

AGENDA ITEM 6

APPENDIX 12

2018/0151/DET

WASTE MANAGEMENT PLAN



**Dalwhinnie Quarry
Dalwhinnie**

**Extractive Waste Management Plan
Management of Extractive Waste (Scotland) Regulations 2010**

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Tables from Guidance on the Management Of Extractive Waste (Scotland) Regulations 2010

CATEGORY A CATEGORISATION PROCESS

Operator assessment of Potential for Category A facilities	
Preliminary	
Q1	Does the WMP include any waste facilities?
	Yes
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
Identification of facility	
	Dalwhinnie Quarry (NN637 862)
Note	Insert Name or NGR ref above or state "None"
Hazardous waste or dangerous substances	
Q2	Will the waste facility contain hazardous waste or dangerous substances?
	No The waste facilities contain overburden stripped from the quarry footprint and are capped with topsoil.
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.
Major Accident - serious danger to human health or loss of life	
Q3	Does the existing facility (or would the planned facility) constitute a significant hazard under the terms of the Quarries Regulations 1999
	No
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
Q4	Can you, as operator, confirm the following?
	(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 out with the site, permanently or for prolonged periods. (b)(i) the operation complies with the Quarries Regulations 1999 (or for mines The Mines and Quarries (Tips) Act 1969 and Regulations), (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 HSE.
	a) Yes. Any failure or incorrect operation of the waste facilities would not result in potential for loss of life or serious danger to persons out with the site. b) The quarry has been designed and will be operated in accordance with the requirements of the Quarries Regulations 1999 and will be subject to regular geotechnical assessments.
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 paragraphs 10-13

Category A Categorisation Process continued

	Major Accident-Serious danger to the environment
Q5	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.
	No The waste facilities will be constructed to ensure stability is maintained. The potential for material from the waste facilities to overspill the site boundary is low. All waste facilities will be regularly inspected by the quarry manager and will be subject to regular geotechnical assessments.
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.
Q6	Are there any designated habitats which might be affected by the spill
	No. The land is not a national, international or locally designated habitat.
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.
Q7	Is it predicted that the impact of a spill would exceed the criteria for serious danger to the environment in Decision 337/2009/EC?
	(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.
	No (see response to Q2)
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
Q8	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?
	No
Yes	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.
No	The facility is not identified at this stage as Category A on this account.
Notes	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. Acid rock drainage associated with surface coal mining is one possibility but this is addressed through the CAR regime and where backfill risk assessment has been carried out to SEPA's satisfaction this aspect will be addressed.
	Operators Conclusion
	Not Category A

TABLE 1 – WASTE MANAGEMENT PLAN OBJECTIVES

Table 1	WMP OBJECTIVES- (APPLIES TO ALL PLANS)
(a)	Reduction of waste production and harmfulness
(a) (i)	How was the design and method for waste management chosen within the context of the mine or quarry process
	The overburden and topsoil stripped from the quarry footprint will be used to form landscaped screening bunds surrounding the quarry extraction area. There are screening bunds surrounding the existing quarry which contain soil and overburden stripped from the site, these will be reprofiled and the material incorporated into the new landscaped screening bunds. The overburden and soil from the landscaped screening bunds will be utilised in final restoration of the site. Dalwhinnie Quarry extracts a metamorphic 'quartzose psammite' of Dalradian (Precambrian) age. The rock quality in conjunction with the proposed processing plant and methods used results in no processing waste currently being produced on crushing and screening. Where appropriate, any waste rock in the existing waste facilities (the existing screening bunds) will be recovered.
(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)?
	No chemical or physical changes have occurred or are expected to occur in the overburden and waste rock in the waste facilities.
(a) (iii)	Has placing the waste back in the extraction void been considered?
	The extractive waste will be returned to the quarry void during restoration.
(a) (iv)	Has replacement or reuse of topsoil been considered?
	There is a thin top soil in the area surrounding the quarry. All topsoil previously stripped from the quarry was used to cap the overburden in the existing waste facilities. Topsoil from the quarry extension area will also be used to cap the new screening bunds. All topsoil will be used in the restoration of the quarry.
(a) (v)	What substances are used in mineral treatment and have less dangerous substances been considered?
	No substances will be used in mineral treatment at Dalwhinnie Quarry.
(b)	Recovery of waste : recycle, reuse, reclaim
(b)	Has recovery of the extractive waste been considered by recycling, reusing or reclaiming the waste where environmentally sound?
	All overburden and soil will be used for site restoration.
(c)	Design for safe disposal of waste - short and long term
(c) (i)	Is the facility designed to require minimal and if possible no monitoring, control or management when closed?
	There is no requirement for long term monitoring of the waste facilities. The overburden and soil will be used in restoration of the site. All waste facilities will be subject to regular inspections by the quarry manager and bi-annual geotechnical assessments.
(c) (ii)	Is the facility designed to minimise long term effects such as release of pollutants to air or water?
	The waste facilities will contain overburden capped with topsoil. These waste facilities have a low potential for pollutant release. No pollutants will be released to air or water from the waste at this site.
(c) (iii)	Is any facility above original ground surface and if so is it designed to ensure long term geotechnical stability?
	The waste facilities are above ground. The waste facilities are designed in accordance with the requirements of the Quarries Regulations 1999 and will be subject to regular geotechnical assessments.

End of Table 1

TABLE 3 EXTRACTIVE WASTE PLACED IN VOID FOR REHABILITATION (RESTORATION) OR CONSTRUCTION

Table 3	WMP (EXTRACTIVE WASTE PLACED IN VOID FOR REHABILITATION (RESTORATION) OR CONSTRUCTION
Regulation	
11(1)	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. Operators should identify the relevant area, complete Table 1 (WMP Objectives) and refer to here.
	The Extractive Waste Facilities Plan (Plan DL-EWMP-01) shows the location of the extractive waste facilities. A small quantity of overburden will be temporarily used in edge protection bunds and access ramps within the quarry.
11 (1) (h)	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)
	Yes All extractive waste will be returned to the quarry void during restoration of the quarry.
	Confirm control and monitoring necessary to ensure stability of the waste. Any materials placed within the void of an operational quarry for rehabilitation will be subject to the Quarries Regulations 1999 and, barring exceptional circumstances, the operator should simply refer to this and confirm compliance.
	All work undertaken within the quarry void will meet the requirements of the Quarries Regulations 1999. A geotechnical assessment will be undertaken at the quarry on a bi-annual basis and the quarry is designed to meet the requirements of the Quarries Regulations 1999.
11(1)(h)(ii) 23(1) 23(1)(a) 23(1)(b) 23(1)(c) 23(4) 27(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. Pollution of surface or groundwater in Scotland is controlled by The Controlled Activities Regulations 2005 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.
	With reference to Table 1 (a) (i). The character of the extractive waste in the waste facilities ensures there is no risk of surface water pollution, groundwater pollution and leachate generation.
11(1)(h)(iii)	Confirm responsibility for aftercare and any monitoring required Operators should confirm existing or proposed arrangements for aftercare with reference to the site restoration plan. In most instances there should be no need for post closure monitoring of any environmental effects from inert extractive waste
	As quarry operator Leiths (Scotland) Limited are responsible for restoration and monitoring. With the overburden in the waste facilities Inert materials sourced from within Dalwhinnie Quarry there are no environmental effects from this material. Any waste rock in the There is no requirement for long term post closure monitoring of environmental effects with the waste used in restoration of the quarry.

End of Table 3

TABLE 4 : WASTE MANAGEMENT PLAN FOR WASTE FACILITY (INERT)

Table 4	WMP FOR WASTE FACILITY (INERT)
11(1)	<p>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. 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 NGR</p>
	<p>The waste facilities at Dalwhinnie Quarry are overburden / screening bunds at North, South, East and West perimeter of the quarry. NGR coordinates of the North waste facility are (NN6380686570). NGR coordinates of the East waste facility are (NN6404086426). NGR coordinates of the South waste facility are (NN6383986209) NGR coordinates of the West waste facility are (NN6361386368). All waste facilities are shown on Dalwhinnie Quarry Extractive Waste Facilities Plan (Plan DL-EWMP-01)</p>
11 (1)(c)	<p>Provide sufficient information and identification to enable the planning authority to evaluate the operator's 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. Operators should complete and refer to Table 1 (WMP Objectives)</p>
	<p>With Reference to Table 1. The landscaped screening bunds will contain overburden stripped from the quarry site and will be capped with topsoil to promote plant growth. The bunds are designed to minimise any visual and landscape impacts from the quarry when the quarry is operational. The bunds are designed in accordance with the requirements of the Quarries Regulations 1999 and will be subject to regular inspections by the quarry manager and bi-annual geotechnical assessments. The material from the waste facilities will be used in the restoration of the quarry void.</p>
11(1)(d)	<p>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.</p> <p>This checklist applies to waste facilities for 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 Quarries Regulations 1999 should enable confirmation of this aspect via the completion of Annex B.</p>
	<p>Waste Facility (Inert)</p>
11(1)(e)	<p>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. Prepare separate note to accompany table based on requirements in Chapter 4.</p>
	<p>The overburden is Inert: Code 01 01 02 (waste from mineral non-metalliferous excavation) in accordance with the European List of Waste Codes. The waste rock discussed in Table 1 (a)(i) is Inert: Code 01 04 08 (waste gravel and crushed rocks other than those mentioned in 01 04 07). Where appropriate the waste rock will be recovered / reprocessed. No further processing waste (waste rock) will be produced from the quarry.</p>
11(1)(f)	<p>Describe the operation generating such waste and any subsequent treatment to which it is subject</p>
	<p>The overburden is the non-productive material overlying the bedrock. The waste rock was rock discarded during mineral processing (crushing and screening). Any waste rock in the existing waste facilities was produced when processing plant and methods were less effective, where appropriate this rock may be recovered during restoration work.</p>
11(1)(h)	<p>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) The answer here should be negative-other wise Table 3 should be completed instead.</p>
	<p>All extractive waste will be used in final restoration. The extractive waste facilities have been categorised as Inert Waste Facilities with the overburden being stored for a period in excess of 3 years.</p>

Table 4 : Continued

22(1)(g)	Describe the proposed plan for closure, including rehabilitation, after-closure procedures.
	Final restoration is aimed at both minimising the visual impact of the quarry and increasing the ecological diversity /biodiversity of the site. Overburden, waste rock and soil from the waste facilities will be tipped over the re-profiled quarry faces and will be spread on the quarry floor to provide a suitable substrate for re-vegetation.
11(1)(k)	Provide a topographic survey and description of the condition of the land affected or to be affected by the waste facility.
	Dalwhinnie Quarry Extractive Waste Facilities Plan. (Plan DL-EWMP-01)
22(1)(c)	Confirm any European or National Designations affected
	No designated sites are affected.
22(1) (c)	Confirm that the facility is suitably constructed, managed and maintained to ensure its physical stability? Stability of all extractive waste tips (including lagoons) at operational quarries is covered by the Quarries Regulations 1999. Tips and lagoons at mines above certain criteria are covered by the Mines and Quarries Tips Act 1969 etc. Confirmation that the facility complies with such legislation will address this aspect.
	The waste facilities will be constructed and operated in compliance with the Mines and Quarries Tips Act 1969. All waste facilities will be regularly inspected by the quarry manager and included in the bi-annual geotechnical assessment to meet the requirements of the Quarries Regulations 1999.
11(1)(g)	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:
22(1)(c)	Location and design
22(1)(d)	Construction, management and maintenance
11(1)(j)	The prevention or minimisation of leachate, collection and treatment
23(1)(a)	Any necessary measures to be taken.
23(1)(b)	
23(1)(c)	Pollution of surface or groundwater in Scotland is controlled by The Controlled Activities Regulations 2005 and, unless there is any reason to suspect that pollution may occur out with this control no further information will be required in this respect. For inert waste, SEPA is unlikely to require the evaluation of leachate generation potential together with collection and treatment. Operators should confirm this requirement
	With Reference to Table 3 27(b). The character of the extractive waste in the waste facilities ensures there is no risk of surface water pollution, groundwater pollution and leachate generation.
11(1) (g)	Describe how pollution of soil is to be prevented or minimised in the short and long term through:
22(1) (c)	Location and design
22(1) (d)	Construction, management and maintenance
11(1) (j)	Any necessary measures to be taken
23(1) (b)	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 runoff from the typically inert materials at most Scottish sites will also be limited but where appropriate any mitigating measures should be confirmed
	The screening bunds will be formed on a footprint where the topsoil has been stripped, both to provide a suitable surface for bund formation and to retain the topsoil for use in either capping the bund or in quarry restoration. The bunds will have a steeper profile than the existing natural ground. The slopes are designed to ensure stability is maintained and to minimise the risk of spillage, instability and runoff. The screening bunds may initially be prone to surface water runoff during periods of very heavy rainfall, until vegetation cover has fully established. Vegetation growth will minimise water run-off and help stabilise ground conditions. Shallow ditches will be formed at the perimeter of each bund to ensure any runoff which may potentially contain particulate matter is directed into the quarry. This surface water will be collected in the quarry pond. These ditches will be maintained until vegetation has fully established on the bunds. A small quantity of overburden is used in temporary edge protection bunds and temporary access ramps within the quarry.

Table 4 : Continued

<p>11(1)(g) 22(1) (c) 22(1) (d) 11(1) (j) 23(1) (d)</p>	<p>Describe how pollution of air is to be prevented or minimised in the short and long term through: Location and design Construction, management and maintenance Any necessary measures to be taken Any existing studies or scoping assessments can be cross referred. Other wise established preventative measures can be concisely confirmed.</p>
	<p>The character of the extractive waste in the waste facility ensures there is no risk of air pollution. The overburden will be capped with topsoil which will promote vegetation growth.</p>
<p>22(1)(c)</p>	<p>Describe how the facility is to be constructed to minimise as far as possible damage to the landscape Where planning permission has been granted this aspect should be assumed to be adequately addressed.</p>
	<p>The screening bunds are located to reduce the visual impact of the quarry. Gentle outer slopes and capping with topsoil to promote rapid vegetation growth help reduce the visual and landscape impact of the bund. A small quantity of waste rock and overburden is used in edge protection bunds and access ramps within the quarry.</p>
<p>Plans</p>	<p>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</p>
	<p>All waste facilities are shown on Dalwhinnie Quarry Extractive Waste Facilities Plan. (Plan DL-EWMP-01)</p>
	<p>Further requirements to consider and include in WMP if details are available at that stage</p>
<p>22(1)(e)</p>	<p>Arrangements for monitoring, inspection and remedial action In many cases operators will firstly be able to confirm their existing system inspection and monitoring practices under the Quarries Regulations</p>
	<p>The quarry manager will be supervising all aspects of the quarry operation. All areas of the quarry are inspected on a bi-annual basis in accordance with the requirements of the Quarries Regulations 1999</p>
<p>22(1)(f)</p>	<p>Arrangements for records of waste management operations in line with Reg 22(2) 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>
	<p>The quantity of material temporarily stored in the screening bunds will be recorded by the quarry manager. The bunds will also be surveyed as part of the quarry survey schedule.</p>

End of Table 4