation voids for rehabilitation and construction purposes (whether the voids were created through surface or underground extraction)</b></p> <p>The answer here should be no-otherwise Table 3 should be completed instead.</p>
6 (2)(i) 9 (1)(e) 9 (1)(f)	<p><b>Describe the proposed plan for closure, including rehabilitation, after-closure procedures and monitoring as provided for in Regulation 12.</b></p>
9 (2)(k)	<p><b>Provide a topographic survey and description of the condition of the land affected or to be affected by the waste facility.</b></p>
9 (1)(a)	<p><b>State any European or National designations</b></p>
9 (1) (c)	<p><b>Confirm that the facility is suitably constructed, managed and maintained to ensure its physical stability?</b></p> <p>Stability of extractive waste tips (including lagoons) at operational quarries is covered by the Quarries Regulations 1999. Facilities at mines (above certain criteria) are covered by the Mines and Quarries Tips Act 1969 etc. Confirmation that the facility is covered by such legislation will address this aspect</p>
6 (2) (g) 9 (1) (a) 9 (1) (b) 9 (1) (c) 6 (2) (j) 10 (1)(a) 10 (1)(b) 10 (1)(c)	<p><b>Confirm how surface water or groundwater pollution or deterioration of water status is to be prevented or minimised in the short and long term where appropriate through:</b></p> <p>Location and design Construction, management and maintenance The prevention or minimisation of leachate, collection and treatment Any necessary measures to be taken.</p> <p>Pollution of surface or groundwater in Scotland is controlled The Water Order and, unless there is any reason to suspect that pollution may occur outwith this control no further information will be required in this respect. For non-inert non-hazardous waste, NIEA may require the evaluation of leachate generation potential together with collection and treatment. Operators should confirm this requirement with NIEA referring to Regulation 5(9).</p>
6 (2) (g) 9 (1) (a) 9 (1) (b) 9 (1) (c) 6 (2) (j)	<p><b>Describe how pollution of soil is to be prevented or minimised in the short and long term through:</b></p> <p>Location and design Construction, management and maintenance Any necessary measures to be taken</p>

10 (1) (b)	
6 (2) (g) 9 (1) (a) 9 (1) (b) 9 (1) (c) 6 (2) (j) 10 (1) (d)	<b>Describe of how pollution of air is to be prevented or minimised in the short and long term through:</b> Location and design Construction, management and maintenance Any necessary measures to be taken
9 (1) (c)	<b>Describe how the facility is to be constructed to minimise as far as possible damage to the landscape</b> Where planning permission has been granted this aspect may be assumed to be adequately addressed.
	<b>The WMP should include an overview , copies of appropriate plans and sections necessary to describe the extractive facility, its operation, its context within the mine or quarry and the location of any human beings or environment that might be affected by. This may be fulfilled by existing site development and restoration plans which may be cross referenced or preferably copied as part of a coherent WMP</b>
	List plans included in WMP

## Annex H – Soil Waiver

Table 6

Is there any risk to water air soil, flora or fauna?
These aspects are covered in the EIA-there is no risk
Will soil or peat cause a nuisance through noise or odours?
There are no odours. Noise is considered in the EIA. There is no prospect of nuisance.
Will it unacceptably affect the landscape or places of special interest?
This can be taken as implicit in the grant of planning. In this case the peat restoration and soil bund location are both positive landscape elements.
Will it result in the abandonment, dumping or uncontrolled depositing of extractive waste?
No- the plans in the application are quite specific

## Annex I – NON WASTE

**Table 7**

1. (a) Has the mining operator physically identified the residues which will actually be used to fill the galleries/voids?
The materials to be used for infilling within these areas are the inert natural clay deposits.
1. (b) Can the mining operator provide the competent authority with sufficient guarantees of that use?
This scheme is a required component of Planning consent.
1. (c) Has the competent authority assessed whether the period during which the residues will be stored before being returned to the mine is so long that those guarantees cannot in fact be provided? Need to reword this in a way that requires applicant to answer
In this instance the materials to be placed will not be stored for any length of time but will be transported and deposited directly from excavation.
2. (a) Is the use of the residues to fill the galleries/voids is (i) necessary and (ii) lawful?
The residues are needed to complete restoration of the excavation area and lawful as a clearly identified component of Planning consent. No other Planning or non-planning consents are required.
2. (b) Are the residues to be used for this purpose without prior processing?
The material will be placed directly from excavation without any processing

## Annex J

### Waste Management Plan for Inert Waste

#### a) Overview and confirmation that waste on site is inert

Details of Operator	
Site Location (Include Site Location Plan)	
Site Operations	
Identification of extractive waste including the operation generating such waste and of any subsequent treatment to which it is subject Please include a site layout showing locations of extraction waste.	
Classification of waste and European Waste Code (EWC)	
Quantities of extractive waste	

## b) Category A categorisation process

	<b>Operator assessment of Potential for Category A facilities</b>
	<b>Preliminary</b>
<b>Q1</b>	<b>Does the WMP include any waste facilities?</b>
	<b>e.g. Yes</b>
Yes	You should identify the facility and follow the questions below.
No	If you have no waste facilities no further consideration is needed.
Note	Categorisation as a waste facility is described in Chapter 3. Some sites will not have any. Some sites may have more than one facility
	<b>Identification of facility</b>
Note	Insert Name or IGR ref above or state "None"
	<b>Hazardous waste or dangerous substances</b>
<b>Q2</b>	<b>Will the waste facility contain hazardous waste or dangerous substances?</b>
	<b>No</b>
Yes	Consider the thresholds in Decision 337/2009/EC. If exceeded the facility will be Category A.
No	The facility will not be Category A on account of material. Move on to question 3.
Notes	Chapter 2 describes the scope for hazardous waste.
	<b>Major Accident - serious danger to human health or loss of life</b>
<b>Q3</b>	<b>Does the existing facility (or would the planned facility) constitute a significant hazard under the terms of the Quarries Regulations 2006</b>
	<b>E.g. Yes-it automatically qualifies on account of the plan area of the mound</b>
Yes	You should continue to question 4
No	The facility should not pose a serious danger to human health or loss of life but you should still make the confirmation required in Question 4
<b>Q4</b>	<b>Can you, as operator, confirm the following?</b>
	(a) that in your opinion structural failure or incorrect operation of the waste facility would not result in potential for loss of life or serious danger to human health considering any human beings other than site workers, who are present outwith the site, permanently or for prolonged periods.  (b)(i) the operation complies with the Quarries Regulations 2006 (ii) that where the facility is or would qualify as a significant hazard the necessary geotechnical assessment work for the waste facility has been undertaken (iii) any notifiable tips have been notified to the HSENI.
	<b>E.g. Yes – give information</b>
Yes	The facility should not be treated as Category A on this count at this stage.
No	If you are not confident in certifying that your facility does not pose such a risk you should seek advice from a geotechnical specialist. Your WMP cannot be approved meantime.
Notes	See Chapter 3

<b>Major Accident-Serious danger to the environment</b>	
<b>Q5</b>	<b>In the event of a structural failure or incorrect operation of any waste facility (whether or not classed as a significant hazard under the Quarries Regulations), is there a type of event where solid waste or slurry material could spill over the site boundary or onto an undisturbed area of the site. If so it would be useful if you could estimate the maximum reach of any spill or state a distance beyond which it certainly would not reach, taking into account the surrounding landform.</b>
	<b>Yes/No</b>
Yes	Continue to Question 6.
No	The facility does not qualify as Category A on this basis.
Note	There is no question of considering the probability of the failure here. You should consider the effect any of the failures or incorrect operations which could conceivably occur at this facility. In many cases it will be possible to estimate from general principles the safe maximum extent of any spill .This information will assist the planning authority to confirm agreement on the impact under question 7 below.
<b>Q6</b>	<b>Are there any designated habitats which might be affected by the spill</b>
	<b>Yes/No</b>
Yes	Go to Question 7
No	Go to Question 7
Notes	This should certainly include any international or national designations. Local designations should be noted where known.
<b>Q7</b>	<b>Is it predicted that the impact of a spill would exceed the criteria for serious danger to the environment in Decision 337/2009/EC?</b>
	(a) the intensity of the potential contaminant source strength is decreasing significantly within a short time; (b) the failure does not lead to any permanent or long-lasting environmental damage; (c) the affected environment can be restored through minor clean-up and restoration efforts.
	<b>Yes/No</b>
Yes	If it is predicted (in the first instance) that these criteria would be exceeded you should confirm this through a specific evaluation in the context of a source pathway- receptor. In very clear circumstances this is expected to be a simple statement.
No	The facility does not qualify as Category A on this count. If the preceding questions have been properly followed the facility will not be Category A
Notes	You should provide the reasoning behind your conclusion (whether positive or negative). Where there is doubt you may be asked to provide a specific evaluation following Decision 337/2009/EC. However in the absence of any other information where waste is non hazardous and there are no high sensitivity habitats such as those with ecological designations it will generally be reasonable to assume that the impact would fall below the above criteria and would not amount to serious danger to the environment
<b>Q8</b>	<b>Is there any other risk of serious danger to the environment above the thresholds in Decision 337/2009/EC (i.e. those in Q7 above) which might result from incorrect operation such as unmitigated acid rock drainage?</b>

	<b>Yes/No</b>
<b>Yes</b>	You should undertake a specific evaluation in the context of a source pathway- receptor chain to demonstrate whether or not the facility qualifies on this count.
<b>No</b>	The facility is not identified at this stage as Category A on this account.
<b>Notes</b>	If the planning Authority or statutory consultees raise other significant considerations this aspect may need to be revisited. Impacts from extractive waste not already covered above (i.e. on account of hazardous waste, dangerous substances or physical movement) are however likely to be limited especially where the extractive waste is inert
	Operators Conclusion
	Category A / Not Category A

**c) Objectives of the waste management processes on site**

<b>(a)</b>	<b>Reduction of waste production and harmfulness</b>
(a)(i)	How was the design and method for waste management chosen within the context of the mine or quarry process?
(a)(ii)	How might the extractive waste change in relation to an increase in surface area and exposure to conditions above ground (e.g. excess snow)
(a)(iii)	Has placing the back waste in the excavation void been considered?
a(v)	Has replacement or reuse of topsoil been considered?
<b>(b)</b>	<b>Recovery of waste: recycle, reuse, reclaim</b>
(b)	Has the recovery of the extractive waste been considered by recycling, reusing or reclaiming the waste where environmentally sound?
<b>(c)</b>	<b>Design for safe disposal of waste – short and long term</b>
(c)(i)	Is the facility designed to minimise long term effects such as release of pollutants to air or water?
(c) (ii)	Is the facility designed to minimise long term effects such as release of pollutants to air or water?
(c) (iii)	Is any facility above original ground surface and if so is it designed to ensure long term geotechnical stability?

**d) Demonstration that extractive waste will not endanger human health or harm the environment**

Document how the extractive waste will be managed using best available techniques to ensure that it will not endanger human health

E.g. Reference can be made to compliance with the NI Quarry Regulations 2006.

Is there any risk to water air soil, flora or fauna?

E.g. These aspects are covered in the Environmental Statement -there is no risk

Will soil or peat cause a nuisance through noise or odours?

E.g. There are no odours. Noise is considered in the EIA. There is no prospect of nuisance.

Will it unacceptably affect the landscape or places of special interest?

E.g. This can be taken as implicit in the grant of planning. In this case the peat restoration and soil bund location are both positive landscape elements.

Will it result in the abandonment, dumping or uncontrolled depositing of extractive waste?

E.g. No- the plans in the application are quite specific

**e) Compliance with other parts of the Regulations**

**Regulation 9: Construction and Management**

Please provide details of how the management of extractive waste will comply with the requirements in Regulation 9 (excluding Regulations 9 (1) (d)(ii) and (iii), (1)(g) and (h) and 9(3)).

**Regulation 10: Prevention of water status deterioration, air and soil pollution**

Please provide documentary evidence where applicable to demonstrate how the management of the extractive waste complies with Regulation 10 (excluding 10 (4) and (5)).