

APPEAL TO THE PLANNING INSPECTORATE

APPEAL REF:

PURSUANT TO REGULATION 31 OF THE ENVIRONMENTAL PERMITTING
(ENGLAND AND WALES) REGULATIONS 2016

BETWEEN

THE TREATMENT HUB LIMITED

Appellant

and

NATURAL RESOURCES WALES

Respondent

INDEX FOR APPEAL

<u>APPEAL BUNDLE</u>			
<u>Document Number</u>	<u>Description</u>	<u>Date</u>	<u>Pages</u>
Part 1			
A: Appellant's written notice of appeal and grounds of appeal			
AB01	Appellant's Written Notice of Appeal	15 September 2020	1 - 6
AB02	Appellant's Grounds of Appeal	15 September 2020	7 - 12
B: Environmental permit and associated documents			
AB03	Environmental Permit (Number: EPR/ZP3933NJ)	28 August 2020	13 - 33
AB04	Environmental Management Plan	September 2013	34 - 154
AB05	Environment Agency Guidance, <i>How to Comply With Your Environmental Permit</i> [Note: this version was retrieved from the	June 2013	155 - 250

	gov.uk website and is marked as having been withdrawn on 1 February 2016]		
AB06	EPR Permit Application Document Number SOL0113ESP01	January 2013	251 - 290
C: Suspension notice			
AB07	Suspension Notice	17 July 2020	291 - 296
Part 2			
D: Relevant correspondence with the Respondent			
AB08	Email chain between Appellant and Respondent	30 April – 29 July 2020	297 – 307
AB09	Email chain between Appellant and Respondent	17 – 25 June 2020	308 - 312
AB10	Email chain between Appellant and Respondent	17 July 2020	313 – 314
AB11	Email chain between Appellant and Respondent	17 - 18 July 2020	315 – 318
AB12	Email from Appellant to Respondent	23 - 30 July 2020	319 - 324
AB13	Email chain between Appellant and Respondent (with attachment)	23 July - 4 August 2020	325 – 334
AB14	Email chain between Appellant and Respondent	23 July - 12 August 2020	335 – 345
AB15	Letter from Burges Salmon to Respondent	14 August 2020	346 – 348
AB16	Email chain between Burges Salmon and Respondent	14 – 26 August 2020	349 – 353
AB17	Email from Respondent to Burges Salmon (with attachments)	27 August 2020	354 – 465
AB18	Letter from Burges Salmon to Respondent	2 September 2020	466 – 468
AB19	Letter from Respondent to Burges Salmon	9 September 2020	469 – 470
AB20	Letter from Burges Salmon to Respondent (with Annex)	11 September 2020	471 - 498



The Planning
Inspectorate

www.gov.uk

For official use only

Date Received

Appeal Ref

The Environmental Permitting (England and Wales) Regulations 2016

Environmental Permitting Appeal Form

If you need this document in large print, on audio tape, in Braille or in another language please call 0303 444 5584.

WARNING: The appeal must reach the Inspectorate with the statutory appeal deadlines as laid out in Schedule 6 of the above mentioned regulations.

PLEASE PRINT CLEARLY IN CAPITALS USING BLACK INK

A. APPELLANT DETAILS

Name THE TREATHMENT HUB LIMITED

Organisation Name (if applicable)

Contact reference Number EPKZP3935PJ

Address BROOK HOUSE MOSS GROVE KINGSWINFORD

WEST MIDLANDS Postcode DY6 9HS

Daytime Tel

Fax

Email

I prefer to be contacted by: Email ☐ Post ☐

B. AGENT DETAILS (if applicable)

Name SIMON TILLING

Organisation Name (if applicable) BURGESS SALMON LCP

Contact reference Number

Address ONE GLASS WHARF BRISTOL

Postcode BS2 0ZX

Daytime Tel 0117 9392000

Fax

Email simon.tilling@burgess-salmon.com

I prefer to be contacted by: Email ☒ Post ☐

Please turn over

C. REGULATOR DETAILS – ENVIRONMENT AGENCY/LOCAL AUTHORITY

Name NATURAL RESOURCES WALES

Contact reference Number EPR-2P3933NJ

Date of Application DDMMYY

Date of Decision 170720

D. APPEAL SITE ADDRESS

Site Address THE TREATMENT HUB SWANSEA BUILDING 2

WESTFIELD INDUSTRIAL PARK SWANSEA

Postcode (if known) SA5 4SF

E. GROUNDS OF APPEAL

Please indicate the grounds for appeal by ticking whichever box applies and then set out your reasons in section F of this form.

- | | |
|--|--|
| 1. Refusal to grant a Permit; | 1. ☐ |
| 2. Refusal to grant a variation of the conditions of an existing Permit; | 2. ☐ |
| 3. Conditions attached to a Permit following an application for a Permit or variation; | 3. ☐ |
| 4. Refusal of application to transfer or conditions attached to Permit to take account of transfer; | 4. ☐ |
| 5. Refusal of application to surrender the Permit or conditions attached to Permit to take account of surrender; | 5. ☐ |
| 6. Variation, Enforcement, Revocation, Prohibition or Suspension Notice; | 6. ☒ |
| 7. Refusal of approval to initiate closure procedures or is served with closure notice; | 7. ☐ |
| 8. Failure by regulator to give notice of determination of application for Permit, variation, transfer or surrender within statutory time-period - 'deemed refusal'; | 8. ☐ |
| 9. Deemed withdrawal of application following failure to provide required information. | 9. ☐ |

F. REASONS FOR APPEAL

DETAILED GROUNDS OF APPEAL
ARE SEPARATELY ATTACHED

G. CHOICE OF PROCEDURE

Please choose option 1 , 2 or 3 by **ticking one box only**

Please note that we must also take the Environment Agency's/Local Authority's preference into account when we decide how the appeal will proceed.

1. Written Representations

This procedure involves an exchange of the parties' written statements, followed by a visit to the appeal site by the Inspector who is responsible for determining the appeal.

✓
W ☐

You and a representative of the Environment Agency/Local Authority will be given an opportunity to accompany the Inspector during the site visit.

2. Hearing

A hearing is a discussion, held under the direction of the Inspector. It lets parties exchange their views in a less formal atmosphere than at a public inquiry. Hearings are open to the public, and third parties may be heard at the discretion of the Inspector.

Hearings are not usually suitable for appeals that:

- are complicated or controversial and have created a lot of local interest
- require cross-examination of witnesses.

H ☐

Although you may prefer a hearing, the Inspectorate will also consider whether your appeal would be best dealt with at a more formal inquiry or on the basis of written representations.

3. Inquiry

This is the most formal procedure and is usually the best way to deal with a case that involves complex legal issues and or where many third parties have expressed an interest in the case. Expert evidence is often presented at an inquiry and witnesses may be cross-examined. An inquiry will normally take longer than a hearing, and in some cases could continue for several days. It is not a court of law but proceedings may appear to be quite similar. Inquiries are open to the public and third parties may be heard at the discretion of the Inspector.

I ☒

An inquiry will be held if you or the regulator decide that you do not want to use the written representations procedure and we decide that a hearing is unsuitable.

Sometimes even if both parties have opted for the written representations procedure or an informal hearing we may decide to hold an inquiry. If we do, we will tell you why.

If you want us to hold an inquiry please set out your reasons.

"I wish to be heard by an Inspector at an inquiry because..."

THIS MATTER INVOLVES COMPLEX TECHNICAL ISSUES RELATING TO TREATMENT OF WASTE AT THE ABOVE SITE. WE ANTICIPATE THAT EXPERT EVIDENCE WILL BE REQUIRED IN THIS REGARD. WE ALSO ANTICIPATE THE NEED TO CROSS-EXAMINE THE REGULATORY OFFICERS

H. ESSENTIAL SUPPORTING DOCUMENTS

The documents listed below, **must** be sent with your appeal form. If we do not receive all your appeal documents within the statutory appeal period we may not be able to accept it.

Please tick the boxes to show the documents you are enclosing.

1. Copy of relevant application (if applicable);
2. Copy of relevant Environmental Permit (if applicable);
3. Copy of the Decision or Notice (the subject of the appeal);
4. Copies of any relevant correspondence, plans etc between you and the regulator.

1.	☐	✓
2.	☒	
3.	☒	
4.	☒	

I. CONFIRMATION

DECLARATION

I understand that:

- a) The Planning Inspectorate may use the information I have given for official purposes in connection with the processing of my appeal;
- b) Details from this form, including my name, the site description and my grounds of appeal may appear on the Planning Portal.

By signing this form I am agreeing to the above use of the information I have provided.

I have completed all sections of the appeal form and confirm that the details are correct to the best of my knowledge. (Please Note: signature is not necessary for electronic submissions)

Signature BURGESS SALMON LLP Date 150920

Name (in capitals) STEPHEN LAUGHTON

On behalf of (if applicable) BURGESS SALMON FOR TREATMENT HUBS

For more information about how we process your personal information please see "Environmental Permitting (England and Wales) Regulations 2016 – The appeal procedure guidance."

Please now send this form and all the necessary supporting documents to:

Environment Team, The Planning Inspectorate, 3A Eagle Wing, Temple Quay House, 2 The Square, Temple Quay, Bristol, BS1 6PN

Or e-mail it to: environment.appeals@planninginspectorate.gov.uk

You also need to send a copy of it to the regulator that issued the Notice.

When we receive your appeal form, we will:

1. Check that the appeal is valid and everything is in order;
2. If everything is in order, we will give you an appeal timetable and **start date**;
3. Inform the regulator of the start date of the appeal (if applicable).

If you submit information or representations late we may be unable to consider them, the Inspector may not see them, and they may be returned to you.

At the end of the appeal process you will receive the Inspector's decision, in writing (including details of the Inspector's reasoning).

J. SUPPLEMENTARY SHEET

APPEAL TO THE PLANNING INSPECTORATE

APPEAL REF:

PURSUANT TO REGULATION 31 OF THE ENVIRONMENTAL PERMITTING
(ENGLAND AND WALES) REGULATIONS 2016

BETWEEN

THE TREATMENT HUB LIMITED

Appellant

and

NATURAL RESOURCES WALES

Respondent

GROUND OFS OF APPEAL

***NB References to [Tab [x]] are references to the location of the documents
in the appeal bundle***

Facts

- 1 The Appellant, a waste management business operating in South Wales, holds an environmental permit EPR/ZP3933NJ (the "Permit") [Tab AB03, pages 13 - 33] for its advanced material treatment, remediation and recycling business at Building 2, The Westfield Industrial Park, Swansea SA5 4SF (the "Facility").
- 2 On 17 July 2020 the Respondent issued a Suspension Notice ("the Notice"). This followed from service of a previous Suspension Notice on 15 July 2020. The Appellant challenged this earlier notice on the basis that the Respondent had not provided justification for deeming the operation at the Treatment Hub a risk to the environment. The Respondent agreed and withdrew the earlier notice on 17 July 2020.
- 3 The following reasons were given for the service of the Notice:

“Natural Resources Wales consider that the operation of the [Facility] involves a risk of pollution namely: Failure to comply with condition 2.3.1(a) of the Environmental Permit EPR/ZP3933NJ. This conditions states that “The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by Natural Resources Wales”. The two operating techniques listed in table S1.2 are, EPR 1 - How to Comply With Your Environmental Permit [Tab AB05, pages 155 - 250] and the document referenced SOL0113ESP01 [Tab AB06, pages 251 - 290] received as part of the application EPR/ZP3933NJ/A001.

The Treatment Hub Limited has not operated the facility or undertaken the treatment activities listed in the document referenced SOL0113ESP01. Storing waste in volumes that exceed the permitted limit restricts the capacity to treat waste in segregated batches and has resulted in mixing of hazardous wastes. Failing to store, treat and manage hazardous waste in breach of the permit, leads to a risk of pollution from these wastes leaving the facility and entering the environment at the receiving sites. These sites are not permitted to receive hazardous wastes and do not have the appropriate controls in place.” [Tab AB07, pages 291 – 292]

- 4 The Appellant had concerns that the justification for serving the Notice was flawed. The Appellant’s attempts to understand the Respondent’s reasons has been the subject of an extensive exchange of correspondence [Tabs AB08 – AB20, pages 297 - 498].
- 5 As a consequence of these exchanges, the Respondent provided the following succinct summary of its reason for serving the Notice in its letter of 9 September 2020 [Tab AB17, pages 457 - 458]:

“In order to be clear, The Treatment Hub’s permit was suspended because there is a breach of condition namely the amount of waste on site is in excess of that allowed under the permit. Due to this breach the waste on site is not being controlled, treated or segregated as required and therefore the waste leaving the site poses a risk to the recipient sites. NRW considers waste leaving the site is an absolute hazardous waste and only a hazardous landfill would have the appropriate infrastructure to deal with this waste so that it poses no risk to the environment.”

- 6 The Respondent was wrong to issue the Notice for the stated reason (or at all). The reasoning was flawed and the decision to issue the Notice was disproportionate and unwarranted.

The Law

- 7 The Notice is served under the Environmental Permitting (England and Wales) Regulations 2016 (as amended) (the “EPR”), Regulation 37(5). Regulation 37(5) provides:

“If the regulator considers that the manner of operating a regulated facility contravenes an environmental permit condition, and that such contravention involves a risk of pollution ... it may serve a suspension notice on the operator.”

- 8 Regulation 37(5) provides for a two-limbed test: first, there must be a contravention of an environmental permit condition, and second, that contravention must create a risk of pollution. Both limbs must be satisfied.
- 9 There is no dispute that the first limb is satisfied: the Appellant accepts that it is in contravention of its permit condition limiting the amount of waste at the Facility.
- 10 This Appeal concerns the second limb of the test: it is the Appellant’s case that contravention of the permit condition limiting the amount of waste at the Facility does not involve a risk of pollution. There is no risk of pollution at all, and certainly not a risk created by the amount of waste at the Facility, which has at all times been within manageable levels for the processes that are undertaken.
- 11 The power to serve a suspension notice under Regulation 37(5) must be compared and contrasted to the power to serve a suspension notice under Regulation 37(1). Regulation 37(1) provides a power to serve a suspension notice whether or not there is a contravention of an environmental permit condition (regulation 37(4)), but only in circumstances where there is a risk of serious pollution (regulation 37(2)).
- 12 Regulation 37(5) is a relatively new power, introduced in 2016 following a government consultation on enhanced powers for regulators to tackle waste crime. Before the 2016 EPR, a suspension notice could only be served where there was a risk of serious pollution (the Regulation 37(1) power). The rationale and policy objective for the new power was set out in the ‘Government response

to consultation on enhanced enforcement powers and other measures to tackle waste crime and entrenched poor performance in the waste management industry', October 2015, Defra and Welsh Government, as follows:

"The weight of argument is in favour of giving stronger powers to the regulators to take action against persistent and entrenched poor performance by some operators in the industry. The Government agrees that enforcement powers should continue to be linked to a risk of pollution rather than simply the breach of an enforcement notice. We therefore propose to make an amendment to regulation 37 of the 2010 Regulations. The amended legislation will expand the regulators' powers to issue a suspension notice where there has been a breach of a permit condition and a consequent risk of pollution."

- 13 It is clear from both the wording of Regulation 37(5) and the explanation in the Government's consultation response that "*a consequent risk of pollution*" is an important safeguard: it is not enough simply to have a breach of permit condition.
- 14 The question then becomes: what degree of risk is required? Given that the whole purpose of the environmental permitting regime is to authorise and control otherwise proscribed activities that inherently pose a risk to the environment, one might argue that any contravention of an environmental permit condition poses a risk to the environment. However, that is clearly an unsustainable argument: such an argument would make the second limb of Regulation 37(5) superfluous and redundant, and it is absolutely clear from the Government's consultation response that the second limb plays an important safeguarding role.
- 15 The Appellant's case that the second limb, the requirement for establishing the existence of a risk of pollution, must require identification of a risk that is real, specific, quantifiable and material.
- 16 There are of course other enforcement options for a contravention of environmental permit conditions: it is the Appellant's case that suspension notices are reserved only for those cases where there is a real, specific, quantifiable and material risk of pollution, arising as a direct consequence of the contravention of a permit condition.
- 17 The Respondent has accepted that its guidance to its officers on the use of its enforcement and sanctioning powers ("RGN 11") is out of date because it has not

been updated to address Regulation 37(5) (despite the passage of more than four years). RGN 11 is nevertheless the extant guidance for suspension notices and it clearly requires officers who issue suspension notices to ensure they can provide “*justification of the judgement, demonstration of a reasonable likelihood of impact, based on clear evidence, within the area of expertise of the person making the judgement*”. The Appellant has a right to test this ‘judgement’ through the appeal process. The Appellant believes that the Respondent’s justification will be found wanting.

- 18 Finally, Regulation 37(5) requires an exercise of discretion. If (and only if) the two limbs are satisfied, Regulation 37(5) provides that the Respondent “*may*” serve a notice: it is not mandatory. If the Respondent succeeds in its argument that a risk exists, it is still necessary to consider the proportionate response to that risk, which depends on the nature of the risk. The Notice should go no further than strictly required to address any such risk.
- 19 It appears from correspondence prior to the issue of this appeal that both parties are in broad agreement on the legal test.
- 20 The issue in this appeal is therefore a narrow one:
- (a) is the Respondent’s analysis of the risk of pollution from the Appellant’s contravention of its permit correct (requiring a reasonable likelihood of impact, not just a theoretical risk); and
 - (b) did that risk justify, on an objective basis, the exercise of discretion to serve the Notice?

Grounds of Appeal: The Respondent erred in its analysis of the level of the risk of pollution at the receiving sites

- 21 The Appellant’s case is simple: there is, in fact, no real, specific, quantifiable and material risk of pollution. As such, the legal justification for the service of the Notice is flawed and so the Notice was served in error and should be quashed.
- 22 The material is not “*absolute hazardous waste*”, as alleged by the Respondent. The Appellant will demonstrate in evidence that the material leaving the Facility is non-hazardous, both as a matter of classification under ‘Technical Guidance WM3: Waste Classification – Guidance on the classification and assessment of waste’, Natural Resources Wales et al., published 1 April 2014, last updated 26

June 2018 (“WM3”), and as a consequence of the actual hazard properties of the material, and therefore there is no risk of pollution at the receiving sites.

- 23 The evidential burden sits with the Respondent to demonstrate that there was a real, specific, quantifiable and material risk of pollution at the date of the service of the Notice and that it was a proportionate response to that risk to serve the Notice.
- 24 The explanation given by the Respondent at the time of the service of the Notice and in subsequent correspondence is based on a series of assumptions and misunderstandings which have been shown to be mistaken in the detailed correspondence between the parties prior to the issue of this appeal [Tabs AB08 – AB20, pages 297 - 498]. These grounds of appeal do not seek to repeat all of the reasons why the Respondent’s reasoning is flawed. It is not for the Appellant to counter all of the reasons why there ‘might’ be a risk of pollution. It is for the Respondent to demonstrate that there is in fact a real, specific, quantifiable and material risk of pollution.
- 25 It is the Appellant’s case that no such risk of pollution exists.
- 26 For the reasons set out above, the Appellant submits that the Notice should be quashed. In the alternative, and in the event that the Respondent demonstrates that a risk of pollution does exist, the Notice should be varied to address that specific risk, and should go no further than is necessary to address that risk.

BURGES SALMON LLP

15 SEPTEMBER 2020

Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

The Treatment Hub Limited

The Treatment Hub Swansea
Building 2
Westfield Industrial Park
Waunarlwydd
Swansea
SA5 4SF

Permit number
EPR/ZP3933NJ

The Treatment Hub Swansea

Permit number EPR/ZP3933NJ

Introductory note

This introductory note does not form a part of the permit

The main features of the permit are as follows. This Permit allows the operation of a Hazardous and Non Hazardous waste treatment facility. The Treatment Hub Limited will accept wastes as detailed in Table S2.2. These are primarily filter cakes and contaminated soils, for treatment using modified clays which incorporate reactive agents to chemically immobilise materials within the clays. Chemical and Cementitious additives (as detailed in table S2.1) may also be used in the process to improve the physical and chemical properties of the treated wastes. Each batch of waste accepted is tested prior to treatment and the additives and process is tailored depending on the chemical and physical properties of each batch. This enables The Treatment Hub Limited to tailor the process and resulting output depending on the waste accepted on site.

All activities are to take place within a building with an impermeable surface and sealed drainage and within the permit boundary as detailed on the site plan in Schedule 7. There are no point source emissions from the installation. Any liquid collected in the drainage system is to be tankered off site.

The status log of the permit sets out the permitting history, including any changes to the permit reference number.

Status log of the permit		
Description	Date	Comments
Application EPR/ZP3933NJ/A0001	Duly made 29/05/13	Application for hazardous and non hazardous waste treatment facility
Permit determined	20/09/13	Permit issued to The Treatment Hub Limited

End of introductory note

Permit

The Environmental Permitting (England and Wales) Regulations 2010

Permit number
EPR/ZP3933NJ

The Natural Resources Body for Wales (“Natural Resources Wales”) authorises, under regulation 13 of the Environmental Permitting (England and Wales) Regulations 2010

The Treatment Hub Limited (“the operator”),

whose registered office is
The Treatment Hub Limited
33 Cardiff Road
Taffs Well
Cardiff
Wales
United Kingdom
CF15 7RB

company registration number **08293060**

to operate an installation at
The Treatment Hub Swansea
Building 2
Westfield Industrial Park
Wanarlwydd
Swansea
SA5 4SF

to the extent authorised by and subject to the conditions of this permit.

Name	Date
	20/09/13

Authorised on behalf of Natural Resources Wales

Conditions

1 Management

1.1 General management

- 1.1.1 The operator shall manage and operate the activities:
- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and
 - (b) using sufficient competent persons and resources.
- 1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.
- 1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

1.2 Energy efficiency

- 1.2.1 The operator shall:
- (a) take appropriate measures to ensure that energy is used efficiently in the activities;
 - (b) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and
 - (c) take any further appropriate measures identified by a review.

1.3 Efficient use of raw materials

- 1.3.1 The operator shall:
- (a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;
 - (b) maintain records of raw materials and water used in the activities;
 - (c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and
 - (d) take any further appropriate measures identified by a review.

1.4 Avoidance, recovery and disposal of wastes produced by the activities

- 1.4.1 The operator shall take appropriate measures to ensure that:
- (a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and

- (b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and
 - (c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.
- 1.4.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

2 Operations

2.1 Permitted activities

- 2.1.1 The operator is only authorised to carry out the activities specified in schedule 1 table S1.1 (the “activities”).
- 2.1.2 Waste authorised by this permit shall be clearly distinguished from any other waste on the site.

2.2 The site

- 2.2.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan at schedule 7 to this permit.

2.3 Operating techniques

- 2.3.1
 - (a) The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by Natural Resources Wales.
 - (b) If notified by Natural Resources Wales that the activities are giving rise to pollution, the operator shall submit to Natural Resources Wales for approval within the period specified, a revision of any plan or other documentation (“plan”) specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.
- 2.3.2 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.
- 2.3.3 Waste shall only be accepted if:
 - (a) it is of a type and quantity listed in schedule 2 table S2.2 and
 - (b) it conforms to the description in the documentation supplied by the producer and holder.
- 2.3.4 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:
 - (a) the nature of the process producing the waste;
 - (b) the composition of the waste;
 - (c) the handling requirements of the waste;
 - (d) the hazardous property associated with the waste, if applicable; and
 - (e) the waste code of the waste.

- 2.3.5 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

Hazardous waste storage and treatment

- 2.3.6 Hazardous waste shall not be mixed, either with a different category of hazardous waste or with other waste, substances or materials, unless it is authorised by schedule 1 table S1.1 and appropriate measures are taken.

2.4 Pre-operational conditions

- 2.4.1 The activities shall not be brought into operation until the measures specified in schedule 1 table S1.3 have been completed.

3 Emissions and monitoring

3.1 Emissions of substances not controlled by emission limits

- 3.1.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.1.2 The operator shall:
- (a) if notified by Natural Resources Wales that the activities are giving rise to pollution, submit to Natural Resources Wales for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
 - (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.
- 3.1.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.2 Odour

- 3.2.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of Natural Resources Wales, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.
- 3.2.3 The operator shall:
- (a) if notified by Natural Resources Wales that the activities are giving rise to pollution outside the site due to odour, submit to Natural Resources Wales for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
 - (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

3.3 Noise and vibration

- 3.3.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of Natural Resources Wales, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.
- 3.3.2 The operator shall:
- (a) if notified by Natural Resources Wales that the activities are giving rise to pollution outside the site due to noise and vibration, submit to Natural Resources Wales for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;
 - (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

3.4 Pests

- 3.4.1 The activities shall not give rise to the presence of pests which are likely to cause pollution, hazard or annoyance outside the boundary of the site. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved pests management plan, have been taken to prevent or where that is not practicable, to minimise the presence of pests on the site.
- 3.4.2 The operator shall:
- (a) if notified by Natural Resources Wales, submit to Natural Resources Wales for approval within the period specified, a pests management plan which identifies and minimises risks of pollution from pests;
 - (b) implement the pests management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

4 Information

4.1 Records

- 4.1.1 All records required to be made by this permit shall:
- (a) be legible;
 - (b) be made as soon as reasonably practicable;
 - (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
 - (d) be retained, unless otherwise agreed in writing by Natural Resources Wales, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
 - (i) off-site environmental effects; and
 - (ii) matters which affect the condition of the land and groundwater.
- 4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by Natural Resources Wales.

4.2 Reporting

- 4.2.1 The operator shall send all reports and notifications required by the permit to Natural Resources Wales using the contact details supplied in writing by Natural Resources Wales.
- 4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to Natural Resources Wales by 31 January (or other date agreed in writing by Natural Resources Wales) each year. The report(s) shall include as a minimum:
- (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;
 - (b) the annual production /treatment data set out in schedule 4 table S4.1; and
 - (c) the performance parameters set out in schedule 4 table S4.2 using the forms specified in table S4.3 of that schedule.
- 4.2.3 The operator shall, unless notice under this condition has been served within the preceding four years, submit to Natural Resources Wales, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.
- 4.2.4 Within 1 month of the end of each quarter, the operator shall submit to Natural Resources Wales using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter.

4.3 Notifications

- 4.3.1 (a) In the event that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately —
- (i) inform Natural Resources Wales,
 - (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and
 - (iii) take the measures necessary to prevent further possible incidents or accidents;
- (b) in the event of a breach of any permit condition the operator must immediately—
- (i) inform Natural Resources Wales, and
 - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
- (c) in the event of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.
- 4.3.2 Any information provided under condition 4.3.1 (a)(i), or 4.3.1 (b)(i) where the information relates to the breach of a limit specified in the permit, shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule
- 4.3.3 In any other case:
- (a) the death of any of the named operators (where the operator consists of more than one named individual);
 - (b) any change in the operator's name(s) or address(es); and

- (c) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.
- 4.3.4 Where Natural Resources Wales has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform Natural Resources Wales when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to Natural Resources Wales at least 14 days before the date the monitoring is to be undertaken.
- 4.3.5 Natural Resources Wales shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

Where the operator is a registered company:

 - (a) any change in the operator's trading name, registered name or registered office address; and
 - (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

Where the operator is a corporate body other than a registered company:

 - (a) any change in the operator's name or address; and
 - (b) any steps taken with a view to the dissolution of the operator.
- 4.3.6 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:
 - (a) Natural Resources Wales shall be notified at least 14 days before making the change; and
 - (b) the notification shall contain a description of the proposed change in operation.
- 4.3.7 Natural Resources Wales shall be given at least 14 days notice before implementation of any part of the site closure plan.

4.4 Interpretation

- 4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.
- 4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "without delay", in which case it may be provided by telephone.

Schedule 1 - Operations

Table S1.1 activities

Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
A1	S5.3A(1)(a)	Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving: (ii) Physico-chemical treatment (vi) Recycling or reclamation of inorganic materials other than metals or metal compounds. R5 & R3.	From receipt of raw materials and waste to despatch of finished product or disposal / recovery of treated waste. Only waste types as specified in Table S2.1 shall be accepted. All treatment of waste shall take place on an impermeable surface with a sealed drainage system.
A2	S5.4A(1)(b)	A mix of disposal and recovery of non hazardous waste with a capacity exceeding 75 tonnes per day involving: (iii) treatment of slags and ashes. R5 & R3	From receipt of raw materials and waste to despatch of finished product or disposal / recovery of treated waste. Only waste types as specified in Table S2.1 shall be accepted. All treatment of waste shall take place on an impermeable surface with a sealed drainage system.
A3	S5.6A(1)(a)	Temporary storage of hazardous waste with a total capacity exceeding 50 tonnes pending any of the activities listed in Section 5.3. R13	From receipt of raw materials and waste to despatch of finished product or disposal / recovery of treated waste. Only waste types as specified in Table S2.1 shall be accepted. All storage of waste shall take place on an impermeable surface with a sealed drainage system.

Table S1.2 Operating techniques

Description	Parts	Date Received
EPR 1 - How to Comply With Your Environmental Permit.	All	N/A
Application supporting document SOL0113ESP01 received as part of application EPR/ZP3933NJ/A001	All	14/03/13

Table S1.3 Pre-operational measures

Reference	Pre-operational measures
1	Prior to the commencement of commissioning, the Operator shall send the site Environment Management System (EMS) to Natural Resources Wales and make available for inspection all documents and procedures which form part of the EMS. The EMS shall be developed in line with the requirements of EPR1: How to comply with your environmental permit. The documents and procedures set out in the EMS shall form the written management system referenced in condition 1.1.1 (a) of the permit. The EMS shall be agreed in writing with Natural Resources Wales Prior to operations commencing.

Schedule 2 - Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels

Raw materials and fuel description	Specification
Sodium modified calcium bentonite	Maximum of 275 tonnes per year
Envirotrete 'A'	Maximum of 17 tonnes per year
Envirotrete 'B'	Maximum of 18 tonnes per year
Envirotrete 'C'	Maximum of 0.7 tonnes per year
Cementitious Materials – Ordinary Portland cement, Pulverised fuel ash, other pozzolanic materials (solids)	Maximum of 800 tonnes per year
Water	-

Table S2.2 Permitted waste types and quantities for the hazardous and non hazardous waste treatment installation.

Maximum quantity	The total annual throughput shall not exceed 40,000 tonnes per year.
Waste code	Description
11	WASTES FROM CHEMICAL SURFACE TREATMENT AND COATING OF METALS AND OTHER MATERIALS; NON-FERROUS HYDRO-METALLURGY
11 01	wastes from chemical surface treatment and coating of metals and other materials (for example galvanic processes, zinc coating processes, pickling processes, etching, phosphatising, alkaline degreasing, anodising)
11 01 09*	sludges and filter cakes containing dangerous substances
11 01 10	sludges and filter cakes other than those mentioned in 11 01 09
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)
17 05	soil (including excavated soil from contaminated sites), stones and dredging spoil
17 05 03*	soil and stones containing dangerous substances
17 05 04	soil and stones other than those mentioned in 17 05 03
19	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE
19 01	wastes from incineration or pyrolysis of waste
19 01 05*	filter cake from gas treatment
19 01 11*	bottom ash and slag containing dangerous substances
19 01 12	bottom ash and slag other than those mentioned in 19 01 11
19 01 13*	fly ash containing dangerous substances
19 01 14	fly ash other than those mentioned in 19 01 13
19 02	wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)
19 02 05*	sludges from physico/chemical treatment containing dangerous substances
19 02 06	sludges from physico/chemical treatment other than those mentioned in 19 02 05
19 03	stabilised/solidified wastes ¹
19 03 04*	wastes marked as hazardous, partly ² stabilised

¹ Stabilisation processes change the dangerousness of the constituents in the waste and thus transform hazardous waste into non-hazardous waste. Solidification processes only change the physical state of the waste (e.g. liquid into solid) by using additives without changing the chemical properties of the waste.

Table S2.2 Permitted waste types and quantities for the hazardous and non hazardous waste treatment installation.

Maximum quantity	The total annual throughput shall not exceed 40,000 tonnes per year.
Waste code	Description
19 03 05	stabilised wastes other than those mentioned in 19 03 04
19 03 06*	wastes marked as hazardous, solidified
19 03 07	solidified wastes other than those mentioned in 19 03 06
19 13	wastes from soil and groundwater remediation
19 13 01*	solid wastes from soil remediation containing dangerous substances
19 13 02	solid wastes from soil remediation other than those mentioned in 19 13 01
19 13 03*	sludges from soil remediation containing dangerous substances
19 13 04	sludges from soil remediation other than those mentioned in 19 13 03
19 13 05*	sludges from groundwater remediation containing dangerous substances
19 13 06	sludges from groundwater remediation other than those mentioned in 19 13 05

² A waste is considered as partly stabilised if, after the stabilisation process, dangerous constituents which have not been changed completely into non-dangerous constituents could be released into the environment in the short, middle or long term.

Schedule 3 – Emissions and monitoring

There are no emission limits or associated monitoring requirements.

Schedule 4 - Reporting

Parameters, for which reports shall be made, in accordance with conditions of this permit, are listed below.

Table S4.1: Annual production/treatment

Parameter	Units
Hazardous waste treated	Tonnes
Non hazardous waste treated	Tonnes
Marketable product produced	Tonnes

Table S4.2 Performance parameters

Parameter	Frequency of assessment	Units
Water usage	Annually	Tonnes
Energy usage	Annually	MWh
Total raw material used	Annually	Tonnes
Waste sent for disposal	Annually	Tonnes
Waste recovered	Annually	Tonnes

Table S4.3 Reporting forms

Media/parameter	Reporting format	Date of form
Performance indicators	Form performance 1 or other form as agreed in writing by Natural Resources Wales	20/09/13

Schedule 5 - Notification

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the EP Regulations.

Part A

Permit Number	
Name of operator	
Location of Facility	
Time and date of the detection	

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution

To be notified within 24 hours of detection	
Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a limit

To be notified within 24 hours of detection unless otherwise specified below	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Time periods for notification following detection of a breach of a limit	
Parameter	Notification period

(c) Notification requirements for the detection of any significant adverse environmental effect	
To be notified within 24 hours of detection	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B - to be submitted as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the facility in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 - Interpretation

“Accident” means an accident that may result in pollution.

“Application” means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 5 to the EP Regulations.

“Annex I” means Annex I to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“Annex II” means Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“Authorised officer” means any person authorised by Natural Resources Wales under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in section 108(4) of that Act.

“Background concentration” means such concentration of that substance as is present in:

- for emissions to surface water, the surface water quality up-gradient of the site; or
- for emissions to sewer, the surface water quality up-gradient of the sewage treatment works discharge.

“Best available treatment, recovery and recycling techniques” shall have the meaning given to it in the document published jointly by the Department for Environment, Food and Rural Affairs, the Welsh Assembly Government and the Scottish Executive on 27th November 2006, entitled “Guidance on Best Available Treatment, Recovery and Recycling Techniques (BATRR) and Treatment of Waste Electrical and Electronic Equipment (WEEE);

“Building” means a construction that has the objective of providing sheltering cover and minimising emissions of noise, particulate matter, odour and litter.

“Controlled substances” means chlorofluorocarbons, other fully halogenated chlorofluorocarbons, halons, carbon tetrachloride, 1,1,1-trichloroethane, methyl bromide, hydrobromofluorocarbons and hydrochlorofluorocarbons listed in Annex I of Regulation (EC) No 2037/2000 of the European Parliament and of the Council of 29 June 2000 on substances that deplete the ozone layer, including their isomers, whether alone or in a mixture, and whether they are virgin, recovered, recycled or reclaimed. This definition shall not cover any controlled substance which is in a manufactured product other than a container used for the transportation or storage of that substance, or insignificant quantities of any controlled substance, originating from inadvertent or coincidental production during a manufacturing process, from unreacted feedstock, or from use as a processing agent which is present in chemical substances as trace impurities, or that is emitted during product manufacture or handling.

“D” means a disposal operation provided for in Annex I to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“Disposal” means any of the operations provided for in Annex IIA to Directive 2006/12/EC of the European Parliament and of the Council of 5 April 2006 on Waste.

“Emissions to land” includes emissions to groundwater.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 2010 No.675 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

“Emissions of substances not controlled by emission limits” means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are not controlled by an emission or background concentration limit..

"Groundwater" means all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

"Groundwater protection zones 1 and 2" have the meaning given in the document titled "Groundwater Protection: Policy and Practice" published by the Environment Agency in 2006.

"Hazardous property" has the meaning given in Schedule 3 of the Hazardous Waste (England and Wales) Regulations 2005 No.894 and the Hazardous Waste (Wales) Regulations 2005 No. 1806 (W.138).

"Hazardous waste" has the meaning given in the Hazardous Waste (England and Wales) Regulations 2005 No.894, the Hazardous Waste (Wales) Regulations 2005 No. 1806 (W.138), the List of Wastes (England) Regulations 2005 No.895 and the List of Wastes (Wales) Regulations 2005 No. 1820 (W.148).

"MCERTS" means the Environment Agency's Monitoring Certification Scheme.

"Quarter" means a calendar year quarter commencing on 1 January, 1 April, 1 July or 1 October.

"R" means a recovery operation provided for in Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste.

"Recovery" means any of the operations provided for in Annex IIB to Directive 2006/12/EC of the European Parliament and of the Council of 5 April 2006 on Waste.

"Solvent Emissions Directive" means Directive 1999/13/EC (as amended by Directive 2004/42/EC) on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations.

"Waste code" means the six digit code referable to a type of waste in accordance with the List of Wastes (England) Regulations 2005, or List of Wastes (Wales) Regulations 2005, as appropriate, and in relation to hazardous waste, includes the asterisk.

"WFD" means Waste Framework Directive 2008/98/EC of the European Parliament and of the Council on waste.

Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

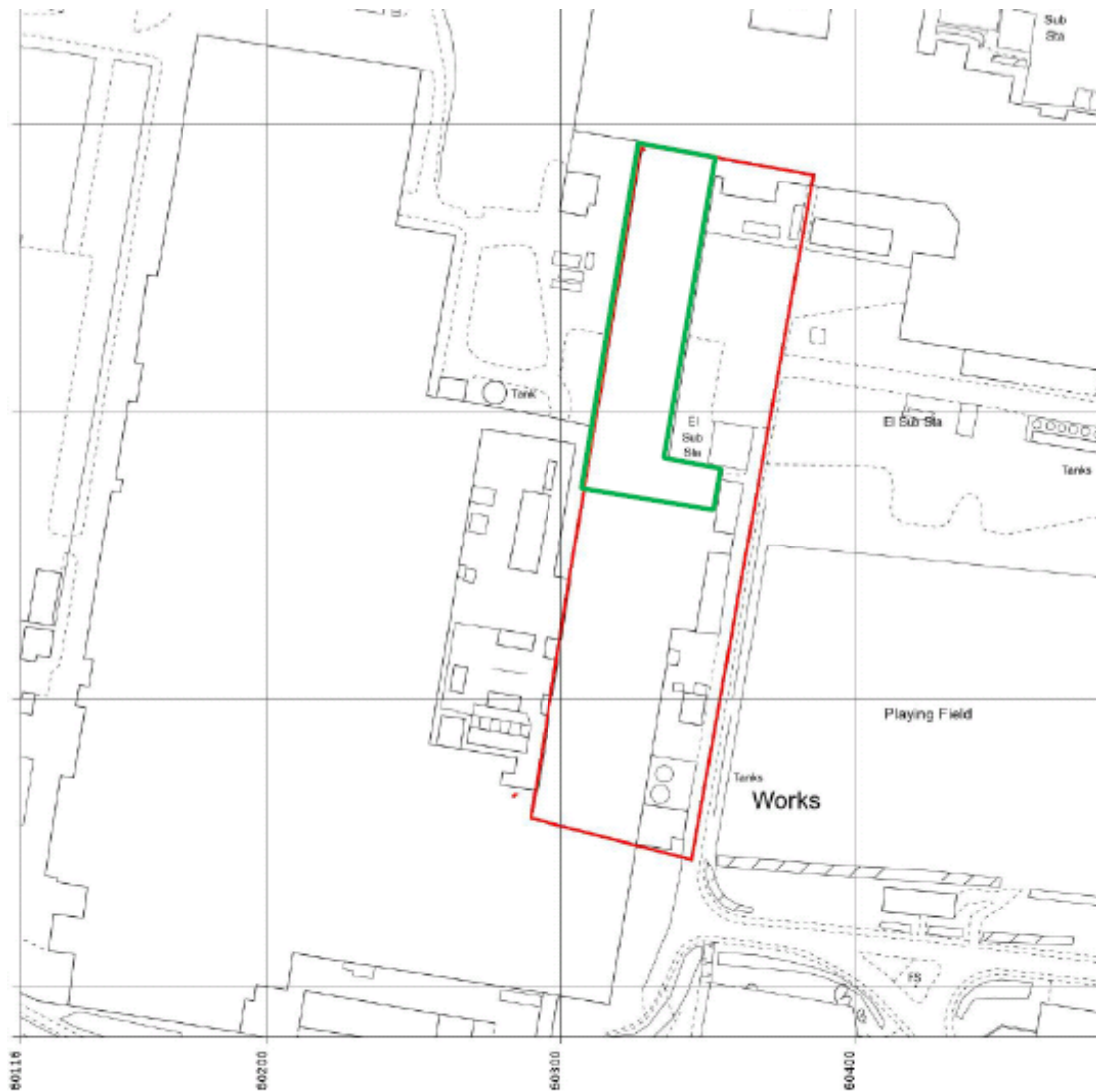
Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or

in relation to emissions from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content

"Year" means calendar year ending 31 December.

Schedule 7 - Site plan



LEASEHOLD BOUNDARY SHOWN IN RED

SITE INSTALLATION BOUNDARY SHOWN IN GREEN

© Crown Copyright and database right 2013. Ordnance Survey licence number 100019741.

END OF PERMIT

Permit Number: EPR/ZP3933NJ

Operator:

The Treatment Hub Limited

Facility: Building 2

Form Number: Performance1

Date of Form: 20/09/13

Reporting of other performance indicators for the period DD/MM/YYYY to DD/MM/YYYY

Parameter	Units
Water usage	Tonnes
Energy usage	MWh
Total raw material used	Tonnes
Waste sent for disposal	Tonnes
Waste recovered	Tonnes

Operator's comments :

Signed
(Authorised to sign as representative of Operator)

Date.....

Environmental Management Plan

Environmental Management System Overview

The Hub

Advanced material treatment, remediation and recycling technology

Environmental Management System Overview.

This Environmental Management System details the written management systems (procedures) required to protect the environment. The procedures identify and control key activities to ensure there is minimal risk of pollution including those arising from operations, maintenance, accidents, non-conformance, closure and those drawn to the attention of The Treatment Hub as a consequence of complaint. The Environmental Management System will demonstrate through training records of individuals and induction the use of sufficiently competent persons and resources.

ENVIRONMENTAL POLICY IMPLEMENTATION.

The Board of Directors are responsible for defining and publishing or issuing the “Environmental Management System” of The Treatment Hub to all employees / sub-contractors.

The statement will cover the quality aims of The Treatment Hub and its commitment to achieving them by complying with the procedures defined in the Environmental Management System.

The Board of Directors are responsible for the issue and / or review of the Environmental Management System to all staff will be carried out and recorded on individual training records which verify understanding and commitment. Part of this process will incorporate outlining the organisation’s commitment to meeting customer and statutory and regulatory requirements and recording this also.

Additional copies of the Environmental Management System will be displayed within the working environment to supplement individual issue & publicise the company's commitment to the environment.

ORGANISATION / RESPONSIBILITY.

The Board of Directors is responsible for ensuring the Environmental Management System is correctly defined & implemented. The Board is also responsible for ensuring that through the management team that adequate competent personnel are in place or being trained to meet the requirements of the quality system implemented, including continual improvement support.

Administrative control, maintenance of and compliance with the Environmental Management System is maintained by appointed Environmental Procedures Manager for many of the defined routine elements.

The Environmental Procedures Manager is responsible for co-ordinating all routine administration, documentation control, training and Implementation activities as defined in the procedures. Also for collating quality data for presentation to management review meetings

The Environmental Procedures Manager will also organise the scheduling & agenda for Management Review meetings and ensure that all scheduled internal audits as defined on the regional Internal Audit Plan are carried out by nominated quality representative & that report copies / summaries are included in subsequent Management reviews.

It is the responsibility of all staff to carry out the defined activity (action) within a relevant procedure as identified and ensure that where appropriate Management Records are completed and maintained.

The Hub

Advanced material treatment, remediation and recycling technology

QUALITY / IMPROVEMENT RESPONSIBILITY.

Each employee is responsible for complying with & achieving or exceeding the standard related to their activity and is encouraged to:

- Draw management's attention to issues that may compromise quality
- Propose suggestions to improve it.

DOCUMENT /PROCEDURE RESPONSIBILITY.

Should procedures require updating it is the responsibility of all staff to draw management's attention to this, so controlled amendment can be achieved, following the document control procedure.

Annual review of the Environmental Management Policy will be achieved via the Management Review process by inclusion on the agenda as appropriate.

MANAGEMENT REVIEW.

The Board of Directors will ensure that Management Review meetings will be held periodically (maximum month intervals), chaired by the Environmental Procedures Manager and senior management team.

The meetings objective will be to formalise and record the continuous improvement process, ensure the Environmental Management System is effectively achieving its objectives and ensure correct system implementation by review. Topics reviewed will encompass all elements of the Environmental Management System the following sources of information will support the agenda & review process:

- Minutes of previous meetings
- Internal and Third Party Audit reports and results.
- Non - Conformance / Corrective & Preventive Action reports.
- Quality Trends & Quality Objective targets
- Continual Improvement / Customer Satisfaction Process
- Annual system & policy review to maintain Quality Focus
- Training Needs and appropriate Training Plan
- Supplier (negative) performance trends
- Document control change and / or improvement proposals.

The Environmental Procedures Manager is responsible for the meeting to be minuted so the review process is recorded, with actions and timescales documented & issued to the appropriate source for resolution. Subsequent review must be arranged and recorded to verify that actions have been completed in agreed time scales.

ENERGY EFFICIENCY.

The Board of Directors will take measures to ensure that energy is used efficiently.

An agenda item for the Management Review meeting will be a review of suitable opportunities to improve energy efficiency. The Environmental Procedures Manager will be responsible for initiating and implementing appropriate measures as agreed.

EFFICIENT USE OF RAW MATERIALS.

The Board of Directors will take measures to minimise the use of raw materials (including water).

The Hub

Advanced material treatment, remediation and recycling technology

An agenda item for the Management Review meeting will be a review of suitable opportunities to improve energy efficiency. The Environmental Procedures Manager will be responsible for initiating and implementing appropriate measures as agreed.

AVOIDANCE, RECOVER AND DISPOSAL OF WASTES PRODUCED BY THE ACTIVITIES.

All waste will be recovered or disposed of without endangering human health or without using processes or methods which could harm the environment.

To demonstrate this comprehensive recording procedures will be implemented.

Procedures

The Hub

Advanced material treatment, remediation and recycling technology

1.0 Waste Pre-Acceptance

This procedure describes the procedure which is followed, records kept and actions taken as part of the Waste Pre-Acceptance process.

Only those wastes listed in table S3.2 of the Permit EPR/ZP3933NJ can be accepted.

No waste containing asbestos can / will be accepted.

No waste containing volatile materials / substances can / will be accepted.

Currently contaminated material may be received from two distinct sources:-

- Waste streams from manufacturing processes (including water treatment).
- Contaminated soils generated from land development.

Waste streams from manufacturing processes (including water treatment).

These waste streams (by nature) will consist of ongoing contracts whereby the waste stream is fully characterised and evaluated by means of client analysis, analysis by The Treatment Hub and treatability trials. The frequency and nature of analysis prior to receipt will be dependant on the variability of the test waste. Each waste stream will be assessed individually by the Technical Director (or nominated person) and the appropriate Waste Stream Evaluation Form (Form TH-002) completed.

Contaminated soils resulting from land development.

These waste streams (by nature) are likely to be one off and variable in nature. The waste will be characterised through either client analysis or directly by The Treatment Hub. Each unique project will be assessed individually by the Technical Director (or nominated person) and the appropriate Contaminated Soils Evaluation Form (Form TH-001) completed.

The Hub

Advanced material treatment, remediation and recycling technology

1.1 Waste Acceptance

This procedure describes the procedure which is followed, records kept and actions taken as part of the Waste Acceptance process.

Currently contaminated material may be received from two distinct sources;-

- Waste streams from manufacturing processes (including water treatment).
- Contaminated soils generated from land development.

Waste streams from manufacturing processes (including water treatment).

All contaminated material, substances or products must be received, inspected, accepted or rejected, handled, kept, despatched and recorded in accordance with the standards specified below

- a. Contaminated material, substances or products inspection - All contaminated material, substances or products to be treated at the operating site, will be inspected on receipt to confirm their description and composition against the relevant accompanying documentation (Waste Pre-Acceptance criteria specification within the Waste Stream Evaluation form). All contaminated material, substances or products will be kept separate from and will not be covered by or mixed with other contaminated material, substances or products until they have been confirmed and recorded for acceptance at the operating site. Deliveries judged as not meeting the Waste Pre-Acceptance (non-complaint) will be rejected and returned.
- b. Quarantine storage and rejection of non-complaint material, substances or products - Any items of non-permitted contaminated material, substances or products which are detected after acceptance at the operating site will be placed immediately in a designated quarantine storage area. All waste in the quarantine area must be kept segregated from other contaminated material, substances or products which are or are likely to be incompatible. Quarantined wastes will be removed from site or treated within 7 days. A Quarantine Report (Form TH-004) will be raised and actioned.

Each delivery will be treated as an individual batch and assigned a unique batch number accordingly.

The material will be stockpiled within the “Untreated Materials” area and clearly labelled with the following

- Client
- Date
- Hazards
- Batch Number

A Contaminated Soils / Waste Stream Treatment Form (Form TH-003) will be raised and the details logged onto the Waste Tracking System (Batch Number Record, TH-DB002).

Contaminated soils resulting from land development.

Generally each site will be treated as an individual batch (unless otherwise determined at the Waste Pre-Acceptance stage) and assigned a unique batch number accordingly.

All contaminated material, substances or products must be received, inspected, accepted or rejected, handled, kept, despatched and recorded in accordance with the standards specified below

- a. Contaminated material, substances or products inspection - All contaminated material, substances or products to be treated at the operating site, will be inspected on receipt to confirm their description and composition against the relevant accompanying documentation (Waste Pre-Acceptance criteria specification within the Waste Stream Evaluation form). All

The Hub

Advanced material treatment, remediation and recycling technology

contaminated material, substances or products will be kept separate from and will not be covered by or mixed with other contaminated material, substances or products until they have been confirmed and recorded for acceptance at the operating site. Deliveries judged as not meeting the Waste Pre-Acceptance (non-compliant) will be rejected and returned.

- b. Quarantine storage and rejection of non-complaint material, substances or products - Any items of non-permitted contaminated material, substances or products which are detected after acceptance at the operating site will be placed immediately in a designated quarantine storage area. All waste in the quarantine area must be kept segregated from other contaminated material, substances or products which are or are likely to be incompatible. Quarantined wastes will be removed from site or treated within 7 days. A Quarantine Report will be raised and actioned.

The material will be stockpiled within the “Untreated Materials” area and clearly labelled with the following

- Client
- Date
- Hazards
- Batch Number

A Contaminated Soils / Waste Stream Treatment Form (Form TH-003) will be raised and the details logged onto the Waste Tracking System (Batch Number Record, TH-DB002).

General.

Emissions.

A Emission Management Plan forms part of procedure 1.5 Chemical Stabilisation and Immobilisation, whereby the Environmental and Health & Safety Questionnaire / Check List (Form TH-006) is completed prior to works commencing, this form should be implemented during all activities which involves moving waste within the facility and therefore as such includes all deliveries.

Dust is to be minimised and where necessary dust suppression systems will be utilised.

Wastes containing VOC's will not be accepted, this will be monitored at point of entry.

Odours.

Odours will be monitored in a similar manner to emissions and will form part of the Emission Management Plan.

Wastes containing acceptable odours will not be accepted, this will be monitored at point of entry

The Hub

Advanced material treatment, remediation and recycling technology

1.2 Waste and Material Storage.

This procedure describes the procedure which is followed, records kept and actions taken as part of the Waste and Material Storage process.

In accordance with the Permit EPR/ZP3933NJ, all materials stored within facility, require that materials are placed on an impermeable area and located away from the building drainage system (at least that the drainage system is isolated).

Raw Material Storage.

Raw materials will ordered, stored and used on a “Just in Time” basis.

Excess ram materials as a consequence of minimum pack size will be used in strict rotation of age.

A record of all ram material purchase, delivery and usage will be maintained (TH-DB001).

Any material outside its “shelf life” will be placed into quarantine pending action by the Technical Director, a Quarantine Notice (Form TH-004) will be raised.

All raw materials will be stored in accordance with supplier / manufacturer instructions to maximum shelf life and usability.

All raw materials will be stored securely.

Any raw materials listed in the Permit EPR/ZP3933NR) Schedule 2 Table S2.1 must conform to the specification set out in the table.

All raw materials received must be checked at point of entry against the original order information and delivery note for accuracy. Only materials in agreement with this documentation can be accepted. Raw materials are logged onto the Raw Material Record (TH-DB001).

Untreated Waste.

As outlined TH 1.1 material meeting the Waste Acceptance criteria will be stockpiled within the “Untreated Materials” area and clearly labelled with the following

- Client
- Date
- Hazards
- Batch Number

Material will remain within this area until scheduled for treatment or quarantined.

The status of the batch will be maintained on the Waste Tracking System (TH-DB002).

Batches (where practically possible) will be stored within individual bays.

Whilst stored, batches will be regularly inspected to ensure compliance with both Environmental and Health & Safety considerations.

Batches will be routinely tested as indicated within the Acceptance Protocol of the Contamination Soils Evaluation Form (Form TH-001) or the Acceptance Protocol of the Waste Stream Evaluation Form (Form TH-002), whichever is applicable.

Quarantine.

The Hub

Advanced material treatment, remediation and recycling technology

It may be required during the storage operation that material may need to be quarantined. This may consist of moving the material to a designated Quarantine Area or by simply Quarantining of existing area. Reasons for this may include;

- Further analysis shows waste not meeting Waste Pre-Acceptance Criteria
- Evidence of Asbestos within waste (not previously indicated).
- Treated material not meeting Validation Criteria.

This is not an exhaustive list and merely indicates possible scenarios.

In the event material is placed in a Quarantine situation, then a Quarantine Notice (Form TH-004) is raised.

Material within Quarantine will be regularly inspected to ensure compliance with both Environmental and Health & Safety considerations.

Treated Materials.

Treated materials will be stockpiled within the “Treated Materials” area and clearly labelled with the following

- Client
- Date
- Batch Number
- Validation Status – Traffic Light label where GREEN = passed validation, RED = awaiting analysis

Material will remain within this area until scheduled for shipment or quarantined.

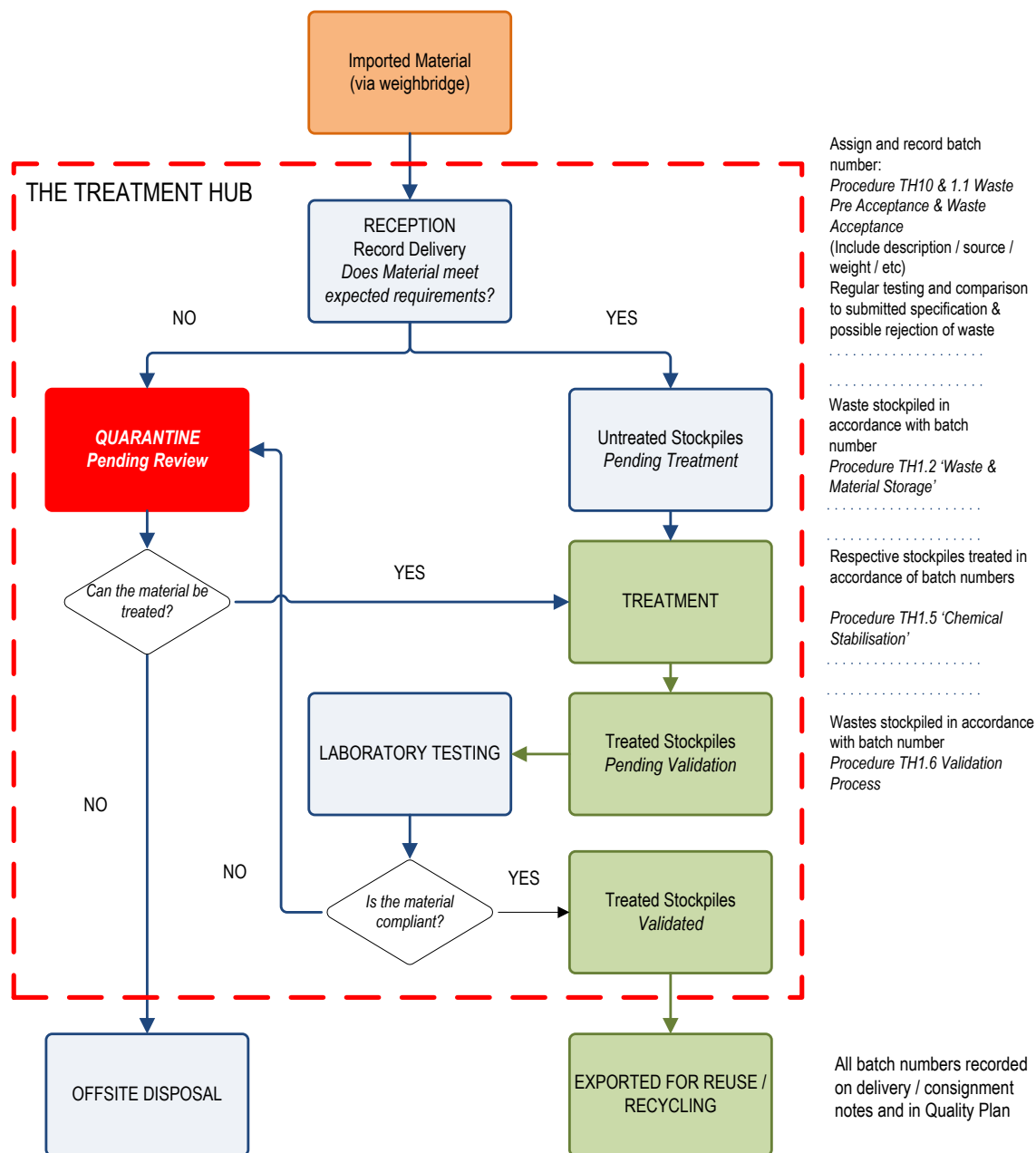
The status of the batch will be maintained on the Waste Tracking System.

Batches (where practically possible) will be stored within individual bays.

1.3 Document and Data Control.

This procedure describes the procedure which is followed, records kept and actions taken as part of the Document and Data Control.

The following Protocols show the Process Control of Waste / Contaminated Soils through The Treatment Hub.



On receipt of the Waste / Contaminated Soils at the Treatment Hub (TH-1.1 Waste Acceptance) a Batch Number is assigned to the material and the recorded both on the Waste Tracking System (TH-DB002) and Contaminated Soils / Waste Stream Treatment Form (Form TH-003).

The Waste Tracking System is a live database which indicates the current status of each batch in the system (including historical).

The Hub

Advanced material treatment, remediation and recycling technology

The Contaminated Soils / Waste Stream Treatment Form (Form TH-003) tracks the material through the treatment process, including Treatment, Validation and Shipment information.

In the event the material is quarantined the batch number is recorded Quarantine Notice Form (Form TH-004).

An individual record is maintained for each batch within the system, which includes

- Contaminated Soils / Waste Stream Treatment Form (Form TH-003).
- Quarantine Notice Form (Form TH-004, if applicable)
- Details of Waste Pre-Acceptance including copy of Contaminated Soils Evaluation Form (Form TH-001) or Waste Stream Evaluation Form (Form TH-002), whichever is applicable, supporting Certificates of Analysis, communiqués (emails, letters, etc), etc.
- Details of Waste Acceptance including transport dockets, observations, comments, etc
- Validation supporting documentation, including Certificates of Analysis, communiqués (emails, letters, etc), etc.
- Shipment supporting documentation, including consignment note, transport dockets, certificate of conformity, etc.

On site activities will either be recorded in a written site diary and will cover the following items.

- construction work,
- maintenance,
- breakdowns,
- emergencies,
- problems with contaminated material, substances or products treated, received and action taken,
- operating site inspections and consequent actions carried out by the operator,
- technically competent management attendance on the operating site: the date and the time onto the operating site and the time left operating site,
- complaints about authorised operations and actions taken,
- environmental problems and remedial actions.

The Hub

Advanced material treatment, remediation and recycling technology

1.4 Purchasing.

This procedure describes the procedure which is followed, records kept and actions taken as part of the Purchasing process.

Sub Contractors.

Only Approved Sub Contractors can be used.

A database of Approved Sub Contractors is maintained (TH-DB003).

New Sub Contractors need to complete a Sub Contractor Qualification Questionnaire prior to being Approved.

A number of pre-existing Sub Contractors can be utilised based on previous experience with Envirotreat or Earth Science Partnership.

All Sub Contractors status is reviewed annually.

A copy of current Insurance Policy is required to be kept on record.

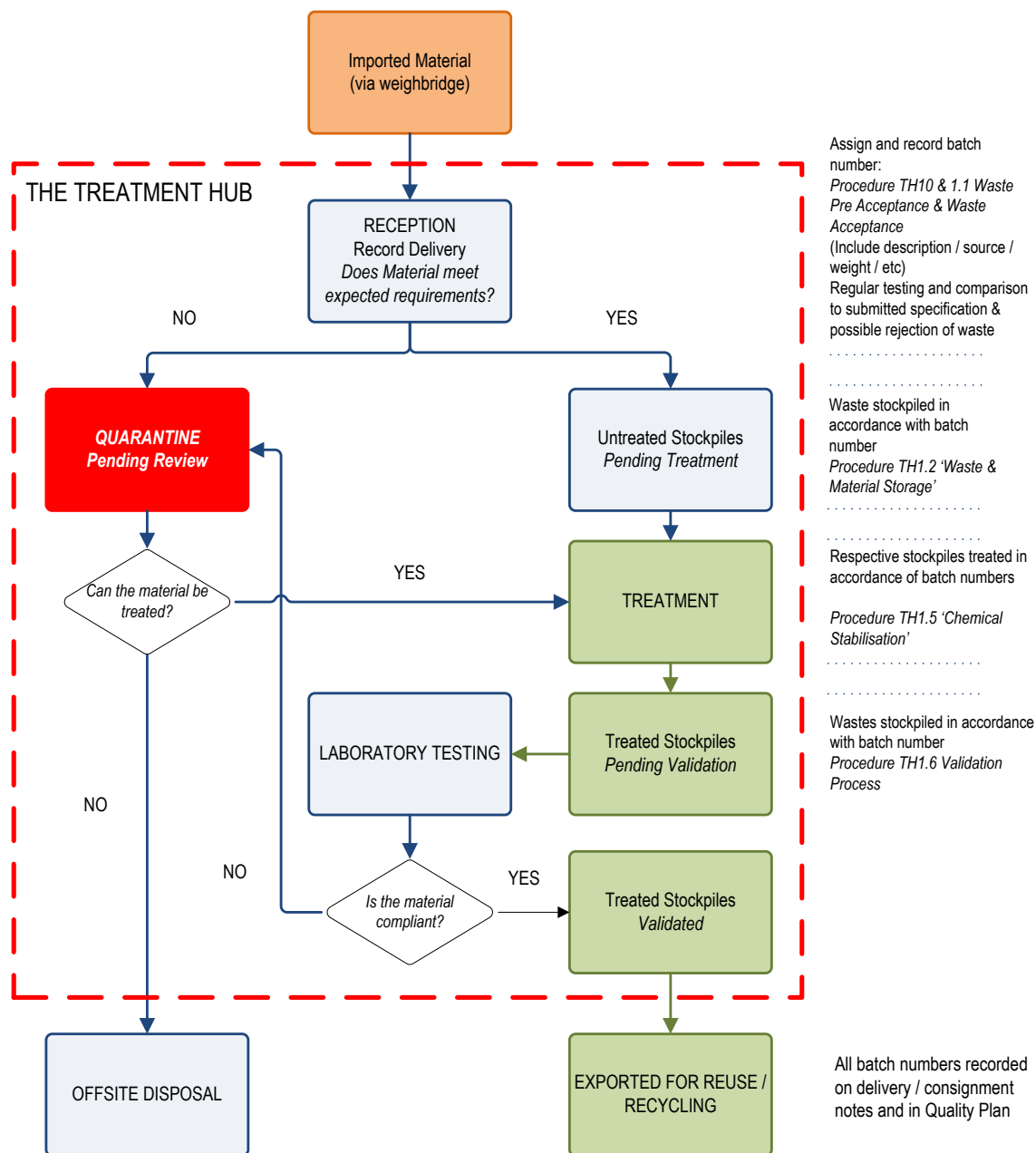
Suppliers.

Generally suppliers do not need to be approved; however there are a number of “preferred” suppliers for chemicals / reagents / services, these are listed in the preferred supplier database (TB – DB004).

1.5 Process Control (including Chemical Stabilisation and Immobilisation).

This procedure describes the procedure which is followed, records kept and actions taken as part of the Process Control (including Chemical Stabilisation and Immobilisation process).

The following Protocols show the Process Control of Waste / Contaminated Soils through The Treatment Hub.



Following Waste Pre-Acceptance and Waste Acceptance, Contaminated Soils / Waste will be treated in accordance with the Proposed Treatment section on the Contaminated Soils Evaluation Form (Form TH-001) or Waste Stream Evaluation Form (Form TH-002), whichever is applicable. The Contaminated Soils Evaluation Form (Form TH-001) or Waste Stream Evaluation Form (Form TH-

The Hub

Advanced material treatment, remediation and recycling technology

002) provides the E-Clay slurry formulation together with the Treatment Methodology which will provide the following:-

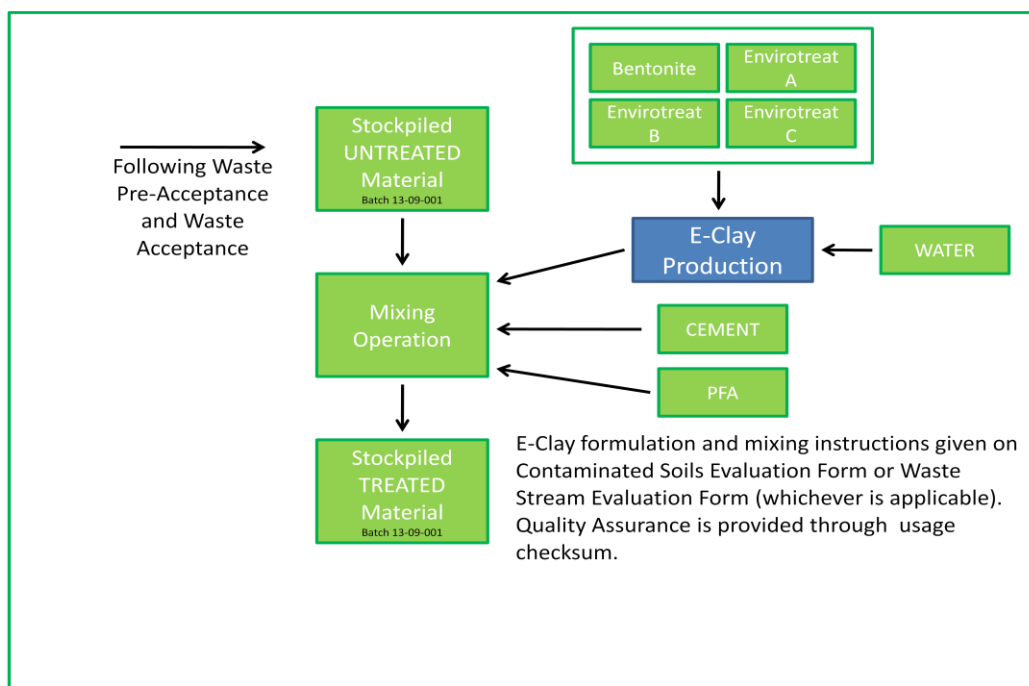
- Instruction of how to prepare a batch of E-Clay slurry.
- Volume of Contaminated Soil / Waste this quantity of E-Clay slurry will treat
- How to mix the Contaminated Soil / Waste with the E-Clay slurry and cement

Prior to, during and following daily operations the Daily Environmental and Health & Safety Questionnaire / Check List (Form TH-006) requires completing and signing off. The completed form should be filled

Following treatment the quantities of reagent used will be entered onto the Contaminated Soils / Waste Stream Treatment Form together with respective batch numbers used. Actual usage will be cross checked against expected usage (based on E-Clay formulation and batch size). Variations of up to 10% (+/-) are considered within acceptable limits. Failure requires the material to be placed in Quarantine pending further investigation.

The Waste Tracking System will require updating to reflect the status of the batch.

The Treatment Process is summarized in the protocol below.



Noise and vibration are inherently most probable during the treatment phase of operations. All plant and equipment will be regularly maintained in accordance with manufacturer requirements.

Noise monitoring will be undertaken as part of onsite activities.

Validation

Validation will be undertaken in accordance with TH 1.6 Validation Process.

The Hub

Advanced material treatment, remediation and recycling technology

Shipping / Dispatch

Once the treated material is accepted as passing the validation protocol (Form TH-003), then arrangements can be made for shipment off site.

The treated material is matched against the identified end user in terms of required specification and volume required (recorded on Form TB-003) A Shipping Form is raised (Form TH-010) and transport arrangements made to meet the order.

The Hub

Advanced material treatment, remediation and recycling technology

1.6 Validation Process.

This procedure describes the procedure which is followed, records kept and actions taken as part of the Validation Process.

Following treatment the treated material will be stored within the “Treated Materials” area. Where upon a number of representative samples will be taken for Validation purposes.

The number of samples and type of Validation testing required will differ depending on the waste stream and intended end use. These requirements will be specified on the Contaminated Soils Evaluation Form or Waste Stream Evaluation Form (whichever is applicable).

All samples for chemical testing shall be submitted to an independent UKAS accredited laboratory.

Test results will be compared to the Validation Criteria for compliance, in the event that the treated material does not meet the specified Validation Criteria for compliance then the treated material will be Quarantined.

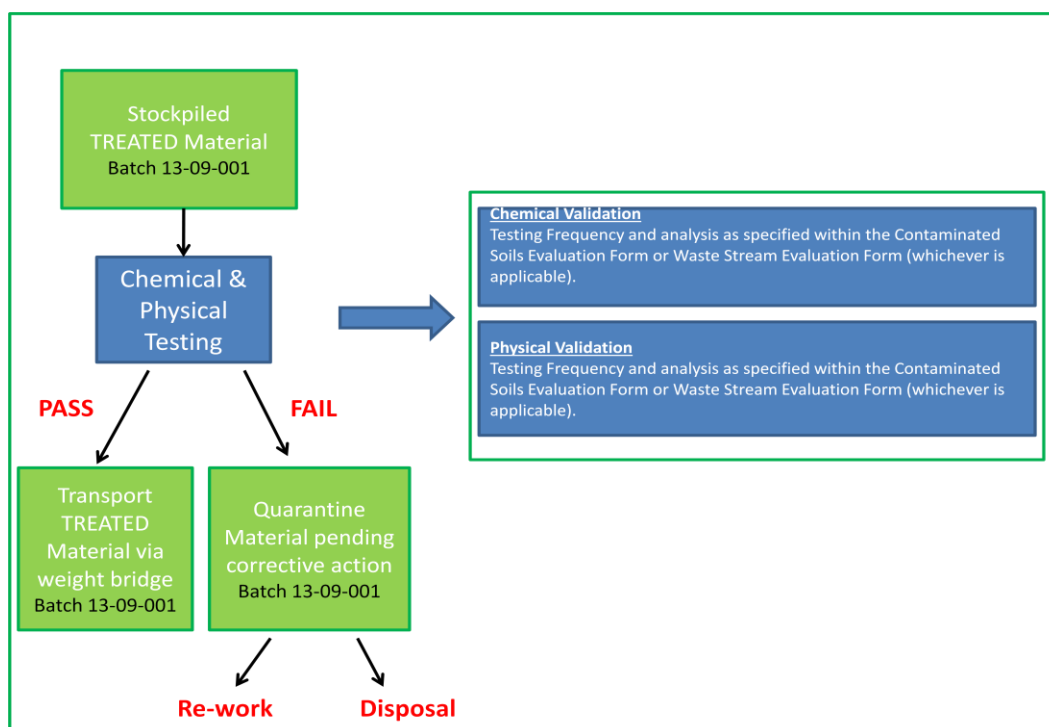
All test certificates will be stored together with other controlled documentation relating to that batch.

Stockpiled materials held within the “Treated Materials” area will indicate their Validation status
RED = Validation pending, GREEN = Validation approved.

The Waste Tracking System will require updating to reflect the status of the batch.

On shipment a Certificate of Conformity may be required by the end user, the nature of this certificate will depend of end user requirements. In the event that a Certificate of Conformity is raised, then a copy will be stored together with other controlled documentation relating to that batch. Shipment dockets relating to the transfer offsite will be stored together with other controlled documentation relating to that batch.

The Validation Process is summarized in the protocol below.



The Hub

Advanced material treatment, remediation and recycling technology

1.7 Control of Records.

This procedure describes the procedure which is followed, records kept and actions taken as part of the Control of Records.

Environmental Management System Overview.

Each Procedure, Form and Document are designated Controlled Documents, as such each can be individually amended following audit, annual review, non-compliance or complaint.

Each document has a unique reference and a revision detail, a record (Master Document Control Record) is maintained for each Procedure, Form and Document together with revision details and circulation list. Any copies made for reference / working purposes should be watermarked "Uncontrolled Document".

A digital backup (scanned) of all Working Forms should be maintained.

The Environmental Management System will be reviewed annually by the management team and findings recorded. Following the review any agreed amendments to the Environmental Management System will be recorded in the Master Document Control Record and circulated accordingly.

Each section of the Environmental Management System is audited quarterly by a member of the management team in accordance with the Audit Schedule. Agreed amendments are made to the Environmental Management System and Master Document Control Record updated accordingly. A record of the audit will be undertaken on the Internal Audit Form. Following the audit any agreed amendments to the Environmental Management System will be recorded in the Master Document Control Record and circulated accordingly.

Record Retention

All records relating to the running of The Treatment Hub will be kept for a minimum of five years (this may be electronically).

IT Systems - All relevant computer data is backed up on a regular basis and routinely at the end of the working day. Password control will be utilised to improve document security. Virus protection will be incorporated within the IT System to reduce risk of data being compromised, with disciplined control on the use of unauthorised software disks / CD's etc. on the system.

Reporting.

As specified by the Permit EPR/ZP3933NJ, all reports and notification required will be completed as requested.

The Hub

Advanced material treatment, remediation and recycling technology

1.8 Training.

This procedure describes the procedure which is followed, records kept and actions taken as part of the Training Process.

Recruitment and training will be undertaken to ensure that all personnel employed in positions crucial to maintaining the company's level of service are competent to carry out their duties. They will have a clear understanding of their responsibilities and the knowledge, skills and / or qualifications to carry them out effectively.

Training records will be generated and maintained in conjunction with a training / induction form for each employee to record the training that has been given & indicate any future training needs that may be required. New employees (permanent or temporary) are to receive induction training on commencement of employment, which will also be recorded on their training record. Also, any external training and / or qualifications that validate their competence to carry out the tasks they are employed for to help achieve the business objectives. Each employee is to be made aware of the general requirements related to operational Quality, H&S & Environmental procedures & where necessary, given formal in house training to cover specific procedures which again will be recorded on their training record.

The Hub

Advanced material treatment, remediation and recycling technology

1.9 Security.

This procedure describes the procedure which is followed, records kept and actions taken as part of the Security Process.

Site security will be provided at all times to prevent access by unauthorised persons.

It is the responsibility of the Site Manager to ensure at the end of the day:-

- All plant and equipment is turned off and made safe
- All chemicals are securely stored
- The facility is suitably locked

Overall site security is provided by the Landlord and as such operate 24 hour security with access limited via a maintained / controlled access.

The Hub

Advanced material treatment, remediation and recycling technology

1.10 Emergency Procedures.

This procedure describes the procedure which is followed, records kept and actions taken as part of the Emergency Procedures.

In the event of fire, the emergency fire plan is followed.

In the event of an environmental incident, the environmental incident plan is followed.

The Hub

Advanced material treatment, remediation and recycling technology

1.11 Complaints Procedure.

This procedure describes the procedure which is followed, records kept and actions taken as part of the Complaints Procedure.

Any formal complaints will be dealt within a timely manner wherever possible (less than 30 days)

The Complaint Form will be used to progress the complaint.

The Complaint Form will be raised by the person receiving the complaint (originator)

The Complaint Form will be forwarded by the originator to the person most qualified / experienced to handle the form.

The originator will be responsible to obtaining a satisfactory response within a timely manner.

The originator will pass the completed form to the Managing Director to sign off and respond to the Complainant.

1.12 Planned Preventative Maintenance System.

This procedure describes the procedure which is followed, records kept and actions taken as part of the Planned Preventative Maintenance (PPM) system.

A record (TH-DB005) of each piece of plant / equipment will be maintained, this list will indicate the required maintenance / calibration interval.

Any plant / equipment hired must be accompanied with instructions (if self drive) and maintenance schedule showing plant / equipment has been maintained in accordance with required maintenance schedule.

Documents

QUALITY & ENVIRONMENTAL POLICY STATEMENT

It is the Quality, H&S & Environmental Policy of The Treatment Hub Ltd to achieve the principles of the following statement:

The management of The Treatment Hub Ltd are committed to the implementation and on-going improvement of our Quality & Environmental Management System and to the involvement of all staff in the continual maintenance of the high standards of customer service provided in the areas of recycling, contaminated land, civil engineering and associated construction activities that fulfil their specified requirements.

To achieve and maintain objectives, the following is required:

- *To establish and maintain a Quality, H&S & Environmental continuous improvements plan with tangible targets wherever possible.*
- *To achieve the customer 's contractual requirements, to comply with current legislation and work to reduce pollution.*
- *To maintain Quality, H&S & Environmental compliance throughout the company by awareness training.*
- *To limit the Environmental impact of its activities by waste material handling & reduction methods.*
- *To investigate & report any Quality, H&S or Environmental complaints or incidents in a responsible manner with a view to reducing these issues and preventing re-occurrence*
- *To record, monitor and publish, as appropriate, statistics related to Quality H&S & Environmental improvement targets & achievement*

To ensure achievement of this intention, the company plan to implement a Quality & Environmental Assurance system throughout their processes, which is mandatory for all employees and will be designed to comply with the requirements of: ISO 9001 : 2008, ISO 14001 : 2004 & OHSAS 18001 : 2007.

Signed by

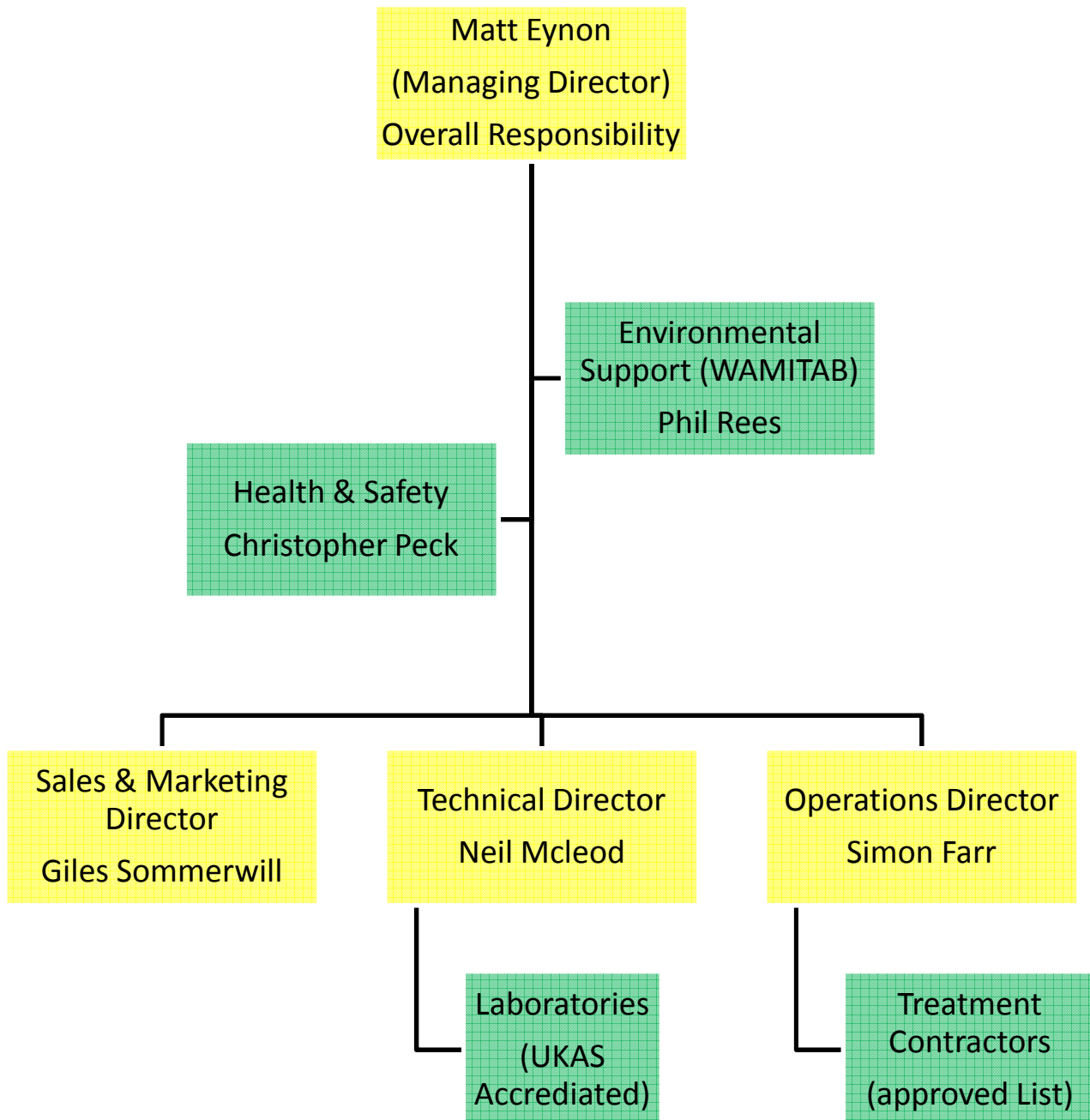


Matthew Eynon

on behalf of *The Treatment Hub Ltd.*

Dated **17th January 2013**

Company Structure



Environmental Management System – Master Document Control Record.

	Revision	Revision date	Revision Details	Circulation
Environmental Management System Overview	Original (R0)	Sept 2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office
Procedures				
TH 1.0 Waste Pre-Acceptance	Original (R0)	Sept 2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office
TH 1.1 Waste Acceptance	Original (R0)	Sept 2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office
TH 1.2 Waste and Material Storage	Original (R0)	Sept 2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office
TH 1.3 Document and Data Control	Original (R0)	Sept 2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office
TH 1.4 Purchasing	Original (R0)	Sept 2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office
TH 1.5 Chemical Stabilisation and Immobilisation	Original (R0)	Sept 2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office
TH 1.6 Validation Process	Original (R0)	Sept 2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office
TH 1.7 Control of Records	Original (R0)	Sept 2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office

	Revision	Revision date	Revision Details	Circulation
TH 1.8 Training	Original (R0)	Sept 2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office
TH 1.9 Security	Original (R0)	Sept 2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office
TH 1.10 Emergency Procedures	Original (R0)	Sept 2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office
TH 1.11 Complaints	Original (R0)	Sept 2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office

	Revision	Revision date	Revision Details	Circulation
Forms				
Form TH 001 Contaminated Soils Evaluation Form	Original (R0)	Sept 2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office
Form TH 002 Waste Stream Evaluation Form	Original (R0)	Sept 2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office
Form TH 003 Contaminated Soils / Waste Stream Treatment Form	Original (R0)	Sept 2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office
Form TH 004 Quarantine Notice	Original (R0)	Sept 2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office
Form TH 005 Internal Audit	Original (R0)	16/09/2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office
Form TH 006 Health & Safety and Environmental Questionnaire	Original (R0)	16/09/2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office
Form TH 007 Sub Contractor Qualification and Questionnaire	Original (R0)	16/09/2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office
Form TH 008 Training and Induction	Original (R0)	16/09/2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office
Form TH 009 Complaints	Original (R0)	16/09/2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office

The Hub

Advanced material treatment, remediation and recycling technology

	Revision	Revision date	Revision Details	Circulation
Forms				
Form TH 010 Shipping Form	Original (R0)	16/09/2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office

	Revision	Revision date	Revision Details	Circulation
Documents				
The Treatment Hub Structure	Original (R0)	16/09/2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office
Audit Schedule	Original (R0)	16/09/2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office
Master Document Control Record	Original (R0)	16/09/2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office
Emergency Procedures – Fire on Site	Original (R0)	16/09/2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office
Emergency Procedures – Environmental Incident	Original (R0)	16/09/2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office

	Revision	Revision date	Revision Details	Circulation
Databases				
TH DB – 001 Raw Material Record	Original (R0)	Sept 2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office
TH DB – 002 Batch Number Record	Original (R0)	Sept 2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office
TH DB – 003 Sub Contractor / Supplier Record	Original (R0)	Sept 2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office
TH DB – 004 Preferred Supplier Record	Original (R0)	Sept 2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office
TH DB – 005 Programmed Preventative Maintenance Schedule	Original (R0)	Sept 2013	Original	Matt Eynon Neil Mcleod Simon Farr Giles Sommerwill The Hub Office

The Hub

Advanced material treatment, remediation and recycling technology

Environmental Management System Audit Schedule.

Procedure	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Environmental Management System Overview				
TH 1.0 Waste Pre-Acceptance				
TH 1.1 Waste Acceptance				
TH 1.2 Waste and Material Storage				
TH 1.3 Document and Data Control				
TH 1.4 Purchasing				
TH 1.5 Chemical Stabilisation and Immobilisation				
TH 1.6 Validation Process				
TH 1.7 Control of Records				
TH 1.8 Training				
TH 1.9 Security				
TH 1.10 Emergency Procedures				
TH 1.11 Complaints				

EMERGENCY PROCEDURE – FIRES ON-SITE

Emergency Plan – Fires On-Site

ALL personnel should read the following procedure carefully in case of a fire.

The following procedure must be adhered to if a fire or explosion occurs on-site.

ALL fires on-site must be regarded as an emergency and dealt with as such.

Evacuated the building immediately and enable outside at the Fire Assembly Point

If the fire can be tackled SAFELY, then extinguish using the on-site portable extinguisher and / or water from the site. The extinguishers will be stored near the site entrance easy access. ALL personnel should be made aware of the fire fighting equipment available and where they are stored. Equipment stored will include at least one of each of the following; a fire extinguisher, a fire blanket and a first aid kit.

Summon the Fire Brigade immediately. Clearly state site details.

The Treatment Hub

Building 2

Westfield Industrial Park

Swansea.

Emergency Telephone Numbers.

999 or 112

Emergency Contact Numbers.

Simon Farr 07803 174046

Matt Eynon 07971 600759

Where possible move all plant and equipment to a safe distance away from the vicinity of the fire.

If 'out of hours', i.e. evenings or weekends, inform fire brigade and then notify relevant personnel on the emergency telephone number supplied above.

It is the responsibility of the principal / main contractor to ensure that relevant training will be given to all personnel on-site on what to do in the event of a fire or explosion and in the use of the fire fighting equipment stored on-site.

EMERGENCY PROCEDURE – ENVIRONMENTAL INCIDENT PLAN

Emergency Plan – Environmental Incident

In the event of an environmental incident, Natural Resources Wales need to be contacted on



0800 80 70 60

An Identification Board will be provided at or near the operating site entrance.

The board will display the following information:

- Operating site name and address
- Operator name (company name)
- Licence number
- Emergency contact name and telephone number
- Statement that the remedial action is licensed by the Environment Agency
- Agency national numbers, for General Enquiries (08708 506506) and Emergencies (0800 807060), or as subsequently notified in writing by the Agency
- Operational hours for licensed activities.

The Hub

Advanced material treatment, remediation and recycling technology

Forms

Contaminated Soils Evaluation Form (page 1 of 2).

Client	
Brief details of contaminated soils (including waste code)	
Source / location	
Estimated volume	
Contamination (analysis, WAC status)	
Asbestos analysis	
Site visit required	
Additional analysis required	
Signed	Date

Treatability required (if not, brief description of reason).	
Treatability findings (if applicable)	
Proposed end usage.	
Signed	Date

Contaminated Soils Evaluation Form (page 2 of 2).

Acceptance Protocol	
Waste pre-acceptance requirements	
Waste acceptance requirements	
Testing frequency Waste pre-acceptance Waste acceptance	
Signed	Date

Proposed Treatment	
	Actual quantity of reagent used
Cement	
Bentonite	
Envirotrete A	
Envirotrete B	
Envirotrete C	
Treatment methodology	
Validation Protocol	
Signed	Date

Waste Stream Evaluation Form (page 1 of 2).

Client	
Brief details of waste stream (including waste code)	
Estimated volume / frequency	
Contamination (analysis, WAC status)	
Asbestos analysis	
Signed	Date

Treatability required (if not, brief description of reason).	
Treatability findings (if applicable)	
Proposed end usage.	
Signed	Date

The Hub

Advanced material treatment, remediation and recycling technology

Waste Stream Evaluation Form (page 2 of 2).

Acceptance Protocol	
Waste pre-acceptance requirements	
Waste acceptance requirements	
Testing frequency Waste pre-acceptance Waste acceptance	
Signed	Date

Proposed Treatment	
	Actual quantity of reagent used
Cement	
Bentonite	
Envirotrete A	
Envirotrete B	
Envirotrete C	
Treatment methodology	
Validation Protocol	
Signed	Date
Review date	

Contaminated Soils / Waste Stream Treatment Form.

Contaminated Soil / Waste Stream Description.		
Assigned Batch Number.		
Estimated Volume		
Contaminated Soils / Waste Stream Evaluation Form Complete	Signed	Date
Waste Pre Acceptance Protocol followed (attach details)	Signed	Date
Waste Acceptance Protocol followed (attach details)	Signed	Date

Treatment			
	Actual quantity of reagent used	Batch Number(s)	Estimated quantity of reagent used
Cement			
Bentonite			
Enviro-treat A			
Enviro-treat B			
Enviro-treat C			
Signed		Date	

Validation (include CofA's)	
Does material meet pre-determined validation protocol	
Volume Treated	
Signed	Date

Shipment (include dockets)	
Date released	
Volume	
Destination	
Signed	Date

Quarantine Notice.

Contaminated Soil / Waste Stream Description.	
Batch Number.	
Estimated Volume	
Reason for Quarantine	

Proposed Action	
Signed	Date

Treatment (if applicable)			
	Actual quantity of reagent used	Batch Number(s)	Estimated quantity of reagent used
Cement			
Bentonite			
Envirotrete A			
Envirotrete B			
Envirotrete C			
Signed		Date	
Validation (include CofA's)			
Does material meet pre-determined validation protocol			
Volume Treated			
Signed		Date	

Disposal / Shipment (include dockets)	
Date released	
Volume	
Destination	
Signed	Date

Internal Audit Form.

Procedure(s) being audited	
Audit date	
Auditor	
Audit details	
Audit evidence	
Audit findings	
Signed	Date

Corrective action (if applicable)	
Signed	Date

Daily Health & Safety and Environmental Check List (Page 1 of 5).

(SITE DIARY)

General Information

Date	
Summary of on-site operation (include details of batch numbers delivered, dispatched, treated, etc)	

Operator(s) on site (name, hours on site & duties)	Read H&S Method Statement & Risk Assessment	Read Environmental Risk Assessment	Inducted

Daily Health & Safety and Environmental Check List (Page 2 of 5).

(SITE DIARY)

Visitor(s) on site (name, hours on site & reason on site)	Read H&S Method Statement & Risk Assessment	Read Environmental Risk Assessment	Inducted

Operative PPE

PPE checklist general		
Description	Issued	Checked
Hard Hat		
Safety Boots		
HiViz jacket / waistcoat		
Gloves		
PPE checklist E-Clay preparation		
Description	Issued	Checked
Safety glasses		
Protective overalls		
P3 dust mask		
Gloves (chemical resistant)		
Hearing Protection		

Daily Health & Safety and Environmental Check List (Page 3 of 5).

(SITE DIARY)

Other Health & Safety equipment check	
Description	Checked
1st Aid Kit	
Eye wash	
Fire fighting equipment	

Details of non-compliance and corrective action taken
Signed

Daily Health & Safety and Environmental Check List (Page 4 of 5).

(SITE DIARY)

Plant & Equipment Check

Plant / Equipment	Tyres / tracks	Oil / Lubricates	Fuel	Pipe work	Pumps / seals	Emissions	Noise	Evidence of leaks	Safety screens / access control	Within maintenance schedule.
GROUT MIXER	NA									
GROUT PUMP	NA									
E-CLAY HOSES	NA	NA	NA			NA	NA			
MIXING SKIP	NA	NA	NA	NA		NA				
TELEHANDLER										
FORKS	NA		NA	NA	NA	NA	NA	NA		
EXCAVATOR										
PROCESSING BUCKETS	NA		NA			NA				
SCREENER										
WATER PUMP	NA									
GENERATOR										
COMPRESSED AIR HOSES	NA	NA	NA			NA	NA			

Details of non-compliance and corrective action taken
Signed

The Hub

Advanced material treatment, remediation and recycling technology

Daily Health & Safety and Environmental Check List (Page 5 of 5).

(SITE DIARY)

Environmental Checks

Parameter	Checked
Site entrance (secure, controlled)	
Hazard signage	
Access / site road	
Housekeeping (general tidiness)	
Dust	
Noise	
VOC's	
Odours	
Integrity of concrete slab and bunds	
Chemical storage area	
Fire (potential)	
Pest / Litter Control	
Overall Health & Safety	

Details of non-compliance and corrective action taken
Signed

SUB-CONTRACTOR QUESTIONNAIRE

1. General Details

	Business name:	
	Registered No:	
	VAT Reg. No:	
	UTR No:	
	Registered address:	
	Trading address:	
	Tel Number:	
	Fax Number:	
	E-Mail:	

Memberships (Trade Organisations)

--	--

2. Insurance

	Please provide the names of insurers and policy details of all relevant insurance policies.				
	Please provide proof of insurance cover from your insurer or broker.				
		Employer's Liability	Third Party Liability	Contract Works	Professional Indemnity
	Insurance Company Name				
	Policy Number				
	Expiry date of Cover				
	Limits of Indemnity				
	Excess Values				

SUB-CONTRACTOR QUESTIONNAIRE

3. Safety Management			
	The following Qualification Criteria have been produced to set out the health and safety management arrangements that we wish to see operating in the subcontractors we engage. Project specific health and safety information may be required as part of any particular tender application. Contractors who do not have a formally documented Health and Safety System will not be automatically excluded, but they will be expected to adopt our procedures. Nothing in this document should be taken to mean that any subcontractor or supplier is relieved of any legal duties or obligations under the Health and Safety at Work Act 1974 and all associated Regulations or legislation.		
3.01	Who has direct responsibility for your company's Safety System? Name _____ Position Director Contact details _____		
3.02	Has your company been the subject of any Health and Safety Executive (HSE) Enforcement Action at any time within the last three years? If you have answered YES to this question please provide brief details of the circumstances, the status of the action, any corrective or preventive action taken and, if appropriate, any judgement or penalty imposed. This may be investigated by our Safety Advisers but will not automatically disqualify you.	Yes	No
HEALTH AND SAFETY POLICY		Yes	No
3.03	Do you have a clearly defined Health and Safety policy appropriate to the nature and scale of your work? If yes, please provide a copy of your signed General Health & Safety Policy Statement of Intent.		
3.04	Is it communicated to your workforce?		
3.05	Do all employees know what aspects of Health and Safety Management they are responsible for?		
COMPETENCY OF EMPLOYEES			
3.06	Have all employees of the company received formal Health and Safety training, appropriate to their responsibilities?		
RISK ASSESSMENTS / METHOD STATEMENTS			
3.07	Do you produce written Risk and COSHH Assessments?		
3.08	Do you produce written Method Statements?		
3.09	Do risk assessments including method statements and safe systems of work where appropriate cover the most important issues to be controlled?		
3.10	Is relevant risk information communicated to all site personnel?		
HEALTH AND SAFETY ADVICE			
3.11	Do you have access to competent, qualified H & S advice?		
3.12	If this is provided by an external body please provide details.		
ACCIDENT PERFORMANCE			
3.13	Do you have a documented process for reporting, dealing with, investigating and recording all accidents?		
3.14	Please provide details of all RIDDOR reportable accidents/incidents for each of the last 3 years.		

SUB-CONTRACTOR QUESTIONNAIRE

4. Environmental Management			
Contractors who do not have a formally documented Environmental Management System will not be automatically excluded, but they will be expected to adopt our procedures.			
4.01	Does your company have an environmental policy? If yes, please enclose a copy of your signed Environmental Policy Statement.	Yes	No
4.02	Who has direct responsibility for your Company's Environmental Management System? Name _____ Position Technical _____ Contact details _____		
4.03	Within the last three years has your company been prosecuted or served with enforcement notices or is your company currently under investigation for any breach of environmental legislation/ regulation? If you have answered YES to this question please provide brief details of the circumstances, the status of the action, any corrective or preventive action taken and, if appropriate, any judgement or penalty imposed. This may be investigated by our Environmental Advisers but will not automatically disqualify you.	Yes	No
4.04	Are you a registered waste carrier? If yes, please provide a copy of your certificate.		
5. Quality Management			
Contractors who do not have a formally documented Quality Management System will not be automatically excluded, but they will be expected to adopt our procedures.			
5.01	Does your company have a quality policy? <i>We do operate Quality Procedures</i> If yes, please provide a copy of your signed Quality Policy Statement.		
5.02	Who has direct responsibility for your Company's Quality Management System? Name _____ Position _____ Contact details _____		

SUB-CONTRACTOR QUESTIONNAIRE

6. Checklist of attachments, where applicable (in addition to any additional responses required to individual questions)		Attached Yes No	
1. Confirmation of current insurance cover.			
2. Copy of Health & Safety Policy Statement.			
3. Copy of Training Policy Statement.			
4. Copy of Environmental Policy Statement.			
5. Copy of Waste Carriers Certificate.			
6. Copy of Quality Policy Statement.			
7. Others – please list. Typical Quality Plan for site work Site Specific Working Plan			
7. Declaration:			
7.01	Where your systems do not provide adequate controls do you agree to adopt our systems and procedures if required?	Yes	No
7.02	As signatory on behalf of the respondent I confirm the foregoing to be an accurate and truthful response to your questions.		
Signed		Date	
Name		Position	

Training & Induction.

Name	
Address	
Date of Birth	
NI Number	
Date Started	
Position / Title	
Qualifications	
Initial Induction Health & Safety Environmental Awareness Quality Procedures E-Clay production	
Additional Training undertaken	
Additional Training requirements	

Complaint Form

Complainant	
Address	
Date Complaint Received	
Brief nature of complaint	
Compliant passed to	
Date Complaint passed	
Action by date	
Complaint finding	
Compliant upheld?	
Action required	
Signed	
Date	

Shipping Form

Pre-shipment

End users (customer) and detail requirements (ie CofA, CofC, etc)	
Quantity Required	
Batch(s)	
Date Required	
Haulier (supplied by The Hub or supplier)	
Estimated number of deliveries and dates	

Shipment

Haulier (if different)				
Deliveries				
Date	Time	Ticket No.	Weight	Weighbridge

Database

Raw Material Record

Material

[illegible]

Sub Contractor	Trades	Contact Name	Contact Number	Questionnaire Completed	Insurance Renewal Date
G Mayer Plant Hire	Plant, labour	Chris Mayer	01948 880418	Yes	30/07/2013
WAS Constuction	Plant, labour	Nicola Morrell	01553 813000	Previously approved	Not known
PT Plant	Labour	Peter Williams	01685 882846	Previously approved	Not Known
Jones Brothers (Hanllan)	Plant, labour	Gareth Jones	01269 844275	Previously approved	Not known
Ben Jones	Plant, labour	Ben Jones		Previously approved	Not known

Service / Supply	Supplier	Contact Name	Contact Number
Laboratory	I2 Analytical		
General Buidling Supplies	LBS Building Supplies		
Plant hire	TBC		
Bentonite	MKM		
Cement	LBS Building Supplies		
Envirotrat A	Goldcrest Chemicals		
Envirotrat B	Wilfrid Smith Chemicals		
Envirotrat C	Goldcrest Chemicals		
Transport	TBC		
Health & Saftey	TBC		

Environmental Risk Assessment

The Treatment Hub

Environmental Risk Assessment

Revision No.	Issue Date	Description	Prepared by:	Approved by:
Original	September 2013	Original	Simon Farr	Neil McLeod

The Treatment Hub – Environmental Risk Assessment

OVERVIEW	8
THE SITE.....	8
Figure 1 – Overview of the Alcoa site showing location of the Hub and access routes.	9
Figure 2 – Installation Boundary.....	10
EMISSIONS TO AIR	10
EMISSIONS TO WATER.....	10
EMISSIONS TO LAND	10
WASTE MANAGEMENT	10
INFRASTRUCTURE AND DESIGN	11
<i>Existing Site Drainage Arrangements</i>	<i>11</i>
<i>Hard standing</i>	<i>11</i>
<i>Tanks and Bunds</i>	<i>11</i>
Figure 3 – Site set up.	13
Figure 4 - Internal bunding and bays.....	14
SITE MANAGEMENT & SUPERVISION	15
Figure 5 – Overall Responsibilities.....	15
CONCEPTUAL SITE MODEL AND RISK ASSESSMENT.....	17
<i>Conceptual Site Model.</i>	<i>18</i>
REQUIREMENT OF THE HUB UNDER THE REQUIREMENTS OF THE PERMIT.	29
SPECIFIED WASTE MANAGEMENT ACTIVITIES	29
<i>Staffing and understanding of requirements of licence conditions</i>	<i>29</i>
<i>Understanding of the Permit</i>	<i>29</i>
<i>Attendance of technically competent persons.....</i>	<i>29</i>
<i>Changes in technically competent persons</i>	<i>29</i>
<i>Provision and maintenance of containment and drainage systems</i>	<i>29</i>
<i>Operating site security</i>	<i>30</i>
<i>Prevention of mud and debris on road (outside permitted area).</i>	<i>30</i>
<i>Remediation of mud and debris on the road (outside permitted area).</i>	<i>30</i>
<i>Potentially polluting leaks and spillage from vehicles, plant and equipment.....</i>	<i>30</i>
<i>Potentially polluting leaks and spillage from skips, drums and other mobile containers</i>	<i>30</i>
<i>Control and remediation of leaks and spillage</i>	<i>30</i>
<i>Prohibition of fires.....</i>	<i>30</i>
<i>Actions to be taken In the event of a fire</i>	<i>30</i>
<i>Actions to be taken In the event of a environmental incident</i>	<i>30</i>
<i>Contaminated material, substances or products acceptance and control procedures</i>	<i>30</i>
<i>Commissioning, operating and maintenance of Process plant and equipment.....</i>	<i>31</i>
<i>Means of measurement.....</i>	<i>31</i>
<i>Treatment of contaminated material substances or products with specified hazardous properties or forms ...</i>	<i>31</i>
<i>Emissions Monitoring - Groundwater, Surface Water, Soil Gas and Emissions to Air</i>	<i>31</i>
<i>Keeping and maintenance of records:</i>	<i>32</i>
<i>Monitoring and control of aerial emissions of dusts, fibres, particulates, bioaerosols, VOC's and odours</i>	<i>32</i>

The Treatment Hub – Environmental Risk Assessment

<i>Monitoring and control of pest Infestations, scavengers and litter</i>	32
<i>Control of noise</i>	32
<i>Security of records</i>	32
<i>Recording of contaminated material, substances or products accepted, treated or removed</i>	32
<i>Site diary</i>	32
ENVIRONMENTAL RISK ASSESSMENT	33
SECTION 1 - THE ENVIROTREAT TECHNOLOGY AND PROCESS, CHARACTERISATION OF RISK SOURCE	33
Table 1 - Identification of potential hazards - pathways and receptors.....	35
Table 2 - Allocation of a scoring system determining the environmental risks identified during and after application of the treatment process.....	36
Table 3 - Identification of risks to human receptors (on-site and off-site) from gaseous emissions to air from chemical reagents used during application of the treatment process.	37
Table 4 - Identification of risks to human receptors (on-site and off-site) from emissions to air from dry materials used during application of the treatment process.....	38
Table 5 - Identification of risks to human receptors (on-site and off-site) from gaseous emissions to air from the contaminants of concern identified within the soil / material matrix.....	39
Table 6 - Allocation of a scoring system determining the risks to human health (<i>site operatives</i>) from emissions to air - Identified during and after application of the treatment process, before and after implementation of controls.....	39
Table 7 - Allocation of a scoring system determining the risks to human health (<i>visitors &, general Public</i>) from emissions to air identified during and after application of the treatment process, before and after implementation of controls	40
Table 8 - Allocation of a scoring system determining the risks to human health (<i>site operatives and general public</i>) from emissions to air identified during and after application of the treatment process, before and after implementation of Controls.....	40
1.1 - Control of mud and debris arising from application of the treatment process.....	41
1.2 - Control and monitoring of noise – Plant & equipment	41
SECTION 2 - POTENTIALLY POLLUTING LEAKS, SPILLAGES AND AERIAL EMISSIONS FROM APPLICATION OF THE TREATMENT PROCESS	42
2.1 - Waste – Spillage.....	42
2.2 - General Spillages On-Site.....	42
2.3 - Chemical Reagents - Potential Spillages	42
2.4 - Chemical Reagents - Emissions to Air	43
2.5 - Migration of Contaminated Ground and Surface-Water / Leachate	44
2.6 - Remediation Reagents – Dry Materials	44
2.7 - Remediation Reagents - Leakage or Accidental Release	44
2.8 - Waste – Volatile Organic Compound Emissions	45
SECTION 3 - FIRES ON THE OPERATING SITE.....	46
3.1 - Waste – Fire / Explosion.....	46
3.2 - Plant – Fire / Explosion.....	49
SECTION 4 - CONTROL, MONITORING AND REPORTING OF DUSTS, FIBRES AND PARTICULATES DURING THE MIXING / TREATMENT PROCESS	50
SECTION 5 - WASTE - GENERATION OF ODOURS.....	51
SECTION 6 - MONITORING AND / OR SAMPLING PROGRAMME.....	52
SECTION 7 - WASTES INCLUDING PATHOGENIC BACTERIA	53
SECTION 8 - CONTROL OF PESTS.....	54

The Treatment Hub – Environmental Risk Assessment

SECTION 9 - CONTROL OF BIRDS AND OTHER SCAVENGERS.....	55
SECTION 10 - CONTROL OF LITTER.....	56
SECTION 11 - DOCUMENTATION	57
SECTION 12 - REFERENCES	58
MONITORING PLAN	59
AIR EMISSION MONITORING	59
INSTALLATION AND COMMISSIONING	59
INDICATOR PARAMETERS	60
<i>Aerial Emissions</i>	60
<i>Dust</i>	60
<i>Noise</i>	60
<i>VOC</i>	60
<i>Preferential Pathways</i>	60

The Treatment Hub – Environmental Risk Assessment

Overview

It is the intention of The Treatment Hub (Hub) to use the permitted facility as a regional specialist soils and materials treatment hub. The treatment processes will utilise proprietary clay formulations (E-Clays) in combination with cementitious material to treat the soils / materials for the purposes intended.

The objective will be to either treat the soils /materials for

- reuse at either the source or another suitable location
- reuse as a raw material in product manufacture (in accordance with ‘End-of-Waste’ requirements)
- waste declassification to enable disposal at an inert / non-hazardous landfill (in accordance with landfill acceptance criteria)

The Hub operation is designed to operate in accordance with waste hierarchy principles as far as practically possible.

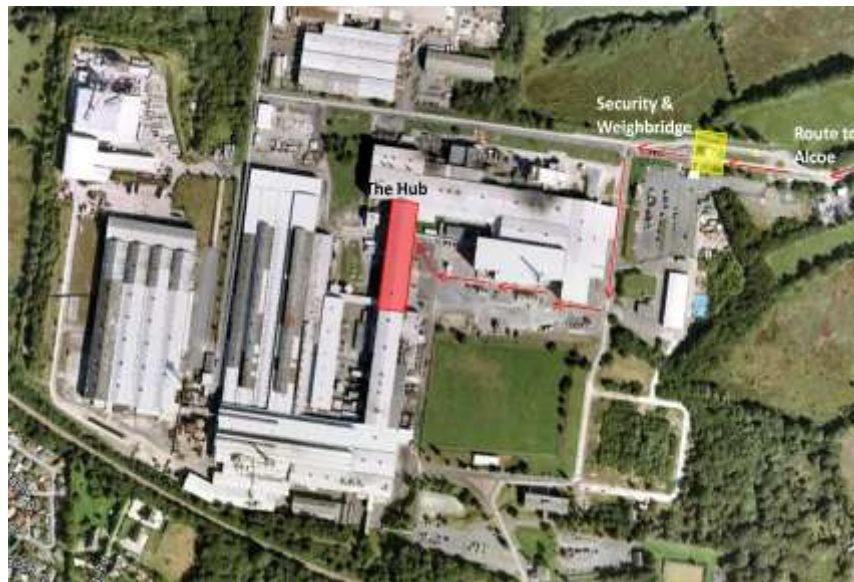
The Hub will process approximately 40,000 tonnes per annum of materials sourced from the local area for the production of clean raw materials and finished products for supply into the construction sector and other appropriate markets. The site will be designed to accept both hazardous and non-hazardous granular materials and soils in accordance with stringent site waste acceptance procedures in accordance with the Environmental Management System.

The Site.

The Hub will operate at Alcoa Manufacturing (GB) Ltd existing site at Westfield Industrial Park, Waunarlwydd, Swansea, SA5 4SF, see figure 1.

The Treatment Hub – Environmental Risk Assessment

Figure 1 – Overview of the Alcoa site showing location of the Hub and access routes.



The activity is housed entirely within an existing industrial process building (the former hotmill building), which constitutes a single high bay; portal framed industrial building of approximately 7,641m². The building is provided with external access, parking and turning areas.

All proposed operations will be entirely contained within the existing buildings as shown in figure 2. The Installation boundary is shown in **GREEN**.

The Installation boundary does not extend beyond the building envelope and is shown in green below. All vehicular access roads and car parking areas are outside of the Installation Boundary.

It should be noted that the ‘planning red line’ against which permission was achieved extends to a far greater area that currently proposed for use, thus allowing for future expansion of the site when required.

The Treatment Hub – Environmental Risk Assessment

Figure 2 – Installation Boundary



Emissions to Air

There will be no point-source or fugitive emissions to air arising from the process.

Emissions to Water

Due to nature of process there will be no point source or fugitive emissions to water. All liquid waste emissions will be tankered off site for disposal.

Emissions to Land

There will be no emissions to land arising from the installation, all materials processed at the site will either be fully recovered or rendered inert and will be transferred off site for safe inert reuse or disposal.

Waste Management

All materials processed at the site will either be fully recovered or rendered inert and will be transferred off site for safe inert reuse or disposal.

All materials are treated and stored internally within the confines of the existing site buildings.

The Treatment Hub – Environmental Risk Assessment

Infrastructure and design

There are no plans for the alterations or addition of new access, hard standing or drainage facilities, providing no notable change to external site appearance or layout beyond the completion of minor fabric repairs if deemed necessary.

See figure 3 for proposed site set up.

Existing Site Drainage Arrangements

The drainage arrangements on site will remain as existing, with no changes proposed as a result of this variation.

The existing drainage arrangements are as follows:

- All internal areas comprise impermeable concrete slabs with no internal drains;
- Tertiary containment is provided by the building floor slabs and building lower walls;
- There are no effluent emissions arising from the proposed process.
- All domestic effluent (toilets, sinks etc) discharge to a foul drainage system.

In the event of a fire, all fire water would be contained on site.

Hard standing

All internal areas will comprise of an impermeable concrete slab construction with no internal drains being present. The building is constructed with solid masonry walls which in turn provide a high degree of tertiary containment. Threshold protection across all access doorways will be provided to ensure that any liquids, hazardous or non-hazardous are retained within the main building.

The previous use of the buildings as rolling mill necessitated substantial reinforced concrete foundations and load bearing flooring to be installed throughout. The thickness of the flooring is known to exceed 300mm in all areas and be in excess of 10mm thickness in areas immediately adjacent to the former mill structures.

There are no external surface water drains on site, therefore all external surface water ‘runs off’ to the wider surface water drainage system provided by the industrial estate.

Tanks and Bunds

Storage bays may be constructed off the existing concrete slab to allow segregation of waste streams, see figure 4.

The process requires the use of proprietary admixtures and chemicals all of which are stored in small volume containers and tanks.

The entire chemical storage area is located on a dedicated secondary containment area located away from the vehicle access and delivery areas.

The Treatment Hub – Environmental Risk Assessment

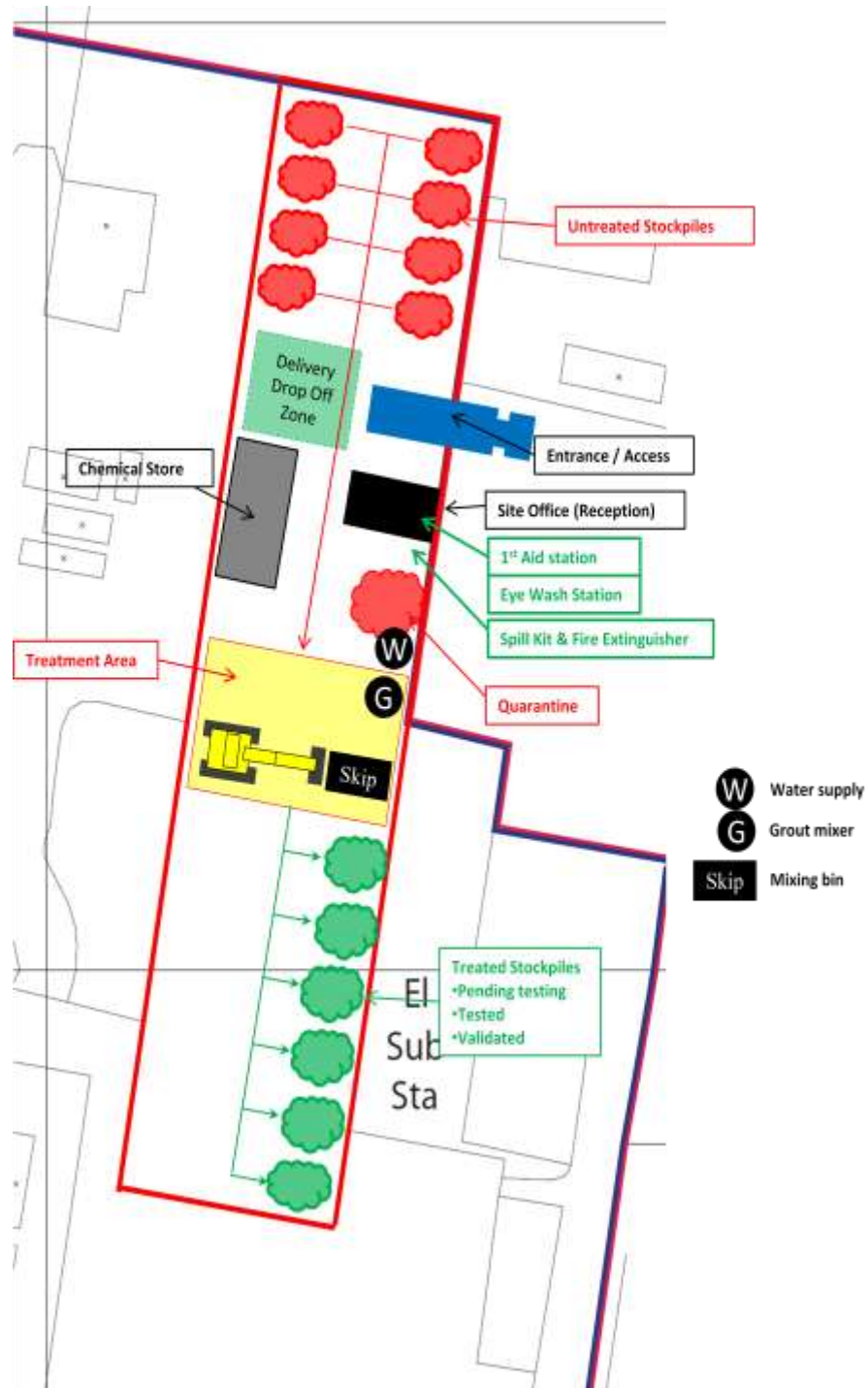
All static and mobile tanks present on site will be equipped with secondary containment round bund. All tanks are labelled to identify contents and will be compliant with the Oil Storage Regulations requirements and pollution prevention Guidance Note PPG2 'Above Ground Storage Tanks'.

Chemicals will generally be stored in small volume containers and/or IBC's. There is no large volume process related storage tanks associated with the Installation.

The Treatment Hub will be utilizing the existing buildings, as shown in Figure 2.1. There will be no changes to the existing buildings.

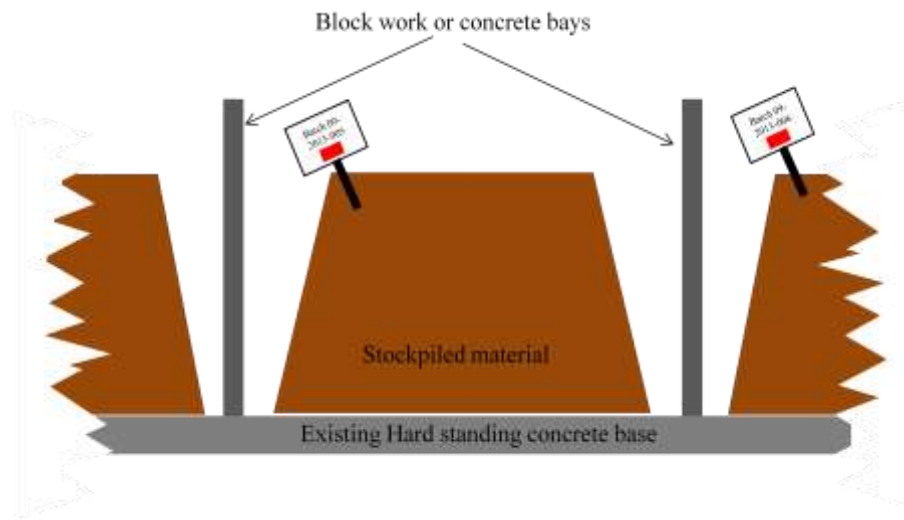
The Treatment Hub – Environmental Risk Assessment

Figure 3 – Site set up.



The Treatment Hub – Environmental Risk Assessment

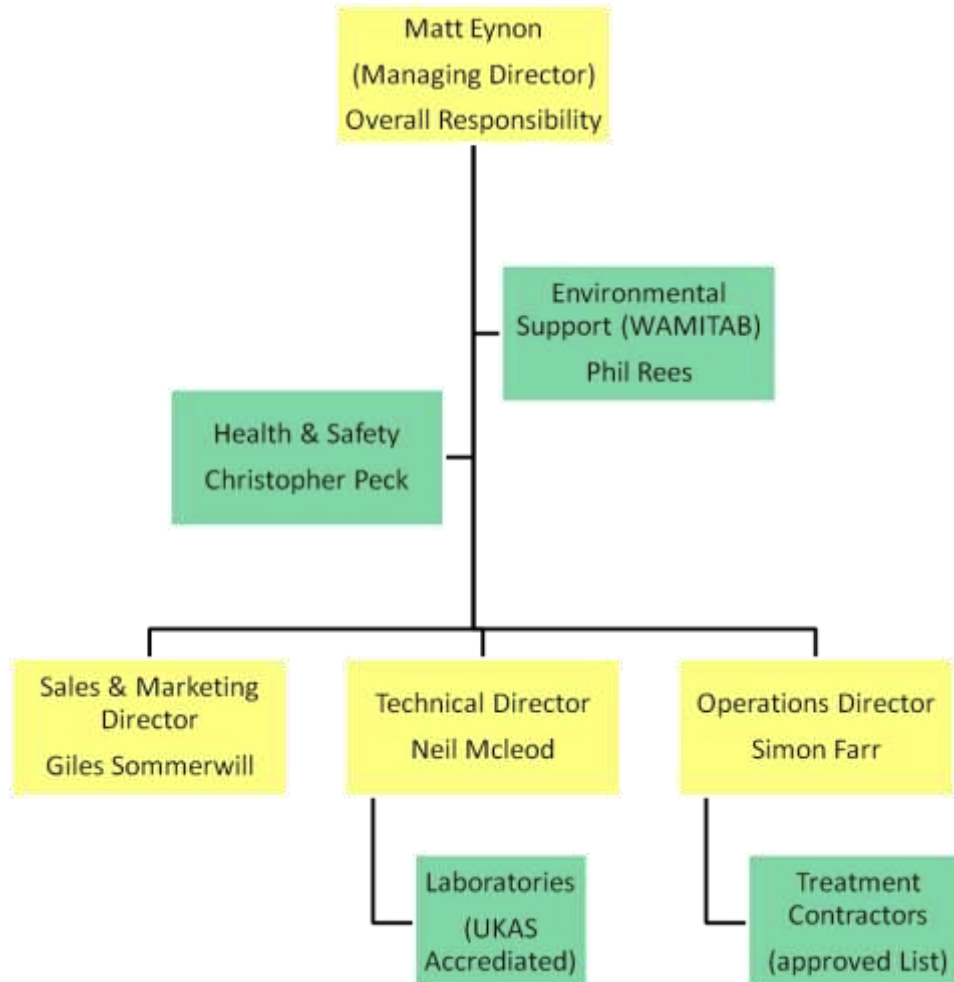
Figure 4 - Internal bunding and bays.



The Treatment Hub – Environmental Risk Assessment

Site Management & Supervision

Figure 5 – Overall Responsibilities.



Matt Eynon as Managing Director will have overall responsibility for the operation of The Hub, Neil Mcleod as Technical Director will be responsible for treatment and validation design, Simon Farr as Operations Director will oversee the treatment operation and be responsible for quality assurance in accordance with the Environmental Management System and day to day Health & Safety. Additionally Simon Farr will act as the Environmental Procedures Manager. Giles Sommerwill as Sales Director will be primarily responsible for sales and marketing, but will provide cover accordingly. External environmental monitoring / compliance will be provided by Phil Rees and additionally health & safety advice / auditing by Christopher Peck. Where laboratories will be used for formal analysis, this will be via a UKAS accredited laboratory. Although no formal approved scheme for suppliers will be operated, a preferred supplier list will be utilised, no formal vetting procedure is utilised other than the requirement to provide the service required and previous good performance / quality. For sub-contractors a formal approved system is operated and this is based on a formal assessment for new sub-contractors, and pre-

The Treatment Hub – Environmental Risk Assessment

approved sub-contractors selected on previous good quality of service. All sub-contractors will be reviewed annually.

Conceptual Site Model and Risk Assessment

The Treatment Hub – Environmental Risk Assessment

Conceptual Site Model.

Source	Receptor	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for Magnitude	Risk Management	Residual Risk
Hydrocarbons / metals associated with contaminated soils / materials	Site operatives, site visitors & neighbours	Human health issues	Contact, ingestion and inhalation of contaminated soil, material, dust & vapours.	Medium	Medium	Medium	Short & long term health effects	Monitoring dust (minimising by wetting if necessary). VOC monitoring (changing working protocols to achieve trigger values). Ensure all operatives use specified PPE. Induction training. Controlled access.	Low
	Underlying soils & groundwater	Contamination of underlying soils / ground water	Migration through ground to underlying soils / aquifer	Low	Medium	Medium	Effect of contamination on soils & ground water	Use of Engineered containment systems (ECS), use of existing integral hard standings. Management and monitoring of ECS. Provision of spill kits.	Low

The Treatment Hub – Environmental Risk Assessment

Source	Receptor	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for Magnitude	Risk Management	Residual Risk
Hydrocarbons and metals associated with contaminated soils	Off site receptors	Contamination of off site receptors	Migration across / off site. Existing drainage	Medium	Medium	Medium	Contamination affecting general public & neighbours. Contamination affecting soils & groundwater off-site	Minimise dust (see above). Provision of decontamination areas for operatives. Clean all vehicles before leaving site, mobile plant remains on site during works, deliveries outside treatment area.	Low

The Treatment Hub – Environmental Risk Assessment

Source	Receptor	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for Magnitude	Risk Management	Residual Risk
Liquid chemical reagents associated with treatment process (spillages or leakage)	Site operatives, site visitors & neighbours	Human health issues	Contact & ingestion of liquids and inhalation of vapours.	Medium	Medium	Medium	Short & long term health effects	Ensure all operatives use specified PPE. COSHH & induction training. Correct labelling of products. Provision of site security and secure storage.	Low
	Underlying soils & groundwater	Contamination of underlying soils / ground water	Migration through ground to underlying soils / aquifer	Medium	Medium	Medium	Effect of contamination on soils & ground water	Use of ECS. COSHH & induction training. Implementation of site security measures.	Low

The Treatment Hub – Environmental Risk Assessment

Source	Receptor	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for Magnitude	Risk Management	Residual Risk
Liquid chemical reagents associated with treatment process (spillages or leakage)	Off site receptors	Contamination of off site receptors	Migration across / off site. Existing drainage	Medium	Medium	Medium	Contamination affecting general public & neighbours. Contamination affecting soils & groundwater off-site	Provision of decontamination areas for operatives. Clean all vehicles before leaving site, mobile plant remains on site during works, deliveries outside treatment area.	Low

The Treatment Hub – Environmental Risk Assessment

Source	Receptor	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for Magnitude	Risk Management	Residual Risk
Powder chemical reagents associated with treatment process.	Site operatives, site visitors & neighbours	Human health issues	Contact, ingestion and inhalation of powders / dusts	Medium	Medium	Medium	Short & long term health effects	Minimise dust (see above). Ensure all operatives use specified PPE. COSHH & induction training. Correct labelling of products. Implementation of site security and secure storage.	Low
	Underlying soils & groundwater	Contamination of underlying soils / ground water	Migration through ground to underlying soils / aquifer	Medium	Low	Low	Effect of contamination on soils & ground water	Use of ECS. COSHH & induction training. Implementation of site security measures.	Low

The Treatment Hub – Environmental Risk Assessment

Source	Receptor	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for Magnitude	Risk Management	Residual Risk
Powder chemical reagents associated with treatment process.	Off site receptors	Contamination of off site receptors	Migration across / off site.	Medium	Low	Low	Environmental risks from contamination are low – nuisance risk only	Minimise dust (see above). Provision of decontamination areas for operatives. Clean all vehicles before leaving site, mobile plant remains on site during works, deliveries outside treatment area.	Low

The Treatment Hub – Environmental Risk Assessment

Source	Receptor	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for Magnitude	Risk Management	Residual Risk
Daughter products resulting from mixing treatment reagents	Site operatives, Site visitors & neighbours	Human health issues	Contact, ingestion and inhalation of E-Clay slurry / vapours.	Medium	Low	Low	No daughter products produced other than E-Clay. E-Clay is non-hazardous	Ensure all operatives use specified PPE. Undertake induction training.	Low
	Underlying soils & groundwater	Contamination of underlying soils / ground water	Migration through ground to underlying soils / aquifer	Medium	Low	Low	No daughter products produced other than E-Clay. E-Clay is non-hazardous and is used to treat soils for reuse on site.	Use of ECS	Low
	Off site receptors	Contamination of off site receptors	Migration across / off site. Existing drainage	Medium	Low	Low	No daughter products produced other than E-Clay. Environmental risks from contamination are low – nuisance risk	Clean all vehicles before leaving site. Undertake induction training.	Low

The Treatment Hub – Environmental Risk Assessment

Source	Receptor	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for Magnitude	Risk Management	Residual Risk
Products resulting from treatment process	Site operatives, site visitors & neighbours	Human health issues	Contact, ingestion and inhalation of treated soils & dusts.	Medium	Low	Low	Post treatment soils are wet minimising potential for dust. Treated material inert.	Dust monitoring. Ensure all operatives use specified PPE.	Low
	Underlying soils & groundwater	Contamination of underlying soils / ground water	Migration through ground to underlying soils / aquifer	Medium	Low	Low	Treated material inert.	Use of ECS. Induction training.	Low
	Off site receptors	Contamination of off site receptors	Migration across / off site. Existing drainage	Medium	Low	Low	Treated material inert. Nuisance risk	Clean all vehicles before leaving site. Undertake induction training.	Low

The Treatment Hub – Environmental Risk Assessment

Source	Receptor	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for Magnitude	Risk Management	Residual Risk
Refuelling machines & plant	Site operatives, site visitors & neighbours	Human health issues	Contact & ingestion of liquids and inhalation of vapours.	Medium	Medium	Medium	Short & long term health effects	Ensure all operatives use appropriate PPE. COSHH & induction training. Correct labelling of products. Use correct refuelling equipment.	Low
	Underlying soils & groundwater	Contamination of underlying soils / ground water	Migration through ground to underlying soils / aquifer	Medium	Medium	Medium	Effect of contamination on soils & ground water	Use of ECS. COSHH & induction training. Use drip trays Regular maintenance	Low
	Off site receptors	Contamination of off site receptors	Migration across / off site.	Medium	Low	Low	Contamination affecting general public & neighbours.	Clean all vehicles before leaving site. Regular maintenance COSHH & induction training.	Low

The Treatment Hub – Environmental Risk Assessment

Source	Receptor	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for Magnitude	Risk Management	Residual Risk
Refuelling machines & plant	All receptors	Environmental & health risks	FIRE	Medium	High	High	Risk of fire during storage and fuelling with flammable liquids	Use correct equipment. Safe storage of fuel. Strict no smoking policy. Training Fire fighting equipment. Emergency Plan.	Low

The Treatment Hub – Environmental Risk Assessment

Source	Receptor	Harm	Pathway	Probability of Exposure	Consequence	Magnitude of Risk	Justification for Magnitude	Risk Management	Residual Risk
Noise generated during mobilisation of plant, transport off waste to Hub onsite works and demobilisation of plant, transport of treated material offsite	Site operatives, site visitors, general public & neighbours	Human health issues	Proximity exposure	Medium to High	Medium to High	Medium to High	Risk of hearing damage or nuisance due to elevated noise levels	High risks relate to operatives using plant and site visitors, use specified PPE as determined on site required. Ongoing noise monitoring. Regular maintenance of plant. Work within agreed working hours. Monitor deliveries to / from facility	Low

The Treatment Hub – Environmental Risk Assessment.

Requirement of the Hub under the requirements of the Permit.

Specified Waste Management Activities

It is proposed that only those activities specified within the permit will be operated, Natural Resources Wales (NSW) would be notified prior to any further activities be undertaken.

The onsite activities shall be carried out in accordance with the Permit.

Staffing and understanding of requirements of licence conditions

During waste acceptance - A suitably experienced Hub staff member or nominated sub-contractor (suitably experienced) will be onsite to undertake Waste Acceptance

During period of treatment - A suitably experienced Hub staff member or nominated sub-contractor (suitably experienced) will be onsite to supervise the treatment operation. That person will be suitably trained and fully conversant with the requirements of the Permit in regard to

- contaminated material, substances or products acceptance and control procedures
- operational controls and environmental monitoring
- maintenance
- record-keeping
- emergency action plans
- notifications to the NRW.

That person will be fully supported by the Board of Directors and onsite by Philip Rees (WAMITAB).

Understanding of the Permit

All staff will work under the direct supervision of a Simon Farr (Operation Director), who is fully conversant with those aspects of the Permit.

Attendance of technically competent persons

A site diary will be maintained logging all site visitors.

Changes in technically competent persons

All changes to technically competent persons will be notified to NRW.

Provision and maintenance of containment and drainage systems

Potentially polluting materials will only be deposited, stored, treated or otherwise handled in an area of the site within the permitted area and where the area benefits from existing hard standing (see above for details).

The engineered containment (hard standing) will be inspected, validated and maintained, and shall be fully documented (Environmental Management System) and recorded, to be fit for purpose and meet the required standards.

The Treatment Hub – Environmental Risk Assessment.

Operating site security

Site security will be provided at all times by the landlord. The site benefits from secure fencing and a secure controlled entrance.

Prevention of mud and debris on road (outside permitted area).

See following Environmental Risk Assessment.

Remediation of mud and debris on the road (outside permitted area).

In the event that mud or debris arising from the operating site is deposited onto outside the permitted area, the following remedial measures must be implemented immediately. The affected areas will be cleaned. Traffic will be isolated from sources of mud and debris within the operating site to prevent further tracking of mud and debris, and measures must be taken to clear any such sources as soon as practicable.

Potentially polluting leaks and spillage from vehicles, plant and equipment

See following Environmental Risk Assessment.

Potentially polluting leaks and spillage from skips, drums and other mobile containers

See following Environmental Risk Assessment.

In addition a Lifting Plan will be followed to ensure the safe / correct loading / unloading and movement of chemicals on site.

Control and remediation of leaks and spillage

See following Environmental Risk Assessment.

Prohibition of fires

No fires will be permitted on site

Actions to be taken In the event of a fire

See following Environmental Risk Assessment.

Actions to be taken In the event of a environmental incident

See following Environmental Risk Assessment.

Contaminated material, substances or products acceptance and control procedures

All contaminated material, substances or products must be received, inspected, accepted or rejected, handled, kept, despatched and recorded in accordance with the standards specified below and detailed in the Environmental Management System.

- a. Contaminated material, substances or products pre-inspection - All waste material will be reviewed based on the information available (WAC analysis, SI analysis, etc). Where insufficient material is available, further information will be requested of sampling / analysis undertaken. Based on this information the Technical Director can ascertain whether the material can be accepted into the Hub and can confirm treatment protocols and validation requirements.
- b. Contaminated material, substances or products, waste-inspection (point of entry) - All contaminated material, substances or products to be treated at the Hub, will be inspected on receipt to confirm their description and composition against the relevant accompanying documentation. All contaminated material, substances or products will be kept separate from and will not be covered by or mixed with other contaminated material, substances or products until

The Treatment Hub – Environmental Risk Assessment.

they have been confirmed and recorded for acceptance at the operating site. Materials not meeting the waste acceptance criteria will be rejected.

- c. Quarantine storage and rejection of contaminated material (non compliant), substances or products - Any items of non-permitted contaminated material, substances or products which are detected after acceptance at the operating site will be placed immediately in a designated quarantine storage area. All waste in the quarantine area must be kept segregated from other contaminated material, substances or products which are or are likely to be incompatible. Quarantined wastes will be removed from site or treated within 7 days. A record will be kept in accordance with the Environmental Management System.

Commissioning, operating and maintenance of Process plant and equipment

All process plant and equipment used within the Hub will be commissioned, operated and maintained, and must be fully documented and recorded in accordance with the Environmental Management System.

Means of measurement

Soil measurement to and from the facility will be based on assuming full loads (20 tonne). A proportion will be checked by means of weighbridge, the frequency of which will depend on accuracy in comparison to full loads.

Contaminated soils will be treated in discrete known volumes batches.

Treatment of contaminated material substances or products with specified hazardous properties or forms

- a. None of the identified waste streams are anticipated are likely when handled to generate significant quantities of dusts, fibres, particulates and bioaerosols. Monitoring of dust will be carried out as specified.
- b. None of the identified waste streams are anticipated are likely to produce odour or VOC's emissions during treatment. Monitoring of VOC's will be carried out as specified.
- c. None of the identified waste streams are anticipated to have combustible constituents

Emissions Monitoring - Groundwater, Surface Water, Soil Gas and Emissions to Air

No formal monitoring is required as part of the Permit requirements.

Environmental monitoring will be undertaken during operation, the environmental monitoring regime is specified in the Environmental Risk Assessment and covers:

- The construction of the monitoring points
- The location of the monitoring points
- Monitoring protocols
- Frequency of monitoring
- Experience and qualifications of personnel carrying out the monitoring and the personnel responsible for interpreting and acting upon the results of monitoring.

The Treatment Hub – Environmental Risk Assessment.

Keeping and maintenance of records:

A record of the emissions monitoring and sampling results will be kept and maintained in accordance with the Environmental Management System.

Monitoring and control of aerial emissions of dusts, fibres, particulates, bioaerosols, VOC's and odours

See following Environmental Risk Assessment.

Monitoring and control of pest Infestations, scavengers and litter

See following Environmental Risk Assessment.

Control of noise

See following Environmental Risk Assessment.

Security of records

All records which are required to be made under the conditions of Permit must be maintained and kept secure from loss, damage or deterioration for a period of 10 years.

Availability of records

These will be held onsite.

Recording of contaminated material, substances or products accepted, treated or removed

These will be recorded in accordance with the Environmental Management System.

Site diary

On site activities will either be recorded in the Site Diary accordance with the Environmental Management System.

- maintenance
- breakdowns
- emergencies
- problems with contaminated material, substances or products treated, received and action taken
- operating site inspections and consequent actions carried out by the operator
- technically competent management attendance on the operating site: the date and the time onto the operating site and the time left operating site
- complaints about authorised operations and actions taken
- environmental problems and remedial actions.

Environmental Risk Assessment

Section 1 - The Envirotreat Technology and Process, Characterisation of Risk Source

A risk assessment has been completed for the Hub to determine the potential environmental hazards and risks associated with application of the proposed remediation technology.

The hazards have been identified as those associated with application of the treatment processes Process at the Hub. The risks are those of pollution to the environment, including harm to human health or serious detriment to local amenities outside the boundary of the site and its containment.

The risk assessment has been undertaken to identify and prioritise the measures that need to be taken to comply with the relevant statutory provisions. The mitigating measures applied are those that need to be implemented in order to comply with the required legislation.

Table 1, is an indication of the potential hazards that should be taken into consideration during application of the technology at the Site. The potential sources, pathway and target receptors have also been identified.

Table 2, shows the allocation of a scoring system determining the environmental risks identified during and after application of the technology.

The likelihood or frequency of occurrence of each hazard is indicated in Column 1.1 and 2.1. The magnitude or seriousness of the consequences of the hazard occurring has been given a similar score and is illustrated in Columns 1.2 and 2.2. The previous two scores are combined to give a measure of the potential risks posed and illustrated in Columns 1.3 and 2.3. Finally, the risks identified require certain controls and therefore management. Columns 1.4 and 2.4 illustrate reduced scores as a result of the management controls in place. Scores are provided during the treatment operation and on completion. The scoring system as indicated in Table 2 has been modelled on previous applications of the technologies to be implemented at the Hub, and re-evaluated in light of site-specific issues at the Hub.

The scoring system is as follows: -

- **N** **Negligible Risk**
- **L** **Low Risk**
- **M** **Medium Risk**
- **H** **High Risk**

Table 3, identifies the risks to human receptors (on-site and off-site) from gaseous emissions to air from chemical reagents used during application of the treatment processes.

Table 4, identifies the risks to human receptors (on-site and off-site) from emissions to air from dry materials used during application of the treatment processes.

Table 5, identifies the risks to human receptors (on-site and off-site) from gaseous emissions to air from the contaminants within soil / material matrix.

The Treatment Hub – Environmental Risk Assessment.

Table 6, allocates a scoring system determining the risks to human health (site operatives) from emissions to air identified during and after application of the treatment processes before and after implementation of controls.

Table 7, allocates a scoring system determining the risks to human health (visitors and general public) from emissions to air identified during and after application of the treatment processes before and after implementation of controls.

Table 8, Allocates a scoring system determining the risks to human health (site operatives and general public) from emissions to air identified during and after application of the treatment processes, before and after implementation of control measures.

The scoring system is as follows: -

- **N** **Negligible Risk**
- **L** **Low Risk**
- **M** **Medium Risk**
- **H** **High Risk**

The scoring system has been carried out by suitably qualified and experienced personnel including representatives from management and supervisory staff and based on an assessment of each operation carried out at the Hub. When determining the levels of risk, decisions have taken into account the potential source, pathway and receptor for each operation and process reagent / material. In particular we have considered levels of volatility (chemical reagents & contaminants of concern), likely levels of dust production (dry materials), potential spillages, distance from the treatment zone to the receptor etc.

The risks to site operatives have been deemed worst case in comparison to the effects to site visitors and the general public etc.

The Treatment Hub – Environmental Risk Assessment.

Table 1 - Identification of potential hazards - pathways and receptors

Source and Hazard	Pathway	Receptor
Mud & debris	Overland	Site operatives General public / neighbours Off site receptors Site visitors
Plant & equipment – Noise	Direct to	Site operatives General public / neighbours Off site receptors Site visitors
Potentially polluting leaks, spillages & aerial emissions. Waste & general spillages	Migration to underlying soils / waters. Migration via groundwater	Groundwater / underlying matrix
Remediation chemical reagents – potential spillages	Migration to underlying soils / waters Migration via groundwater	Groundwater / underlying matrix
Migration of contaminated ground & Surface water / leachate	Migration to underlying soils / waters Migration via groundwater	Groundwater / underlying matrix
Remediation reagents – dry materials	Airborne Migration to underlying soils / waters Migration via groundwater	Groundwater / underlying matrix Site operatives General public / neighbours Off site receptors Site visitors
Remediation reagents – leakage or accidental release (E-Clay slurry)	Overland Migration to underlying soils / waters Migration via groundwater	Groundwater / underlying matrix
Waste – Volatile Organic Compound (VOC) Emissions	Airborne	Site operatives General public / neighbours Off site receptors Site visitors
Plant or Waste – fire / explosion	Overland	Site operatives General public / neighbours Off site receptors Site visitors
Waste – Generation of dust	Airborne	Site operatives General public / neighbours Off site receptors Site visitors
Waste – Generation of odours	Airborne	Site operatives General public / neighbours Off site receptors Site visitors
Pests / birds & other scavengers / litter	Overland	Site operatives General public / neighbours Off site receptors Site visitors

The Treatment Hub – Environmental Risk Assessment.

Table 2 - Allocation of a scoring system determining the environmental risks identified during and after application of the treatment process.

	During Treatment				After Treatment			
	1.1 Probability of occurrence	1.2 Magnitude of consequence	1.3 Level of risk before controls	1.4 Level of risk with controls in place	2.1 Probability of occurrence	2.2 Magnitude of Consequence	2.3 Level of risk before controls	2.4 Level of risk with controls in place
Mud & Debris	M	L	M	N	M	L	M	N
Plant & equipment – noise	M	M	M	L	N	N	N	N
Potentially polluting Leaks, spillages & aerial emissions – Waste & General Spillages	M	M	M	N	N	N	N	N
Chemical reagents – potential spillages	M	M	M	L	N	N	N	N
Migration of contaminated groundwater / leachate	L	M	L	N	N	N	N	N
Remediation reagents – dry materials	M	L	L	L	N	N	N	N
Remediation reagents – leakage or accidental release	M	M	M	L	N	N	N	N
Waste - VOC Emissions	L	M	L	L	N	N	N	N
Plant & Waste – Fire / Explosion	N	H	N	N	N	N	N	N
Waste – generation of dust	M	M	M	L	N	N	N	N
Waste – generation of odours	L	M	L	L to N	N	N	N	N
Pests / birds & other scavengers / litter	L	M	L	N	N	N	N	N

The Treatment Hub – Environmental Risk Assessment.

Table 3 - Identification of risks to human receptors (on-site and off-site) from gaseous emissions to air from chemical reagents used during application of the treatment process.

Parameters	Envirotreast 'A'	Envirotreast 'B'	Envirotreast 'C'
Relative Volatility	Medium	Low	Low
Occupational Exposure Limit	10mg/m ³ over an 8 hour period	2mg/m ³ over an 8 hour period	1mg/ m ³ over an 8 hour period
Storage	Intermediate Bulk Containers (IBC's) (1000L capacity)	205litre drums	Carboys (25L capacity)
Transportation on-site	Forklift / telehandler		
Dispensing into measuring receptacle	Controlled tap to closed transfer container at ground level	Manual dispenser pump to closed transfer container	Controlled tap to closed transfer container at ground level
Carriage	< 3m from storage to mixer unit in bucket		
Dispensing into mixer units	Controlled pouring, medium risk of skin / eye controlled reduced to low risk through use of PPE.		
Slurry mixing operation	Water soluble		
Pumping to mixing zone application area	Slurry is contained within pipe and reagents are absorbed within E-clay slurry matrix		
Soil mixing	Soils are mixed in a skip with E-Clay slurry; dry cement is added and further mixed. Reagents are absorbed within E-clay slurry matrix.		
Post remediation	Following treatment the risk associated with odour production is negligible.		

The Treatment Hub – Environmental Risk Assessment.

Table 4 - Identification of risks to human receptors (on-site and off-site) from emissions to air from dry materials used during application of the treatment process.

Parameters	Ordinary Portland Cement	Bentonite
Volatility	N/A	
Occupational Exposure Limit	10mg/m ³ total inhalable dust over an 8 hour period; 4mg/m ³ respirable dust over an 8 hour period	
Storage	25kg paper bag with waterproof lining, pallets covered with plastic sheeting.	
Transportation on-site	Forklift to treatment area	
Dispensing into measuring receptacle	N/A	
Carriage	< 3m from storage to mixer unit unopened	
Dispensing into mixer units	Bags opened with knife, controlled dispensing into mixer unit or mixer skip.	
Slurry mixing operation	Water Soluble	Water absorbent
Pumping to mixing zone	Slurry is contained within pipe and materials are absorbed within E-clay slurry matrix	
Soil mixing	Soils are mixed in a skip with E-Clay slurry; dry cement is added and further mixed. Materials are absorbed within E-clay slurry matrix. Medium risk of cement dust reduced to low risk through PPE	
Post remediation	Following treatment the risk associated with odour / dust production is negligible.	

The Treatment Hub – Environmental Risk Assessment.

Table 5 - Identification of risks to human receptors (on-site and off-site) from gaseous emissions to air from the contaminants of concern identified within the soil / material matrix.

Parameters	Heavy Metals	VOC	PAH	TPH
Relative volatility	Low	Low to Medium	Low to Medium	Low to Medium
Soil mixing	Transfer of identified material to mixing zone is required – low to medium risk (controlled through PPE). Following treatment the risk associated with odour production is negligible. All operations to be monitored via either olfactory or hand held VOC monitor.			
Post installation	Following treatment the risk associated with odour / dust production is negligible.			

Table 6 - Allocation of a scoring system determining the risks to human health (site operatives) from emissions to air - Identified during and after application of the treatment process, before and after implementation of controls

Parameters	Envirotreat 'A'		Envirotreat 'B'		Envirotreat 'C'		OPC (Ordinary Portland Cement)		Bentonite	
	Before controls	After controls	Before controls	After controls	Before controls	After controls	Before controls	After controls	Before controls	After controls
Relative volatility	M		L		L		N/A		N/A	
Occupational Exposure Limit	M	N	L	N	M	N	M	N	M	N
Storage	N		N		N		N		N	
Transportation on-site	N		N		N		N		N	
Dispensing into measuring receptacle	M	N	L	N	M	N	N		N	
Carriage	M	N	L	N	M	N	N	N	N	N
Dispensing into mixer units	M	N	L	N	M	N	M	N	M	N
Slurry mixing operation	N		N		N		N		N	
Pumping to mixing zone	N		N		N		N		N	
Soil mixing	N		N		N		N		N	
Post installation	N		N		N		N		N	

The Treatment Hub – Environmental Risk Assessment.

Table 7 - Allocation of a scoring system determining the risks to human health (visitors & general Public) from emissions to air identified during and after application of the treatment process, before and after implementation of controls

Parameters	Envirotreat 'A'		Envirotreat 'B'		Envirotreat 'C'		OPC		Bentonite	
	Before Control	After Control	Before Control	After Control	Before Control	After Control	Before Control	After Control	Before Control	After Control
Relative Volatility	N		N		N		N/A		N/A	
Occupational Exposure Limit	N	N	N	N	N	N	L	N	L	N
Storage	N		N		N		N		N	
Transportation on-site	N		N		N		N		N	
Dispensing into measuring receptacle	N		N		N		N		N	
Carriage	N		N		N		N		N	
Dispensing into mixer units	N		N		N		N		N	
Slurry mixing operation	N		N		N		N		N	
Pumping to mixing zone	N		N		N		N		N	
Soil mixing	N		N		N		N		N	
Post installation	N		N		N		N		N	

Table 8 - Allocation of a scoring system determining the risks to human health (site operatives and general public) from emissions to air identified during and after application of the treatment process, before and after implementation of Controls

	Inhalation		Ingestion		Skin Contact		Eye Contact		Controls / PPE Req.	
	Site Operatives	General Public	Site Operatives	General Public	Site Operatives	General Public	Site Operatives	General Public	Site Operatives	General Public
OPC	M	L	L	N	M	N	M	N	YES	NO
Bentonite	M	L	L	N	N	N	L	N	YES	NO
Env 'A'	L	N	L	N	M	N	M	N	YES	NO
Env 'B'	N/A	N/A	L	N	L	N	M	N	YES	NO
Env 'C'	N/A	N/A	L	N	M	N	M	N	YES	NO

N.B. The scoring system has been based on the hazardous nature of each of the chemicals / materials.

The Treatment Hub – Environmental Risk Assessment.

1.1 - Control of mud and debris arising from application of the treatment process

The control and prevention of mud and debris from being transported off-site during application of the Envirotreat Technology will be dependent upon a number of factors. These include the amount of traffic and personnel travelling across the site. The level of risk for movement of mud and debris off-site is **low** during the project (with control measures in place) and **negligible** following completion (refer to Table 2) for the reasons stated below: -

The operation will be undertaken indoors and therefore not subject to inclement weather conditions (rain). Strict housekeeping protocols will be required to minimise mud on-site, this in turn will minimise the risk of off-site contamination. A visual inspection of all vehicles will be undertaken before allowing them to move off-site.

All operations regarding the treatment process will be carried out within a designated Treatment Area. Therefore, all mud and debris arising from the treatment operation will be contained within the Treatment Area and will not be transported off-site.

There will be little or no movement of plant or equipment off-site for the project duration.

Imported materials including bentonite, OPC and chemical reagents will be delivered and off-loaded in the vicinity of the site entrance and moved around the site internally via an excavator or forklift. The procedure will not require import vehicles to have contact or even access to the treatment zone.

1.2 - Control and monitoring of noise – Plant & equipment

Noise during application of the technology may originate from plant vehicles, the batching plant and / or any vehicles delivering materials to the site.

Receptors at risk are site operatives and the local community.

Following implementation of control measures, the level of risk on receptors from noise will be **low** from plant and equipment operating on site with appropriate control measures in place, in addition there will be a **negligible** impact on receptors from noise during delivery of materials to the site for the reasons stated below: -

Although noise levels within the unit will present a **medium** risk, this risk will be reduced to **low** by the requirement to wear ear protection.

The process is undertaken indoors which minimise the effects of sound traveling.

The delivery process is not generally noisy and will only occur during sociable working hours (i.e. 08:00 – 17:00).

Deliveries will only be permitted at designated access points for operational vehicles.

The Treatment Hub – Environmental Risk Assessment.

Section 2 - Potentially polluting leaks, spillages and aerial emissions from application of the treatment process

2.1 - Waste – Spillage

Potential receptors for spillages are the groundwater & the underlying soil matrix, site operatives and the local community. On the basis that the treatment process will be undertaken within the confines of existing integral hard standing, the perceived risk to the surrounding environment is **negligible** during the treatment process with appropriate control measures in place and negligible following remediation for the reasons stated below:-

Throughout the treatment operation at the Hub, waste will only be moved within the confines of the Permit area. Any spillages will be scraped up, and incorporated in the mix.

2.2 - General Spillages On-Site

As with the spillage of waste, the identified receptors are the underlying site, operatives and the local community.

The risk to the surrounding environment is **negligible** during the remediation works with appropriate control measures in place for the reasons stated below:-

All maintenance and refueling of plant and equipment at the Hub will be carried out by trained personnel within a designated area using drip trays.

All spillages will be dealt with immediately using absorbent material and incorporated with the material for treatment.

Diesel fuel will be stored within a self-contained bowser. The spillage capacity will be 110% of the maximum volume of diesel stored within the bowser.

Regular maintenance checks of plant and equipment will be carried out daily to prevent leaks etc occurring.

2.3 - Chemical Reagents - Potential Spillages

There is a perceived risk to the surrounding environment from the spillage of chemical reagents during delivery, the mixing process and / or via damaged or leaking pipe-work.

The potential receptors identified include site operatives, underlying soil and groundwater. The associated risk to the surrounding environment is deemed to be **low** when controls are in place for the reasons stated below: -

Delivery of reagents will generally be in the form of Intermediate Bulk Containers (IBC's), 205L drums, and 25 kg carboys. All chemical containers will be stored within a lockable container.

Any leaks or spillages will be contained within the bunded area and can be used within the slurry mixers and incorporated for the next batch of treatment slurry. Bentonite will be available to act as a spill absorbent. All leaks and spillages will be addressed as soon as practically possible but within a 24 hour period.

The Treatment Hub – Environmental Risk Assessment.

The prevention of spillages during the chemical reagent addition process will be achieved by the use of closed containers, spouts for pouring and that a clear path is maintained at all times between the chemical store and the mixer units.

The general condition of engineered containment system and general condition of chemical reagents will be inspected on a daily basis so that any damage can be identified and repaired.

The authority to deal with spilt waste or chemical reagents will only be given to trained personnel.

The potential risk from spillages during the delivery and off-loading process is deemed to be of low risk for the reasons stated below: -

All deliveries will be off-loaded with a forklift operated by trained and qualified personnel only in accordance with the site specific Lifting Plan.

Off-loading of chemicals will be supervised. All precautions will be taken to ensure the chemical IBC's / drums are handled carefully.

Absorbent materials (i.e. Bentonite) will be provided should a spillage occur. This material will be contained within a waste skip for disposal at a suitable location.

2.4 - Chemical Reagents - Emissions to Air

Potential risks to human health from aerial emissions of chemical reagents from each stage of the treatment process are perceived to be **low** following implementation of control measures (PPE).

The surrounding environment and the general public will not be at risk from the treatment operation due to the relatively low volatility of the chemical reagents used and the relatively large distances from the Treatment Area.

Should emissions to air become an issue Envirotreat personnel have the authority to cease operations until the issue is addressed.

The Treatment Hub – Environmental Risk Assessment.

2.5 - Migration of Contaminated Ground and Surface-Water / Leachate

The potential pathway for migration of contaminated ground and surface-water, and / or leachate off-site is through the underlying base. The migration of contaminants off-site as a result of the treatment process via the above pathways is perceived to be **negligible** with controls in place for the reasons stated below: -

The chemical reagents will be located on the integral concrete slab and suitably bunded, any spillages being cleaned up immediately.

The batching plant will be located on the integral concrete slab, any spillages being cleaned up immediately.

Untreated soils will be located on the integral concrete slab and be further bunded by separating bay walls, any spillages being cleaned up immediately.

Once the contaminated soils come into contact with the treatment slurry the contaminants are bound within the treated matrix preventing leaching to the groundwater bodies.

2.6 - Remediation Reagents – Dry Materials

Possible receptors from dust production include site operatives and members of the local community (refer to Table 1). The risk of pollution from dust production to off-site receptors during the delivery and use of dry materials is perceived to be **low** (refer to Table 2) following implementation of control measures for the reasons stated below: -

Bentonite and Ordinary Portland Cement (OPC) is delivered in 25kg bags, shrink wrapped so presents a **low** risk

During treatment, the bentonite bags are split and emptied carefully in the mixer units; the cement bags are split and emptied direct into the mixing bin / skip, the risk from dust production at this stage is perceived to be of **medium** risk to site operatives reducing to **low** with the provision of appropriate PPE. PPE in the form of dust masks which will be worn by site personnel working in the vicinity of the treatment zone. The risk to but **low** the local community of due to the distance from the treatment zone.

Dust monitoring will be undertaken and if deemed necessary dust suppression in the form of screens and / or misting units will be utilised if dust becomes a problem on-site.

2.7 - Remediation Reagents - Leakage or Accidental Release

The potential pathway and receptor from the leakage or accidental release of treatment slurry is through the base into any underlying aquifer. The risk to environmental receptors off-site is perceived to be **low** with the control measures outlined for the reasons stated below:-

All remediation reagents will be stored on the integral concrete slab with suitable bunding.

The batching plant will be located on the integral concrete slab.

Any leaks or spillages will be scraped up and incorporated within the next batch of treatment slurry.

The Treatment Hub – Environmental Risk Assessment.

2.8 - Waste – Volatile Organic Compound Emissions

The generation of VOC's and their toxicity to life is dependent upon the type and quantity of contamination on-site. The pathway for the release and transport of VOC's during the delivery and treatment stages is airborne, and receptors include site operatives, members of the public, neighbours and site visitors.

The risk to potential receptors from the treatment operation is perceived to be **low**.

VOC's will be monitored throughout the treatment by means of lavatory and hand held gas monitoring equipment (PID). In the event of unacceptable VOC levels, works will stop until the situation can be resolved.

The risk posed to off-site receptors is deemed to be **negligible** due to the relatively large distances between the working area and the site boundary.

The Treatment Hub – Environmental Risk Assessment.

Section 3 - Fires on the Operating Site

3.1 - Waste – Fire / Explosion

The potential risk of fire from application of the treatment process is **negligible** for the reasons stated below: -

The nature of the treatment process, method and location of application and wastes concerned. Wastes that are classified as explosive or highly flammable (Special Waste Hazard code H1, H3-A and H3-B) will not be accepted at the waste pre-acceptance stage or at the waste acceptance stage.

Smoking and the use of naked flames will be prohibited within the treatment zone.

The emergency procedures for a fire or explosion on-site are detailed in the Fire and Emergency Plan.

The Treatment Hub – Environmental Risk Assessment.

The Hub

Advanced material treatment, remediation and recycling technology

EMERGENCY PROCEDURE – FIRES ON-SITE

Emergency Plan – Fires On-Site

ALL personnel should read the following procedure carefully in case of a fire.

The following procedure must be adhered to if a fire or explosion occurs on-site.

ALL fires on-site must be regarded as an emergency and dealt with as such.

Evacuated the building immediately and enable outside at the Fire Assembly Point

If the fire can be tackled SAFELY, then extinguish using the on-site portable extinguisher and / or water from the site. The extinguishers will be stored near the site entrance easy access. ALL personnel should be made aware of the fire fighting equipment available and where they are stored. Equipment stored will include at least one of each of the following: a fire extinguisher, a fire blanket and a first aid kit.

Summon the Fire Brigade immediately. Clearly state site details.

The Treatment Hub

Building 2

Westfield Industrial Park

Swansea.

Emergency Telephone Numbers.

999 or 112

Emergency Contact Numbers.

Simon Farr 07803 174046

Matt Eynon 07971 600759

Where possible move all plant and equipment to a safe distance away from the vicinity of the fire.

If 'out of hours', i.e. evenings or weekends, inform fire brigade and then notify relevant personnel on the emergency telephone number supplied above.

It is the responsibility of the principal / main contractor to ensure that relevant training will be given to all personnel on-site on what to do in the event of a fire or explosion and in the use of the fire fighting equipment stored on-site.

The Treatment Hub – Environmental Risk Assessment.

3.2 - Plant – Fire / Explosion

Both light and heavy plant and equipment are used to carry out the requisite treatment works. Consequently, there will be a requirement to store fuel on-site, which may pose a fire risk to site personnel and the local community etc. The following control measures will be in place during the works: -

Fuel will be stored on-site within a self-contained bowser. Smoking or the use of naked flames will not be permitted within the storage area.

Only suitably trained personnel, in accordance with the manufacturer's specifications, will carry out maintenance of plant and equipment.

The emergency procedures for a fire or explosion on-site are detailed in the Fire and Emergency Plan, see previous.

The Treatment Hub – Environmental Risk Assessment.

Section 4 - Control, monitoring and reporting of dusts, fibres and particulates during the mixing / treatment process

The generation of dust and particulates on-site and the risk to the surrounding environment will be dependent upon the following parameters: general day to day disturbances and whether the soils are damp.

Possible receptors include site operatives, the local community, surface water and local properties. The potential risk is **low** with the application of appropriate control measure for the reasons stated below:-

On-site vehicle traffic will be kept to a minimum and water will be used to dampen down should dust become a problem from the movement of plant and equipment.

Monitoring of the concentration of airborne dust and particulates will be assessed throughout the day.

Appropriate PPE will be supplied to site operatives in contact with bentonite and cement dust. Should dust levels become problematic, dust suppression equipment in the form of misting units will be used.

The Treatment Hub – Environmental Risk Assessment.

Section 5 - Waste - Generation of odours

The potential generation of odours on-site is related to the type of waste present. The pathway identified for the transport of odours across the site boundary is through the atmosphere, with potential receptors being site operatives, the public and site visitors. With controls in place, the likely production of odours is perceived to be **low** to site operatives and **negligible** to members of the local community for the reasons stated below: -

The untreated stockpile and soil mixing areas will be located indoors and away from the site boundary and any sensitive receptors (as far as is practicably possible);

Monitoring via olfactory and hand held gas monitoring equipment will be utilised;

If persistent odour problems occur, the treatment process will be stopped and appropriate measures i.e. odour suppression units will be employed to minimise odours on the recommencement of treatment;

In the event of increased odour production, respirators will be worn by site personnel working in the vicinity of the treatment zone;

The Treatment Hub – Environmental Risk Assessment.

Section 6 - Monitoring and / or Sampling Programme

The following parameters were taken into account to determine the monitoring and sampling programmes:

- The likely contamination encountered;
- The design of the facility;
- The mode of operation;

The treatment strategy to be applied at the Hub is designed to ensure that the risks associated with the identified contaminants of concern are fully addressed in accordance with the quantitative risk assessment.

See below for details of the daily monitoring plan.

The Treatment Hub – Environmental Risk Assessment.

Section 7 - Wastes Including Pathogenic Bacteria

The Hub will not accept wastes identified with the presence of pathogenic bacteria.

Consequently, the potential risk to receptors associated with the application of the technology for the treatment of contaminated material as identified at the Site is **negligible**.

The Treatment Hub – Environmental Risk Assessment.

Section 8 - Control of Pests

Potential pests pose a **low** risk to site operatives and the local community from application of the treatment process for the reasons stated below: -

The nature and source of the possible wastes to be treated (i.e. organic, inorganic/ heavy metal wastes) are not regarded as foodstuffs for pests;

Foodstuffs introduced to site by operatives will be disposed of within appropriate, covered bins;

Usual good housekeeping practices will be adopted;

In the event that a pest infestation occurs, a pest control contractor will be appointed.

The Treatment Hub – Environmental Risk Assessment.

Section 9 - Control of Birds and Other Scavengers

Birds and other scavengers do not pose a risk during application of the treatment process for the reasons stated below: -

The nature and source of the wastes to be treated on-site are not regarded as foodstuffs for birds and other scavengers.

All food and putrescible wastes will be deposited within covered waste bins / skips, to ensure that birds and other scavengers do not become a problem on-site;

Main operations will be undertaken indoors.

The Treatment Hub – Environmental Risk Assessment.

Section 10 - Control of Litter

The major source of litter from site will be from material bags and as such the risk from litter is **negligible** (refer to Table 2) for the reasons stated below: -

Litter will be deposited on-site in skips/covered waste bins;

Chemical drums and IBC's will be safely stored until arrangements can be made for their collection. Collection of empty drums / IBC's will be arranged as and when required (by a suitable carrier).

The Treatment Hub – Environmental Risk Assessment.

Section 11 - Documentation

At all times, an up to date Environmental Management System, records and Health & Safety documentation will be kept at the site office for reference by site personnel. The site will be inspected regularly by the Environmental Procedures Manager / WAMITAB assessor to ensure license compliance.

All records will be made available for inspection by the Local Council and the Environment Agency during operational hours.

The Treatment Hub – Environmental Risk Assessment.

Section 12 - References

Permit - EPR/ZP3933NJ

The Treatment Hub – Environmental Risk Assessment.

Monitoring Plan

Monitoring will be carried out and results interpreted by suitably qualified and experienced personnel. Records of results from all monitoring will be filed in accordance with the Environmental Management System, which will be on-site during hours of operation.

Personnel to Carry out Monitoring:

- WAMITAB (Philip Rees)
- Simon Farr
- Matt Eynon
- Neil Mcleod
- Giles Sommerwill

Monitoring will be undertaken daily throughout the on site works. In addition further monitoring will be undertaken should there be any concerns between routine monitoring intervals.

Air Emission Monitoring

The potential risk from aerial emissions following implementation of control measures is **low** to **negligible** for the following reasons: -

- Regular monitoring of dust and VOC's
- On-site vehicle traffic will be kept to a minimum and water will be used to dampen.
- Soil treatment involves the addition of wet E-Clay slurry.
- Following treatment the potential for aerial emissions is negligible.

In the event dusts / VOC's / odours become problematic works will cease until corrective action can be implemented.

Installation and Commissioning

The commissioning of the facility will be carried out by a suitably qualified Technically Competent Manager (WAMITAB).

Following commission, the integrity of the containment system will be monitored on a daily basis. The monitoring regime will consist of a visual inspection.

If a problem arises, the containment system and / or bund will be repaired immediately and recorded.

The Treatment Hub – Environmental Risk Assessment.

Indicator Parameters

Aerial Emissions

Indicator	Justification
Cement (OPC) and Bentonite particulates released to air	The only potential aerial emissions will originate from the addition of Cement and Bentonite. This will be evaluated visually.

Dust

Indicator	Justification
Dust released to air due to vehicle movements, etc	The only potential source of dust will originate from the movement of site vehicles. This will be evaluated visually and appropriate action undertaken if deemed unacceptable.

Noise

Indicator	Justification
Noise levels rising significantly (5 dBa) above the baseline levels at site boundary	The remediation operation is not expected to generate excessive noise beyond the site boundaries and it is not anticipated that levels will rise above the indicator levels (5 dBa over baseline at site boundary) for the reasons stated previously.

VOC

Indicator	Justification
Any emissions over STEL / TWA. Benzene > 1ppm	Through monitoring throughout the treatment operation by means of hand held monitor (PID), incidents will be minimised.

Preferential Pathways

Indicator	Justification
Observation of drainage runs, other ducts, etc which lead to receptors	Use of site plans and supervision of site investigations will minimise the risks associated with these.

How to comply with your environmental permit



We are the Environment Agency. We protect and improve the environment and make it a better place for people and wildlife.

We operate at the place where environmental change has its greatest impact on people's lives. We reduce the risks to people and properties from flooding; make sure there is enough water for people and wildlife; protect and improve air, land and water quality and apply the environmental standards within which industry can operate.

Acting to reduce climate change and helping people and wildlife adapt to its consequences are at the heart of all that we do.

We cannot do this alone. We work closely with a wide range of partners including government, business, local authorities, other agencies, civil society groups and the communities we serve.

Published by:

Environment Agency
Horizon house, Deanery Road,
Bristol BS1 5AH
Email: enquiries@environment-agency.gov.uk
www.environment-agency.gov.uk

© Environment Agency 2011

All rights reserved. This document may be reproduced with prior permission of the Environment Agency.

Further copies of this report are available from our publications catalogue:
<http://publications.environment-agency.gov.uk>
or our National Customer Contact Centre:
T: 03708 506506

Email: enquiries@environment-agency.gov.uk.

Document 433_11 (Version 6 - June 2013)

Contents

Contents

Introduction	5
Part 1 - All activities	8
Appropriate measures	9
General management condition	10
Management system	10
What type of management system should I have?	11
What you need in your management system	19
Operations	25
Permitted activities	25
Emissions and monitoring	26
Point source emissions to air, water and land	26
Emissions of substances not controlled by emission limits	26
Releases from liquids in containers	27
Monitoring	29
Information	32
Records	32
Reporting and notification	33
Part 2 - Waste operations	34
General management	34
Sufficient competent persons	35
Technical competence schemes	36
Site attendance guide for technically competent managers	36
Avoidance, recovery and disposal of wastes	39
Operations	40
Permitted activities	40
Waste acceptance	40
Emissions and monitoring	42
Emissions of substances not controlled by emission limits	42
Odour	44
Noise and vibration	46
Pests	48
Information	49
Records	49
Part 3 – Installations	51
General management	51
Sufficient competent persons	52
Energy efficiency	53
Efficient use of raw materials and water	55
Avoidance, recovery and disposal of wastes	55
Emissions and monitoring	57
Point source emissions to air, water and land	57
Emissions of substances not controlled by emission limits	59
Odour	61
Noise and vibration	62
Monitoring	64
Pests	65

Contents

Information	67
Records	67
Notification	68
Change in operation	69
Part 4 - Mining waste operations	70
General management	70
Waste management plan	70
Site condition and closure	70
Sufficient competent persons	71
Emissions and monitoring	72
Emissions of substances not controlled by emission limits	72
Odour	73
Noise and vibration	75
Information	77
Records	77
Waste records	77
Part 5 – Discharge of sewage or trade effluent	78
General management	78
Emissions and monitoring	80
Point source emissions to air, water and land	80
Emissions of substances not controlled by emission limits	80
Groundwater activities	81
Monitoring	82
Information	83
Reporting and notification	83
Change in operation	84
Part 6 - Groundwater discharges (and spreading activities)	85
General management	85
Operations	86
Volume	87
Discharge period	87
Application rate	88
Emissions and monitoring	90
Emissions of substances not controlled by emission limits	90
Information	91
Records	91
Change in operation	91
Part 7 – Where to find more information	92
Record of changes	95

Introduction

This guidance explains the conditions or rules of your environmental permit. It describes the standards and measures you must use to control the most common risks of pollution from your activity and how to comply with the conditions of your permit.

The rules or conditions of your environmental permit tell you what you must do to protect the environment and people. We call these objective based conditions or rules. In many cases you have flexibility about what measures to use if you can show us you are meeting these objectives.

You must read and understand this guidance and keep a copy handy with your permit paperwork. People working on a site must have read the relevant sections of this guidance and be able to refer to it at any time.

The following do not need to read this but will need to look at other guidance.

Householders If you are a householder and you have a permit for discharging treated sewage effluent up to 15m³/day to ground or 20m³/day to surface water you need to read the management system toolkit designed for you.

Intensive Farming If you are carrying out intensive poultry or pig production you need to read the sector guidance note *EPR 6.09 How to comply with your environmental permit for intensive farming*.

Radioactive Substances If you are carrying out a radioactive substances activity you need to read the how to comply guidance relating to your specific activity.

Before you apply for a new permit

When you apply for a permit you confirm that you will follow all the relevant guidance and have a management system.

You must read the sections of this guidance that apply to you. This guidance also refers to other guidance you may need to read [Part 7](#) – Where to find more information page 92 explains where to find information about applying for a permit and other guidance.

Get your permit application right first time and you are likely to receive your permit decision faster. We encourage you to have a pre-application discussion with us. We can give you advice about applying for a permit and how we issue a permit. We will answer questions you have about how we regulate a permit and how to produce a management system. Contact us on 03708 506506.

Introduction

When you have a permit

Once we have given you a permit you need to use this guidance to help you carry out your activities. You must be able to explain to us and explain in your management system what measures you are using to protect people and the environment. If something goes wrong, we need to know what you are going to do about it. We can help you understand what to do to improve things.

We will inspect your site, check your management system and score you on how well you are complying with your permit. The score may affect how much you pay to us in fees each year. If you are complying, we can reduce how often we need to inspect you. Some low risk activities will not receive routine inspections.

If you want to change what you are doing, transfer the permit to someone else or you do not need your permit any more please contact us.

Layout of this document

Part 1 has general information for everybody, including information on management systems.

Parts 2 – 6 have information for different types of activities. You only need to read the part that applies to your activity.

Part 7 explains where to find more information.

Parts 1 – 6 are presented in the order the conditions appear in the permit:

1. Management
2. Operations
3. Emissions and monitoring
4. Information

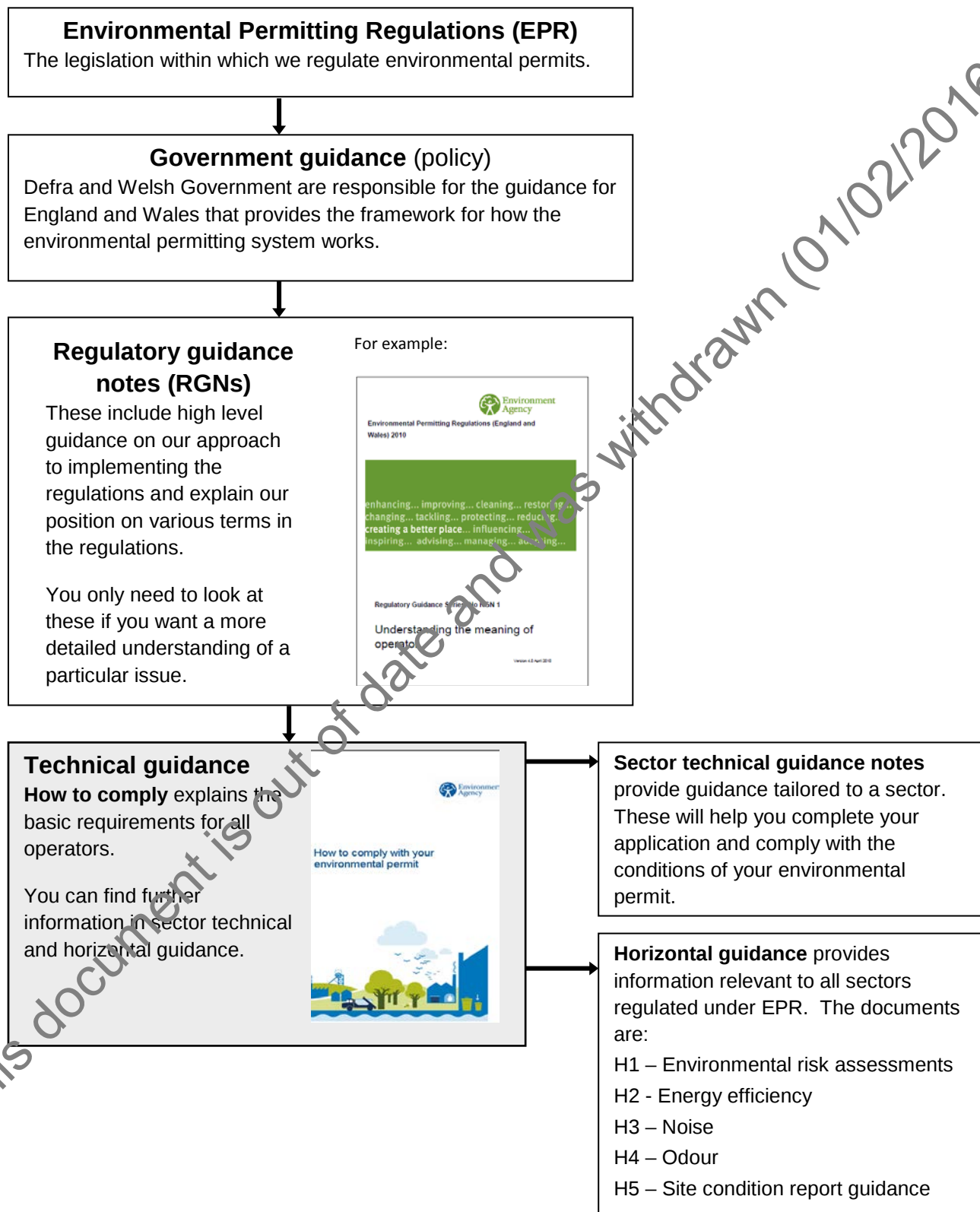
We state a condition or rule and then explain the things we expect you to do to meet it. We direct you to more information where needed.

Our other guidance

This document includes general guidance about conditions and some activity specific guidance. For some activities you will need more information to understand what you need to do. This is covered in the sector technical guidance notes listed in [Part 7](#) – Where to find more information page 92. If there is conflict between the sector technical guidance and this document, the sector guidance will apply.

Introduction

How the guidance fits together



[Part 7](#) page 92 explains where to find more information. It includes links to the guidance documents and application information on our website and other useful sources of information.

Part 1 - All activities

How permits and guidance work together

When you apply for a permit you are making a commitment to meet the standards specified in this document, using the measures described or their equivalent.

Your permit will contain a range of conditions intended to achieve the objectives in the relevant UK and European legislation. Some conditions will be detailed such as numerical limits on emissions or restrictions on the type of waste you can handle. Most conditions, for example those about your management system, will state outcomes you must achieve, but will not specify how you achieve them, this is up to you. They offer you some flexibility in the way you operate your activity and reduce the need for you to apply to us to change your permit. However, they require you to be proactive and to take responsibility for compliance with the objectives, rather than just meeting a series of “tick box” requirements. You will need to put thought and planning into how you will comply with these conditions. You must read the conditions in combination with this document and any other guidance that applies to your activity.

Our officers use this document as the basis for assessing compliance with your permit. If you are not meeting these or equivalent standards we will consider all the relevant issues and then take action to ensure compliance with the requirements. Depending on the circumstances, we may provide further help and advice, formally require compliance using a notice, or ultimately take formal enforcement action, which can result in prosecution and permit revocation. We describe our approach to enforcement in our Enforcement and sanctions position statement published on our website.

Types of permits

There are two main types of permit under the *Environmental Permitting Regulations* (EPR):

- **bespoke** permits with conditions specific to the site or a mobile plant activity
- **standard** rules permits, which impose a set of generic rules applicable to all activities of a certain type.

Bespoke permit applications have a detailed site-specific determination process. The permit will usually contain conditions specific to your activity and site. The first condition states you need a management system. Certain activities will also have a condition that incorporates the commitment you made in your application to follow relevant guidance including this document and any management plans submitted as part of the application. A bespoke permit for a number of activities can also include standard rules sets.

Standard rules permits impose a set of rules which apply to sites carrying out activities of a certain type such as composting, or waste storage, as long as they meet the screening criteria. For example, they may need to be a certain distance from housing or protected sites, species and habitats. A standard permit has one condition that says which standard rules set or sets you must comply with. If you apply for one of these permits you are confirming that you have read, understood, and will comply with these rules, the risk assessment and the appropriate guidance, including this document. If you cannot meet the standard rules criteria you must apply for a bespoke permit.

If you have a standard rules permit you will need a site-specific management system. For example, there is a standard rules set for waste storage and treatment up to 75,000 tonnes per year. This does not mean that every site granted this standard rules permit has been assessed and approved to handle this amount of waste. We are saying that up to this level the same set of standard rules will apply. Your management system must identify and control how much of

All activities

each specific waste type your site can safely handle whilst minimising the risk of pollution. We describe how to comply with this condition in more detail later in this section.

We publish the standard rules on our website and they are subject to change from time to time. We usually carry out a public consultation on proposed changes, unless they are only administrative changes. We will always tell you about the changes if you are affected. If you wish to continue to have a standard rules permit you must comply with any changes.

There are some standard rules sets for mobile plant. Other mobile plant activities are covered by bespoke permits. Once you have a permit for a mobile plant activity you need to complete a deployment application when you want to use the mobile plant at a specific site. We assess this and let you know whether we agree to the deployment going ahead. Each deployment must meet the conditions of the permit for the mobile plant activity.

Appropriate measures

Some of the conditions in your permit require you to take **appropriate measures** to comply with them. European directives use various terms to describe what type of measures should be taken to prevent pollution such as “all appropriate preventative measures”, “reasonable”, “best available” and “best practicable”. These can all be interpreted slightly differently but have the same general meaning that we call appropriate measures.

Definition of pollution

For water discharge or groundwater activities, it means the direct or indirect introduction, as a result of human activity, of substances or heat into the air, water or land which may:

- be harmful to human health or the quality of aquatic ecosystems or terrestrial ecosystems directly depending on aquatic ecosystems,
- result in damage to material property, or
- impair or interfere with amenities or other legitimate uses of the environment.

For all other activities it means any emission as a result of human activity which may:

- be harmful to human health or the quality of the environment,
- cause offence to a human sense,
- result in damage to material property, or
- impair or interfere with amenities or other legitimate uses of the environment.

You must understand what appropriate measures mean for your site. It is important that you take reasonable measures to prevent or minimise pollution. Your measures will be based on those described in this document, industry or sector guidance, good practice and an assessment of the costs and benefits. As a minimum we expect you to implement the measures described in this document that apply to your activity. You can use your own measures that provide the same level of protection but you must explain them in your management system. In certain circumstances you may need to describe them in a management plan, for example for emissions, odour or noise issues. We may ask you to submit the plan for approval.

In some cases you may need to go further than industry standards to demonstrate appropriate measures. This may be because the activity is in a particularly sensitive environment, for example close to housing or a protected sites, species and habitats. Or the activity may give

All activities

rise to more or different types of impacts, such as where you are treating very odorous or smelly wastes, or using hazardous materials.

Do not wait until there is a problem to implement measures. It is often more costly and less effective to fix and pollution may have already occurred. If you do not achieve the outcomes specified in the permit then you must review what you are doing and we may require you to implement further measures. In many cases problems occur because the site design or operational problems make the usual appropriate measures less effective.

When an operator has acted reasonably and in good faith, we will work together to achieve the right outcome. There may be times when an unacceptable impact still exists after all cost effective measures have been considered and it may be necessary to consider limiting or stopping operations.

General management condition

The purpose of environmental regulation is to protect and improve the environment. Your permit incorporates these requirements. The management condition and your written management system are key for assessing how effectively you are protecting the environment and help to improve how you manage the environmental risks from your activities.

Typical permit condition or rule 1.1.1

The operator shall manage and operate the activities

(a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, [closure] (*This does not apply to mobile plant, stand-alone water discharge activities or stand-alone groundwater activities.*) and those drawn to the attention of the operator as a result of complaints; and

(b) using sufficient competent persons and resources.

Typical permit condition or rule 1.1.2

Records demonstrating compliance with condition 1.1.1 shall be maintained.

Typical permit condition or rule 1.1.3

Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

Management system

This condition requires you to have a written management system, run your activities according to it, and improve it if you are not compliant. The management system must be in place once your site is operational and available to us when we ask to see it.

The content of your management system depends on the risk and complexity of your activities. It must identify the risks to the environment from your activities and explain in detail the measures you will take to prevent or minimise those risks. An effective management system will enable you to manage compliance with your permit and any other legal requirements to protect the environment.

All activities

You, as the site operator, are responsible for writing your management system. You must ensure that everyone on site follows the procedures. Staff and contractors must be aware of the permit requirements, have access to the permit and management system, any relevant standard rules and understand how the site management system works.

When you apply for a permit you confirm that your management system meets our guidance. The appropriate measures in this guidance provide the basic standards we expect you to meet on your site, to show you comply with this condition.

For **bespoke permits** this guidance and your H1 risk assessment provide a set of measures that we will use to assess compliance with your permit. You need a written management system to link your procedures and measures.

For **standard rules permits** you must use the generic risk assessment and decide what appropriate measures you need and describe them in your management system. We explain more about how to assess the risks from your operations from page 18.

If you are not complying with the control measures in your management system we will take that into account when we assess compliance with your permit. We will look at any non-compliance as a symptom of poor management and we will focus on correcting poor performance through improved management systems and practices. Our regulatory staff may review your management system and appropriate measures on site as part of any compliance work.

Why do I need a management system?

As well as helping you comply with your permit an effective management system can help improve your business. By using your management system you will:

- be more likely to comply with your environmental permit and other environmental legislation
- demonstrate your commitment to protecting the environment
- better protect the environment and human health
- identify, provide and record all staff training
- have a structured programme of maintenance for plant and infrastructure.
- develop more consistent site operations
- be a good neighbour
- manage your site more efficiently
- be more able to develop cost saving practices (resource efficiency, recycling rates, possibility of cheaper insurance, no legal costs).

What happens if I do not have a management system?

If you do not provide an adequate written management system we will take action to ensure compliance with this requirement. Depending on the circumstances we may provide further help and advice, formally require compliance using a notice, or take formal enforcement action. We describe our approach to enforcement in our Enforcement and sanctions position statement on our website see [part 7](#), page 92.

What type of management system should I have?

You can have an in-house management system which you design yourself (or with the help of a consultant) or you can have a system based on a recognised standard or scheme such as ISO 14001 or EMAS. You may choose to have your management system certified or inspected by independent auditors.

All activities

We expect that your management system will be proportionate to your activities. Lower risk, less complex sites and activities may only need a basic management system. For larger or more complex sites and activities, we encourage you to have a comprehensive environmental management system that either meets the requirements, or is equivalent in scope to the international standard, ISO14001, or the European Eco Management and Audit Scheme (EMAS). Larger sites or more complex activities may include:

- large, high risk or highly complex waste operations
- installations (as defined by EPR)
- large water and groundwater discharge activities.

Remember in order for your management system to be effective you and your staff must implement it. There must be evidence in the day-to-day activities taking place on the site that you are using your management system.

In-house management systems

For sites with lower risk of environmental impact or if your organisation does not have the resources to join a formal certified scheme then you can develop your own in-house management system. This can be written by you, the operator, or on your behalf by a consultant. You can use our toolkit to help you write your management system details found in [Part 7](#) page 92.

We are available to discuss your management system approach at pre-application meetings, and we will audit your specific features of your chosen approach during compliance inspections.

External certified environmental management systems (EMS)

When you are thinking about implementing a management system, consider the value of adopting an externally recognised standard or scheme to implement a formal EMS. There are certification and inspection bodies to provide verification that the scheme used at a site meets the relevant standard.

Here we briefly describe some externally recognised standards or schemes. For more information use the website links in [Part 7](#) page 92.

ISO14001 (ISO is the International Organisation for Standardisation) provides an acknowledged worldwide standard.

EMAS (Eco Management and Audit Scheme) was originally a European Standard but is now available to organisations outside Europe.

EMASeasy aims to help small and medium sized enterprises achieve registration for EMAS.

BS8555 is designed for any size of organisation. It enables an organisation to take a phased approach to implementing a management system. It can be used to achieve ISO14001, EMAS, or they can choose to remain at a particular phase that is appropriate to their nature and size. Alternatively, an organisation can choose to remain at a particular phase that is appropriate to their size and environmental risks. It is useful for demonstrating an organisation's commitment to environmental improvement and working towards ISO14001 or EMAS.

There are a number of schemes available in England and Wales to support implementation of BS8555. You can find out on the UKAS website which certification or inspection bodies are accredited to audit each type of EMS standard or scheme, including the level of independence that they provide.

If you adopt an externally recognised management system, it is good practice to use external independent certification bodies to verify your conformance to the requirements of the standard

All activities

or scheme. Certification or inspection bodies are commercial organisations that carry out audits of the performance of an organisation against the EMS standard or scheme requirements.

Certification and verification helps to provide independent assurance of the performance of your management system. To demonstrate that your management system passes a high level of scrutiny, we believe that the certification or inspection body you use for verification should be accredited by the United Kingdom Accreditation Service (UKAS), or an equivalent National Accreditation Body (NAB) for certification bodies based outside the UK, for the specific standard or scheme they audit against. This provides additional assurance that verification audits are carried out to recognised standards. We consider that this is best practice (but not mandatory) and recognise this in our operational risk appraisal scheme, Opra. Currently, the highest recognition levels are for an EMS certified to ISO 14001 or registered to EMAS, and independently verified by an accredited certification body.

The use of an external certified EMS does not mean that you will automatically comply with all your permit conditions. Check your permit and management system carefully to ensure that all conditions are covered by your system and that it is implemented.

How do I choose the appropriate management system?

The table below lists factors to consider when weighing up whether to have an in house or a certified management system. Your operation may include other things you will also need to consider in which case add these to the table.

Tick in the column of the management system that best represents your situation. You need to think about the relative importance of each factor and may want to apply a weighting if some factors are more important than others. If you are in doubt you can discuss this with us. The combination of these factors will help you decide which type of management system will be best for your site. You can then use this as part of an appropriate measures analysis to justify your chosen approach.

In-House system	Tick	Certified system	Tick
Limited resources		Resources available	
Limited finance		Finance available	
Standard rules operation or simple bespoke operations		Installation or complex bespoke operations	
Low volume water discharge		High volume water discharge	
Simple on site processes		Complex on site processes (for example treatment of hazardous waste)	
Low volumes of materials		High volumes of materials	
No customer/client requirement		Customer/Client requirement	
Total		Total	

Producing and maintaining a management system

You need to produce a management system that shows how you will minimise risks of pollution from your activities. You then need to follow and keep it up to date. You must continually assess your management system to monitor the effectiveness of your operations and make

All activities

changes to it if it fails or when you can see ways of improving it. This should help you to achieve and maintain compliance with your environmental permit(s).

Your management system must be documented. It can be:

- handwritten (but must be legible)
- produced and saved on a computer
- produced on a computer and printed out.

Some operators have a number of regulated sites. You may want to have an overarching management system that covers all your sites and activities. If so, you must ensure it is relevant to the permitted activities being carried out at each site. For example, you may need to demonstrate additional measures where some sites are nearer sensitive habitats than others, or you are carrying out different types of activities.

The management system may not all be in one document, in which case you should have a signpost document that explains where to find different parts. For example, different procedures such as electrical or mechanical maintenance may be covered in separate documents but will still form part of your overall management system. The overall outcome of the management system will be that the regulated facility is effectively managed, operated and maintained to minimise the risks of pollution.

You may have processes and procedures to deal with accidents / incidents / non-conformances and complaints across your business rather than having many separate systems that deal with individual assets on a site-by-site basis. The overall outcome of the operation of these company-wide systems will be that each relevant activity will be subject to effective management that will identify and minimise risks of pollution arising from accidents / incidents / non-conformances and complaints.

You can write an effective management system by following the Plan Do Check Act (PDCA) cycle. This cycle represents a continual process of review and improvement of performance. For example if you have a non-compliance action plan, by monitoring your compliance scores you will see what the recurring problems on your site are. You can then identify how to improve your operations. You could set a compliance target for the next year to improve your levels of compliance in any area.

The diagram on the next page illustrates the key elements of PDCA to consider for a management system required by an environmental permit.

There are templates and a toolkit to help householders and small and medium sized businesses produce a management system. See [Part 7](#) page 92 for links.

All activities

Review your management system:

- operator regularly reviews to ensure fit for purpose
- any environmental policy implemented and action plans carried out
- update procedures and control measures
- report (site) environmental performance where needed
- consider external certification or verification.

Plan your management to establish your environmental baseline and obligations:

- carry out an environmental review and risk assessment
- identify requirements for compliance with all environmental permits and applicable environmental legislation
- set objectives to maintain and improve environmental performance and compliance action plan
- operator owns management system and promotes to all staff. May include an environmental policy and action plan.



Check your management system to ensure it is being followed:

- control and monitor environmental performance and management system
- monitoring and measurements
- review continual improvements and corrective actions
- carry out internal audits
- ensure compliance with legal requirements
- record your checks.

Do - implement and operate your management system:

- establish procedures and control measures to manage and comply with all permits and other obligations
- communicate requirement to staff, contractors and external parties
- staff and contractors are trained and competent to carry out responsibilities
- establish and work to maintenance schedule
- test accident and emergency plans
- keep accurate and clear records.

All activities

Plan your management system

In order to improve your environmental performance you need to understand the impacts of your activities. Then develop a set of objectives appropriate to your operation. You will need to know if your objectives are being met. For example, targets when used properly can be useful indicators of your performance, but to be effective they need to be SMART.

Specific	Each target should be clearly stated and address one issue
Measurable	It must be quantifiable and the results definitive. (e.g. 10% reduction in fuel use)
Achievable	It must be realistic – do not set targets that cannot be met
Relevant	It should be related to the environmental objectives you have defined
Time restricted	There is a clearly defined deadline or end date for delivery

You can revise your targets as part of the review and continual improvement process.

Things to consider at the Plan stage

- Complete a risk assessment to cover as a minimum, sections on site operations, maintenance, accidents, training and records. See risk assessment page 18.
- Identify and evaluate legal requirements.
- How you are meeting any standards or requirements in guidance and codes of practice, quality protocols and assurance schemes, for example bunds for large oil storage tanks need to be able to contain 110% of the maximum capacity of the oil tank.
- Any exemptions you have registered at the site.
- Any effluent discharge consents for the site from the local water company.
- How you are meeting requirements of other regulations that relate to environmental protection for example the hazardous waste regulations.

Outcomes

- A comprehensive understanding of the potential and actual impacts of the permitted activities on the surrounding environment and people's health.
- The correct appropriate measures are selected to manage environmental risks and prevent or minimise their effects so as not to cause pollution.
- If you are following a formal certified EMS you will have relevant documents needed for that such as an environmental policy.
- Action plan/development programme with objectives for improvement.

Implement your management system (Do)

Once you have developed your action plans or development programmes, you need to implement them. You may need to improve infrastructure and equipment. You or any employees may need further training. You need to identify roles and responsibilities in the management system and make sure everyone is clear about them.

A key area in reducing environmental impacts is the use of a Planned Preventative Maintenance (PPM) system instead of a reactive one. This can help improve operational reliability and reduce impacts on the environment. The amount of waste generated by sudden breakdowns is usually greater and takes more of your resources to fix than a PPM programme for the equipment you operate.

All activities

In the event of a breakdown, the level of impact on your operation as well as the environment will vary depending on the equipment. You can define the levels of impact and criticality using the Failure Mode Effect Analysis (FMEA) to determine:

1. The type of failures that may occur and the causes and effects of failure.
2. How often failures are likely to occur, over a set period of use (for example mileage or hours run).
3. The effective maintenance options available. For example, manufacturers often provide servicing schedules, but you may change the recommended period based on operational experience.

Things to consider at the Do stage

- Operational control measures, see page [20](#).
- Staff training and competences, see page [23](#).
- Staff awareness and access to the permit and management system.
- Documenting the system and keeping records, see page [24](#).
- Communication of requirements to internal and external parties.

Outcomes

Evidence in day to day activities taking place on site that the management system is being used and followed:

- Control measures and procedures are an integral part of business operation.
- Easy for staff to access, understand and use.
- Staff are trained and competent to carry out procedures and control measures.
- Requirements of the management system are communicated to management, staff and contractors.

Check your management system

Regular monitoring and measuring of your operational activities helps you to evaluate the level of compliance with your permit and relevant legislation. Where there are problems you can immediately consider how to address them. Record all results and any decisions or actions taken because of these results.

Internal audits will allow you to monitor the effectiveness of procedures and operations.

Things to do at Check stage

- internal audits
- independent (second or third party) audits.

Outcomes

- checks are carried out to ensure that the management system is being implemented as intended
- preventative and corrective actions are undertaken to minimise breaches (non-compliances).

Review your management system (Act)

The results of internal audits provide managers and directors with an opportunity to look at how effective the management system is and to consider any actions or changes to improve it.

Regularly review your management system to ensure it is appropriate and being implemented.

You must review your management system when:

- there are changes on site, in your activities and/or equipment
- if you are applying for a variation to your permit
- if there is an accident, complaint or breach of your permit.

All activities

Once you have reviewed the outcomes for one period; you can plan the objectives and targets for the next. Once you have established your management system after one full review period, you may decide to use external auditors and to achieve certification to a recognised standard or scheme.

Things to do at Review stage

- Review the content of your management system regularly including any supplementary plans, for example noise or odour plans.
- Keep a record of all changes to your management system and let us know about any major changes.
- Following an accident or permit breach or significant near miss we may review your management system to identify any failings. We may make recommendations for improvements that we will expect you to implement.
- Determine whether your objectives, and any targets, have been met and report on them.
- For more complex activities carry out performance monitoring, measurement and reporting. You may want to use appropriate key performance indicators KPIs for example feedback from staff and stakeholders such as the local community.

Outcomes (evidence)

- The management system is kept up to date.
- The management system is continually improved.
- Where relevant interested parties (for example regulators, local community) are engaged, informed and supportive.

Risk assessments and environmental permits

Bespoke permits require you to submit an assessment of the risks from your site as part of the application. The guidance *H1 Environmental risk assessment* and our risk assessment tool help you with this. For certain water discharge activities we will do this assessment for you.

Standard rules permits require you to look at the generic risk assessment that we have already completed for each type of environmental permit. You can find this on the same web page as the standard rules sets. As no two sites are the same you need to use the generic risk assessment as a guide and consider it in relation to your site and any additional site specific risks to help you decide what appropriate measures you need. You may have to do more than the measures within this guidance if your site or the type of activity requires it. You may need to add to the generic risk assessment to make sure it includes all the activities on your site. Although H1 is aimed at those businesses whose operations do not fit a standard rules permit it provides information useful to anyone conducting a risk assessment.

How do I identify the risks my operation poses?

You can identify many risks simply and quickly. You can use our toolkits and H1 to help you.

An environmental risk is posed by any activity which could harm the environment or human health. Three separate factors must be in place for that risk to be realised.

1. There has to be a source of pollution or hazard.
2. There has to be a receptor that can be affected by that source of pollution.
3. There has to be a pathway between the source and the receptor.



This diagram shows the waste oil in the tank as the potentially contaminating source or hazard to the plant and animal receptors in the river. The broken manhole provides the pathway to a surface water drain which discharges to the river. We can represent this in a table form to identify the risks, the harm and the actions needed to reduce the risk. The table below shows one receptor. You need to work through this process for every receptor. In this example you would also need to consider abstractors.

Receptor	Source	Harm	Possible Pathway	Solution	Actions	Is the risk reduced?
River ecosystem	Oil in tank	• Can affect oxygen levels • Poisons mammals and birds	Concrete pad draining to cracked manhole into drain	• Check drainage plan including Manhole/ Drain discharges to river • Provide physical barriers to prevent leaks from the tank escaping and collisions with tank. • Ensure EA is notified of any such leaks so that they can decide if others need to be informed. • Identify a specialist contractor who can clean up spills in river.	• Repair/replace manhole • Construct bund (110% of tank capacity) • Write a maintenance schedule into management system • Action plans detailing what to do and who to inform in the case of accident or emergency	Yes

What you need in your management system

Site plans

Your plan does not have to be highly technical but it does need to represent accurately all the main features of the site and be drawn to scale. Regularly update the plan, for example at least once a year or when processes are changed or work is carried out on site.

Show the following where they are relevant to your activity:

- the activities carried out and any discharge points
- a drainage plan which identifies both surface and foul drains and the final destination of any drain
- the location of any waste activities such as storage areas for skips (full and empty)
- the location of any oil and chemical storage facilities
- important or sensitive local receptors such as neighbours, sensitive wildlife areas, rivers, underlying groundwaters
- potentially contaminated land on your site.

All activities

Operations

You must consider how to avoid or minimise the environmental risks and impact of the normal running of the activities. Normal running includes start-ups, shut downs, and variations in materials or waste received.

Your management system must include a written contingency plan that ensures impacts on the environment are minimised if there are any breakdowns, enforced shutdowns or changes in normal operations, for example because of extreme weather, liquidation or supply chain failure.

You must refer to any codes of practice, British Standards and industry standards in your management system. Where these exist, we expect your management system to include following them and to justify where you do not follow them.

As a minimum, it must include:

- site specific processes, activities or operations
- emissions and discharges
- accidents, incidents and emergencies
- site engineering and infrastructure
- plant and machinery use and maintenance
- a review of your activities against what your permit allows you to do

For waste and installations, it must also include:

- waste acceptance, quantities, treatment and storage procedures
- storage of materials on site
- drainage infrastructure
- transportation and distribution
- how any potential pollution from the above activities could impact on air, water, land and neighbours
- procedures to enable you to apply the waste hierarchy of re-use, recover, recycle, dispose
- your Duty of Care

We address many of these types of issues in our Pollution Prevention Guidance series, such as pollution incident planning and these may prove useful as you review your site activities and risks.

Maintenance

Many pollution incidents reported to us can be traced back to a maintenance failure, so it is very important that where the poor performance of plant or infrastructure (for example impermeable surface, bunds, key mechanical or electrical equipment and pipe work) could cause pollution, you must carry out a programme of Planned Preventative Maintenance (PPM). You must include a plan for this maintenance in your management system. If you choose to use an inspection or maintenance timescale which differs from that recommended by the manufacturer, supplier or installer you must explain the reasoning behind this in your management system.

Accidents and incidents

The word **accident** in this condition means an accident, incident or event that may result in pollution.

All activities

Accidents can cause significant pollution. You must put in place measures to deal with “accidents, incidents and non-conformances” (these include emergencies). Typically this is called an accident management plan and must form an integral part of your management system. Ensure that the accident management plan is communicated to all employees, managers and contractors who work at the site. Test your plan using regular drills or exercises. You may also have business continuity procedures that should be tested.

If a serious pollution occurs that you cannot immediately control, you may have to reduce or stop your activities until satisfactory controls are in place or the pollution stopped.

Accidents, incidents and emergencies can be diverse and require very different responses. You are likely to consider many of these risks as you complete your risk assessment. The pollution prevention guidance note (PPG) 21 *Pollution incident response planning* and *H1 Environmental risk assessment* (annex A or C) can help you identify the risks.

Your accident management plan must identify:

- potential accidents and put in place measures to minimise them happening
- events or equipment failures that could damage the environment, for example fires, vandalism, flooding or other extreme weather events such as drought, heat waves, strong winds, snow or extreme cold
- how likely these events or failures are to happen
- the consequences if they do happen
- the steps needed to minimise them happening
- the steps needed to minimise any impact if they do happen
- how you will record and investigate complaints, pollution incidents or breaches of your permit and the actions taken.

Your accident management plan must include:

- site plan which identifies location of any emergency kits or equipment for fire, spill kits and drain caps
- a list of key contacts and their numbers.

You must also consider any other things that may be important at your site. For example:

- making the emergency services aware of your activities
- consider having appropriate insurance to cover any clean up following an accident, including firewater
- checking whether you are in a Flood Risk Area and if so register with Flood Warning Direct
- making sure you are up to date with our or other organisations' advice about how to deal with extreme weather
- planning drills or exercises to test your accident and emergency procedures and ensure that your employees know what to do
- having a site evacuation plan and specific assembly points for staff off site
- making sure people can access key information off site if there is a problem entering the site in an emergency
- having a site board displayed to clearly identify your site contact numbers in case of emergency (waste and installations must have this, see your activity section).

If an accident or incident causes damage to the environment, or risks doing so, you must:

- immediately do what it says in your accident management plan
- report the accident to us, see [Reporting/Notification](#) on page 33
- do whatever is necessary to minimise the environmental consequences
- clean up after the incident or spillage

All activities

- record the incident or accident, in a report book or folder
- find out why the accident happened
- consider if your response and actions were adequate
- take any actions needed to stop it happening again
- review and amend your accident management plan as soon as possible.

Investigate malfunction, breakdown or failure of plant and equipment, techniques and near misses, releases to the environment, or impacts on the local amenity. You must be able to:

- detect abnormal operation and investigate the causes
- assess the information and decide what to do
- in the short-term, get back to normal operation
- in the long-term take steps to make sure the problem does not happen again
- where appropriate, make sure that the public would know what to do if a problem arises.

Severe weather may cause unforeseen environmental impacts and may increase the risk of pollution or non-compliance with permit conditions. If you are concerned during or ahead of extreme weather talk to your local officer about what you can do to avoid or prevent or minimise potential impacts. After the event make sure you review what happened in your accident management plan and if problems occurred what you need to do in future to avoid them.

Site security

You must take a risk-based approach to decide the level of security needed on site to prevent unauthorised access. What is appropriate will depend upon the environmental risks posed by the activity itself and the location. You need to be clear about the level of security needed at your site and make a written assessment of your control measures in your management system.

For example, you may need security measures to prevent vandalism that could result in equipment damage or polluting liquids from tanks or drums being released into rivers or onto the ground, or unauthorised deposit of waste at a waste treatment site.

Non-compliance

A non-compliance or non-conformance refers to any activity on a permitted site that does not meet the relevant permit condition or relevant legislation. Regulatory officers will inform you of any non-compliance they observe. Staff or members of the public may inform you about a problem that may need further action.

If you have a non-compliance:

- record it
- investigate to establish the root cause of the problem if needed
- record any action taken to resolve it
- consider whether you need to change any operations on site in response to the review of the non-compliance (part of your continuous improvement process)
- amend the management system to reflect changes
- make sure staff and managers are aware of changes
- tell us about the changes.

For agricultural permitted sites where the Rural Payments Agency or Rural Inspectorate Wales (RIW) undertake compliance assessment a breach of groundwater activity permit may lead to a reduction in the farmer's single farm payment.

All activities

Closure

This does not apply to mobile plant, standalone water discharges or standalone groundwater discharges.

It is inevitable that at some point your operation will close, but it is probably the last thing on your mind when you first apply for an environmental permit and start operating. However, this is the time when you can put plans in place that could make closing the site far easier and cheaper. This is because when you apply to surrender a permit, you will be asked to show that the state of contamination of the land when you close your site is no worse than when you began your operations. Find out more about this in the sections on waste, installations and mining waste.

Complaints

You must take complaints you receive seriously and take the necessary actions to investigate the complaint. If a complaint is valid:

- identify the cause
- minimise the impact of the activity causing the problem
- investigate the root cause of the problem
- take steps to ensure the problem is not repeated, this may include changing a piece of equipment or procedure
- record the complaint and what you did to investigate and resolve it
- amend your management system to reflect any changes.

You must have a line of communication between you, your neighbours and any complainants who may be affected by your activities. Providing feedback once the problem has been resolved will help complainants feel they can report problems directly to you as the operator and get them resolved rather than reporting it to us. Following the theme of continual improvement you must reflect the outcome of any investigation in your management system and improved operations.

Sufficient competent persons, resources and training

You must have enough trained and competent staff or an appropriate maintenance contract, to manage and operate your site to ensure you comply with your permit. Any contractors working on your site must also have the skills and knowledge they need. This must be written into your management system. All staff working on permitted activities must be trained on what your management system means. It must be easily available to staff and contractors.

Your management system may contain the following information on staff capability if relevant to your activities and where the relevant records are held:

- evidence you have enough staff to run the site
- list the roles and responsibilities of all your staff
- a list of the skills and training your staff need
- a general training record for each staff member
- evidence staff are trained in aspects that can lead to pollution and the measures to be taken to prevent that pollution
- evidence staff are trained to deal with accidents
- evidence staff are aware of your responsibilities under your permit
- records of staff training for key equipment and plant
- who is qualified and competent to operate machinery and provide them with safe operating instructions for that equipment or activity
- appropriate induction training for site visitors or temporary contractors.

Management systems

All activities

For waste operations this includes technical competence requirements. Find out more about this on page [36](#).

For small water discharge activities evidence of maintenance contracts with the treatment plant supplier will cover this.

Emissions and monitoring

Emissions can be anything that leaves your site and can pollute the air, land or water or affect the human population or other receptors such as designated habitat sites. Your management system will need to include information about these emissions, the receptors and the appropriate measures to control these emissions. For stand-alone water discharge and point source groundwater activities this means that your management system will need to include information about each of the permitted discharges and how the discharges could affect receptors such as designated habitat sites and downstream water users.

There is more general information about emissions under the emissions conditions on page [26](#).

The appropriate control measures will be site specific but examples are available in your activities section of this document, the H1 guidance and in the generic risk assessment provided alongside your permit application form, or you can refer to the management systems template for more help.

Except in the case of stand-alone water discharge and point source groundwater activities, if your operation has the potential to be noisy, odorous, dusty or cause pests and is close to sensitive receptors we may require you to complete a specific management plan to address the specific issue, for example an odour management plan, which will then form part of your management system.

If your permit includes monitoring conditions you need to explain your monitoring arrangements in your management system

Records

You must keep records to demonstrate that you are operating and managing the activities in compliance with your management system. Use your management system to explain what records you are going to keep and where they will be held. Then make sure you keep the relevant records up to date.

For example your management system may say you are going to check your site boundary every six months and that you will record this in your site diary. Then your detailed record of those checks will be in your diary.

We expect you to record the changes you make to your management system and the dates they happen, including as a result of relevant notifications to us or following a permit variation.

Access to your permit

Staff and contractors must be aware of the permit requirements, have convenient access to the permit and management system, any relevant standard rules, and understand how the site management system works. It is not always practical to have the permit at the site of the activity but the relevant documents must be readily available to anyone responsible for the operation of the activity. For large organisations this could be at one or more central locations with electronic access.

All activities

Operations

Permitted activities

Typical standard permit condition or rule 2.1

The operator is only authorised to carry out the activities specified in Schedule 1 table S1.1 (the “activities”).

Typical bespoke permit condition or rule 2.3.1

- the activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in Schedule 1 table S1.2 unless otherwise agreed in writing by the Environment Agency
- If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan or other documentation (“plan”) specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.

When you apply for a standard rules permit you confirm that your management system meets the conditions and measures set out in our guidance. This is legally binding and so you must follow these measures you signed up to in your permit application. The activities you are permitted to carry out are listed in table 2.1 of the standard rules set.

Bespoke permits reference the documents, measures and operating techniques you outlined in your application and agreed to follow. The activities you are permitted to carry out are listed in Schedule 1 of your permit.

We may list key appropriate measures in the permit, for example waste operations may contain “all bulking, transfer or treatment of waste shall be carried out inside a building”.

We expect you to operate your site in line with the measures. If you wish to change how you operate you must tell us. We may agree that you can change your operating technique or you may have to apply for a variation. Update your management system to reflect changes in operating techniques.

If a pollution problem arises, we may require you to revise your plans and procedures.

You may carry out other activities on the site if:

- they do not need a permit under any legislation
- they are exempt from the requirement to have a permit
- you have a separate permit issued by the Environment Agency or by another regulator such as the local authority.

Any exemptions or other permits that apply to the site must be referenced in the site management system. We expect you to keep exempt activities separate from permitted activities.

All activities

Emissions and monitoring

Point source emissions to air, water and land

This section applies if you have point source emissions. Also see your activity section. Some activities, for example many small waste activities, may not have point source emissions.

Typical permit condition or rule 3.1.1

There shall be no point source emissions to air, water or land, except from the sources and emission points listed in Schedule x.

The limits given in Schedule x, tables y.y, and z.z. shall not be exceeded.

A point source emission is localised in origin for example:

- exhaust gas from a boiler stack
- waste water from an effluent plant outlet pipe
- the discharge of sewage effluent to surface water or ground/groundwater from a pipe.

The sources and emission points are listed in a table in your permit. An emission point may have one type of emission or a number of emissions from the same point.

You must not make any hazardous or non-hazardous emissions that could result in the direct or indirect release of polluting substances to land and/or groundwater unless they are permitted and meet the requirements of Schedule 22 to the *Environmental Permitting Regulations*.

You must comply with the emission limits listed in your permit. You need to identify all control measures you use to manage emissions from your activities. You must list these measures and contingency plans in your management system or procedures.

Emissions of substances not controlled by emission limits

Typical permit condition or rule 3.2.1

Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including but not limited to, those specified in table y below and in any approved emissions management plan, have been taken to prevent or, where that is not practicable, to minimise, those emissions.

Typical permit condition or rule 3.2.2

The operator shall:

- if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
- Implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

For stand-alone water discharge and point source groundwater activities this is limited to the emissions of substances without limits from the permitted discharge. See parts 5 and 6.

All activities

For other activities these may be emissions to air, water or land from your activities from a localised or diffuse source, not controlled by an emission or background limit in your permit. They are sometimes referred to as fugitive emissions of substances in older permits and sector technical guidance.

Emissions may be listed in a table within your permit but no limits set. This condition will also be used to control those emissions.

Such emissions may include dust, fumes, volatile organic compounds, bioaerosols, flies, vermin, mud, litter and substances. They can cause nuisance to neighbours or lead to serious health impacts. Scavenging animals, birds and other pests, including flies, can introduce substances into the environment that may spread disease. Similarly, emissions from waste or other materials stored on site can attract pests.

Leaks to ground or underlying groundwaters can have serious impacts on the potential for sustainable use of the water environment for other purposes for example for use for water abstraction and as support for surface waters and other aquatic ecosystems.

If there is potential for a significant pollution beyond your site boundary or to the receiving surface water or groundwater, you must have a written emissions management plan. This must show what appropriate measures you will use and how you will respond to prevent or minimise the emissions. The easiest way to do this is to follow the risk assessment for emissions not controlled by emission limits in part 1 of H1 Environmental risk assessment and describe how you will manage the risks.

If a serious pollution occurs that you cannot immediately control, you may have to reduce or stop your activities until satisfactory controls are in place or the pollution stopped.

If an emissions management plan has not been incorporated under condition 3.2.1 and we come to the view that the activities are giving rise to pollution, condition 3.2.2 allows us to require the operator to submit an emissions management plan, for our approval and require them to operate in accordance with the approved plan.

Releases from liquids in containers

Typical permit condition or rule 3.2.3

All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or, where that is not practicable, to minimise, leakage and spillage from the primary container.

This condition includes your measures to prevent any leaks or accidental releases from tanks, sumps, bunds and containers. All above-ground tanks containing liquids whose spillage could be harmful to the environment must be bunded.

If secondary containment (bunding) is not practicable or structures are designed to work without secondary containment (such as lagoons and concrete effluent treatment plants) then appropriate measures to prevent or minimise leakage would include:

- regular maintenance and inspections to a written procedure
- ensuring that any leakage is detected for example by monitoring boreholes or sampling adjacent watercourses.

If you have any of the following infrastructure on your site you need to follow the guidance listed below.

All activities

Subsurface structures

- establish and record the routing of all site drains and subsurface pipework
- identify all sub-surface sumps and storage vessels
- engineer systems to minimise leakages from pipes and ensure swift detection if they do occur, particularly where hazardous substances or non-hazardous pollutants (as defined by the Environment Permitting Regulations) are involved
- fit oil separators where appropriate to surface water drainage systems to protect them from contamination by oil
- provide secondary/ tertiary containment and/or leakage detection for sub-surface pipework, sumps and storage vessels.

Sumps (other than those within bunds – see below) must be:

- impermeable and resistant to stored materials
- looked at regularly and any contents removed after checking for contamination
- where not frequently inspected, fitted with a high level probe and alarm
- regularly inspected for their condition (normally visual, but extending to hydraulic testing where structural integrity is in doubt).

Bunds must:

- be impermeable and resistant to the stored materials
- have no outlet (no drains or taps) and drain to a blind collection point
- have pipework routed within bunded areas with no penetration of contained surfaces
- be designed to catch leaks from tanks or fittings
- have a capacity greater than 110 percent of the largest tank or 25 percent of the total tankage, whichever is the larger. When you calculate this do not use the design capacity of the tank or tanks, instead use the maximum physical capacity of the tank or tanks – assuming it is/they are over-filled to the point of spillage
- be looked at regularly and any contents removed after checking for contamination
- be fitted with a high-level probe and an alarm, where not frequently inspected
- have tanker connection points within the bund where possible (otherwise adequate containment should be provided at the connection point)
- be regularly inspected for their condition (normally visual, but extending to hydraulic testing where structural integrity is in doubt).

Make sure all above-ground tanks containing liquids whose spillage could be harmful to the environment are bunded.

Storage areas for intermediate bulk containers (IBCs), drums, bags, and so on, must be designed and operated to minimise the risk of releases to the environment. In particular:

- where spillage of any stored substance could be harmful to the environment, the area needs appropriate kerbing or bund
- provide appropriate storage facilities for substances with special requirements for example, flammable, sensitive to heat or light, and formal arrangements should be in hand to keep separate packages containing incompatible substances (both “pure” and waste). Do not use plastic IBCs to store flammable materials
- locate storage areas away from watercourses, unprotected drainage systems and sensitive boundaries, (for example those with public access) and protect them against vandalism

All activities

- consider undercover storage / weatherproof covering where pollution can be significantly reduced by so doing
- storage areas should have appropriate signs and notices and be clearly marked-out, and all containers and packages should be clearly labelled
- state the maximum storage capacity of storage areas and do not exceed this, and specify and adhere to the maximum storage period for containers
- store containers with lids, caps and valves secured and in place - and this also applies to emptied containers
- regularly inspect all stocks of containers, drums and small packages (at least weekly)
- have procedures in place to deal with damaged or leaking containers.

Monitoring

This section applies if you have a monitoring condition. Also see your activity section. Some activities, for example many small waste activities, do not have this condition.

Typical permit condition or rule 3.3.1

The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake monitoring specified in the following tables in Schedule x to this permit:

- point source emissions specified in tables Sxx, Sxx and Sxx
- surface water or groundwater specified in table Sxx
- noise specified in table Sxx
- ambient air monitoring specified in table Sxx
- process monitoring specified in table Sxx
- land specified in table Sxx.

Typical permit condition or rule 3.3.2

The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.

Typical permit condition or rule 3.3.3

Permanent means of access shall be provided to enable sampling/monitoring to be carried out <in relation to the emission points/at the monitoring points> specified in schedule 3 tables S3.1, S3.2 [,S3.3 etc] unless otherwise agreed in writing by the Environment Agency.

Monitoring may be required if:

- The permit allows ongoing releases to the environment;
- There is a particular risk of release to which we need to be alerted;
- or
- To check that the effect of the activities on the environment is as predicted.

Tables in the permit specify the point source emissions and monitoring point locations.

Keep records of the monitoring you have done and the maintenance and calibration of all equipment used. Your management system must contain information on the standards or monitoring methods you use, equipment, maintenance requirements and the frequency. As monitoring standards change and improve, we will agree any changes required with you.

All activities

We have a monitoring certification scheme (MCERTS) for product certification of monitoring systems (for example, instruments, analysers and equipment), the competency certification of personnel, the accreditation of laboratories and organisations involved in sampling. You must use MCERTS certified equipment, staff and laboratories where practicable. See our monitoring guidance linked from [part 7](#), page [93](#).

Where monitoring shows that substances are not emitted in significant quantities, it may be reasonable to reduce the monitoring frequency.

Your permit may contain other monitoring points that are not point sources, for example the monitoring of particulate matter.

For some activities, monitoring may be necessary prior to development, during commissioning, start-up, normal operation, shutting-down and aftercare.

Continuous monitoring and recording (or at least sampling in the case of water) is likely to be required:

- where the potential environmental impact is significant or the concentration of substance varies widely
- where there is an emission limit on a point source emission
- where a substance is abated, continuous monitoring of the substance will normally be required to show the performance of the abatement plant. For example continuous monitoring of dust is needed after a fabric filter, to show the effectiveness of the filter and indicate when maintenance is needed.

Unless we agree otherwise in writing, you must provide permanent means of access to monitoring points. This includes making sure manhole covers can be removed. Use lightweight covers where possible. If you need a heavy duty cover consider what options you have to make monitoring access easier. For example use a sliding cover or provide an accessible monitoring window in the cover.

Environmental monitoring

Environmental monitoring may be required when:

- there are vulnerable receptors
- the emissions are a significant contributor to an environmental quality standard (EQS) that may be at risk
- the emissions (to ground and/or underlying groundwater) are a contributing factor to risk of Water Framework Objectives failures, such as “prevent or limit”
- you are looking for departures from standards based on lack of effect on the environment
- you need to validate modelling work.

Consider whether you need environmental monitoring to assess the effects of emissions to controlled water, groundwater, air or land, or emissions of noise or odour from your site.

Consider environmental monitoring for:

- groundwater to characterise quality and flow, taking account of short and long-term variations, using an appropriate level of monitoring up-gradient and down-gradient of the site
- surface water, looking at upstream and downstream quality of the controlled water
- air, including odour
- land contamination, including sampling vegetation, crops and soils
- assessment of health impacts
- noise.

All activities

We may require you to carry out environmental monitoring if there is a risk of pollution from your site or to investigate an incident. Follow the relevant monitoring guidance in your activity specific information.

Where we already carry out monitoring of surface waters or groundwater, operators of water discharge, groundwater activities and mining waste operations generally will not need to carry out ongoing monitoring of these waters.

This document is out of date and was withdrawn (01/02/2016)

All activities

Information

Records

Typical permit condition or rule 4.1.1

All records required to be made by this permit shall:

- be legible
- be made as soon as reasonably practicable
- if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
- be retained, unless otherwise agreed in writing by the Environment Agency, for at least 6 years from the date when the records were made.

Records are an essential part of your management system and permit compliance. They must be **clear, legible, accessible and consistent**:

- you can store your records electronically or in paper format
- record times using the 24-hour clock, for example 17:49
- make a record as soon as possible after any event or activity that needs recording.

Your staff must be aware of what records you need to produce, how to make and store them. Any amendments to records need to be made so that the original is still accessible, for the required period of time (minimum six years) and legible if directly amended by hand.

You need to keep records that are related to environmental protection. They do not have to include administrative records themselves, for example a work order or requisition note, but they should be able to tell us that something has been done.

Keeping records for six years makes sure that there will be sufficient information if we have to investigate an environmental incident. The records may also be used when we carry out a formal periodic review of all permits. This may happen once every four to eight years.

All activities

Reporting and notification

The following condition does not apply to installations. Instead see page [68](#).

Typical permit condition or rule 4.2.1

The operator shall send all reports and notifications required by these standards rules to the Environment Agency using the contact details supplied in writing by the Environment Agency.

Typical permit condition or rule 4.3.1

The Environment Agency shall be notified without delay following the detection of:

- any malfunction, breakdown or failure of equipment or techniques, accident or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution
- the breach of a limit specified in the permit
- any significant adverse environmental effects.

Typical permit condition or rule 4.3.2

Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in Schedule xx to this permit within the time period specified in that schedule.

Without delay means that you must notify us as a priority as soon as is practicable (you may do this by telephone)

May cause means near misses from causing significant pollution and ongoing incidents (arising from malfunction, breakdown etc) which you may be dealing with but which have the potential to cause significant pollution.

If you need to notify us during normal working hours you can contact your regulatory officer or the local Environment Agency office. Alternatively or out of hours use our free 24 hour incident hotline 0800 80 70 60. If you are unsure if you need to notify us or not contact your regulatory officer.

Significant adverse environmental effects include harm to any sensitive receptors and significant impacts on properties. We consider significant pollution to be something that would cause a category 1 or 2 non-compliance as described in our Common Incident Classification System (CICS).

If, during monitoring, you discover any breaches of the limits specified in your permit, we expect you to notify us as soon as the results have passed any laboratory quality assurance checks.

You must keep a record of the incident or accident, investigate it and take the required actions. Keep a record of the information you sent to us until we are satisfied with your response to the incident.

General management

Waste operations

Part 2 - Waste operations

This section covers general measures that are important for operators running relevant waste operations defined in Schedule 9 of the *Environmental Permitting Regulations*. You also need to read part 1. You may need to implement further measures in addition to those in this section such as those that are recognised as industry good practice and are in industry guidance. See [part 7](#) page 94 for links to other guidance. It includes links to guidance mentioned below.

Operators with permits for installations carrying out specified waste management activities must read this section and part 3 - installations.

General management

Typical permit condition or rule 1.1.1

The operator shall manage and operate the activities:

- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and
- (b) using sufficient competent persons and resources.

Typical permit condition or rule 1.1.2 on the permit

Records demonstrating compliance with condition 1.1.1 shall be maintained.

Typical permit condition or rule 1.1.3

Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

Waste storage

If you store waste pending its disposal or recovery elsewhere, your management system must include:

- storage times and procedures to ensure that these times are not exceeded
- maximum storage capacities for specified storage areas and the facility as a whole and procedures to ensure that these capacities are not exceeded
- maximum storage heights to prevent or minimise the emission of dust, litter and throughput management
- a procedure to identify the specific waste types stored at your facility
- procedures to segregate incompatible wastes for example use of appropriate separation distances and or suitable engineering measures.

Site condition report and closure

Your management system must include information about the condition of the land before you start operations, and how you have protected it during the life of the permit and site closure.

If you apply for a bespoke permit you need to submit a site condition report describing the condition of the land and groundwater with your application. If you apply for a standard rules permit we recommend that you produce a site condition report when you get your permit.

When you come to apply to surrender your permit, you will need to be able to show you have taken the necessary measures to avoid any pollution risk resulting from your activities and the site has been returned to a satisfactory state. Keeping your site condition up to date during the life of your permit will help you demonstrate this.

When you apply to surrender you complete the surrender parts of the sites condition report and submit it to us. This will describe what condition the land and groundwater are in at the time of surrender. If the land and groundwater are not in a satisfactory state, we will not accept your application to surrender your environmental permit.

The section on [Site condition records](#) on site conditions, page 49, explains more about what records you need to keep.

Regulatory guidance note 9 Surrender explains more about what we mean by satisfactory state and the legal tests for surrender.

Incidents and non-conformances

You must have a complaints system and do whatever is necessary to prevent or minimise, the causes of pollution unless there are overriding national security reasons for not doing so. Display a notice at or near the site entrance telling the public about the nature of the site and who they can contact for further information or who to notify if they have a concern. It needs to be easily readable from outside the site in daylight hours and must include:

- the permit holder's name (company name at least)
- the operator's name if different (company name at least)
- an emergency contact name and the operator's telephone number
- a statement that the site is permitted by the Environment Agency
- the permit number
- environment Agency national numbers, 03708 506506 and 0800 807060 (incident hotline), or any other number we subsequently notify you about in writing.

Fires are a key issue at waste operation sites and you must ensure you have measures to prevent fires such as fire breaks and maximum storage quantities. Your accident plan must clearly cover what you will do in the event of a fire; PPG 21 can help you. As a minimum we expect:

- identification of any sites/organisations that may need to be informed such as local receptors, highways, utility companies
- liaison with the fire brigade to ensure they are aware of the risk from your site.

Severe weather (for example wind, flooding, drought, snow) can have serious implications for waste operations. If the ability to operate your business or manage your waste can be effected then you must ensure you have a written contingency plan as part of your management system.

Sufficient competent persons

Make sure your staff have clearly defined roles and responsibilities. Write down the skills required for each post and keep records of how each individual in that post has gained those skills and how they keep their skills up to date, for example by receiving refresher training. Where appropriate, keep written instructions for the work they do. We will refer to these records and instructions if we need to investigate an incident.

You can demonstrate competence in various ways:

- academic qualifications for example a relevant degree
- professional qualifications for example membership of an appropriate institution

General management

Waste operations

- vocational qualifications for example National Vocational Qualifications (NVQs)
- external training qualification/certification for example certificate of technical competence
- attendance at external or in-house training courses
- those with approved training to cascade that training to other staff
- mentoring as part of on the job training
- experience (as long as there is evidence that it is kept up to date).

Technical competence schemes

Typical permit condition or rule 1.1.4

The operator shall comply with the requirements of an approved competence scheme.

You must have a technically competent person to direct activities on your site and they must attend the site for a minimum period of time each week. (See site attendance section below.) The technically competent person demonstrates their competence by satisfying one of the accepted industry schemes approved by Defra.

All technically competent people must demonstrate continuing competence by passing a periodic assessment which tests the candidate's understanding of recent developments within the waste industry.

If you already hold a certificate of technical competence, or have previously successfully completed an Environment Agency assessment which is still valid, or have been previously "deemed competent" you will not be expected to get further qualifications. You will need to demonstrate continuing competence by passing a periodic assessment.

All new technically competent candidates have two years in which to pass an assessment. Failure to do so within the deadline will result in loss of technical competence status.

Site attendance guide for technically competent managers

The technically competent manager must be in a position to direct activities on the site. This will be reflected in the operator's management system and operational procedures.

There is a minimum site attendance of one hour a week on all operational sites. This includes in-house facilities taking their own waste. A week runs from Sunday at midnight and ends on the following Sunday at midnight.

We consider that a site is operational when it is either accepting or removing waste, or undertaking any process or activity involving waste that should be under the day-to-day control of a technically competent manager.

If the facility is non-operational (zero operational hours) site attendance is not required.

You must keep a record in the site diary or a separate log of weekly operational hours and site attendance. Record start and finish times of operations and arrival and departure times of the technically competent manager. The records must be available for us to inspect.

We apply a maximum cap of 48 hours per week for site attendance for all facility types.

Minimum site attendance standards for technically competent managers are shown in the table below. You must meet these standards if:

- you have been operating for less than six months
- you have been carrying out an activity for less than six months
- you do not have a settled management system i.e. a lack of accredited, written and adhered to procedures

General management

Waste operations

- you have not agreed alternative minimum attendance with us in writing
- your Compliance Rating score is over 16 in any quarter, which shows that activities appear to be running beyond the control of the management.

The Compliance Rating score is calculated by the number and category of non-compliances assessed by our Compliance Classification Scheme. A score of 16 or more in any quarter equates to more than 4 category 3 breaches or a category 2 non-compliance.

When we consider agreeing an alternative standard of attendance with you we will look at the activity authorised and carried out on site, the waste types you handle, and the past compliance record.

Where the minimum site attendance standard is met for a particular facility we will view this as evidence that there is adequate management control unless the compliance record indicates otherwise. If the minimum attendance time is insufficient to ensure compliance, the technically competent manager must bring this to the attention of the operator and record the fact in the site diary.

If you operate two or more separately authorised facilities which share a common boundary, the site attendance requirements are those for the facility with the higher attendance percentage. The appropriate technical competence qualification will be necessary for each type of facility. For example where there is a separately authorised civic amenity site on a landfill site, the attendance requirements of the landfill will satisfy the attendance requirements for both facilities by a technically competent manager holding both the relevant awards.

For landfill sites in post closure phase, where waste input has been completed and the only continuing authorised activities are likely to be the management of surface water and stability, you do not need a technically competent manager to attend the site to demonstrate technical competent management. One technically competent manager can demonstrate technically competent management for any number of closed sites.

Calculating attendance

Add up attendance points for complexity, location and emissions bands then refer to the table on total attendance points to see how what percentage of time the technically competent manager needs to be on site.

Waste operations

Opra attribute bands				
Attribute	Low	Medium	High	Highest
Complexity band	A	BC	D	E and double letters
Location band	A	BC	D	E
Emissions band	A	B	C	DE
Attendance points	1	2	3	4

Installations

Opra attribute bands				
Attribute	Low	Medium	High	Highest
Complexity band	-	A	BC	DE
Location band	A	BC	D	E
Emissions band	A	B	C	DE
Attendance points	1	2	3	4

Waste operations

If your Opra profile details different waste activities (rather than multiple plant), include a score for each complexity band. For tier 2 permits (this includes standard rules permits), we expect a minimum attendance of 20% unless you agree an alternative with us.

Total attendance points	Attendance
3	5%
4	10%
5	15%
6	20%
7	25%
8	30%
9	35%
10	40%
11	45%
12	50%
Over 12	55%

General management

Waste operations

Avoidance, recovery and disposal of wastes

Typical permit condition or rule 1.4.1

The operator shall take appropriate measures to ensure that:

- (a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and
- (b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and
- (c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

You must demonstrate waste avoidance or reduction measures. Where waste is produced you must consider recycling and recovery options rather than automatically choosing the cheapest waste disposal option. Think about the impact on the environment of all the available options and select the option which is best for the environment.

This is the waste hierarchy. Use this when making decisions about what you do with your waste.



You must:

- comprehensively characterise and quantify each waste stream arising from the regulated facility
- use government guidance to decide how each waste stream is to be recycled, recovered or disposed of
- be capable of justifying decisions that deviate from best practice.

If you propose any disposal:

- explain why recycling or recovery is technically and economically impossible
- describe the measures planned to avoid or reduce any impact on the environment.

Waste operations

Operations

Permitted activities

The following condition only applies to mobile plant permits.

Typical permit condition or rule 2.1

Treatment activities under this permit shall not begin at any site until the Environment Agency has agreed a deployment form in writing for that particular site.

All process plant and equipment shall be commissioned, operated and maintained, and shall be fully documented and recorded, in accordance with the agreed deployment form.

Once we have approved the deployment you must comply with your permit condition and the information agreed in your form which includes things like the amount of waste you can use and how long the deployment will last.

If you start a deployment and then want to change what you are doing, for example increase the amount of waste, then you must contact us before you implement the proposed changes. Depending on the magnitude of the change we may need to re-assess your deployment to ensure that potential risks that may result from your new activities are adequately considered and will be controlled during your operations.

Waste acceptance

Typical permit condition or rule 2.3.2

Waste shall only be accepted if:

- it is of a type and quantity listed in Schedule X Table X1, X2 and so on; and
- it conforms to the description in the documentation supplied by the producer and holder.

The following guidance applies for acceptance of low risk non-hazardous waste. If you also accept higher risk waste, including any form of hazardous waste, you must follow and meet the standards in [S5.06 Guidance for the recovery and disposal of hazardous and non-hazardous waste](#). This explains waste pre-acceptance, acceptance and storage.

Check wastes when they arrive on your site and accept them only if your permit allows them and if they meet the description given in the waste transfer note.

If you are transferring non-hazardous waste between your own sites and there is no change in ownership, you must keep a record which is of the same standard as a duty of care waste transfer note. For hazardous wastes the notification, consignment, records and returns requirements of the *Hazardous Waste Regulations* must be met for all movements, including internal movements.

The table will use the waste descriptions and codes given in the *List of Waste Regulations*. You must not accept any wastes not listed in your permit. We may restrict permitted wastes by, for example, limiting the quantity received, stored or treated or their composition.

Waste operations

Your procedures for checking the wastes must be written into your management system and include:

- the location where checking will be carried out
- the extent of visual checks and any sampling and analysis required
- quarantining unacceptable waste.

If the waste is not as described your procedures should be proportionate to the environmental risk caused. The whole load may be something different or is mostly what it should be, but contains a small proportion of material you are not permitted to take. You need to check all wastes because such material is a common cause of environmental incidents. For example small amounts of asbestos in skip waste at a non-hazardous waste transfer station.

If you find non-permitted material in a delivery that has already been accepted onto site identify and quarantine this before sending it to an authorised site as soon as practicable. You must be prepared for this situation and investigate the cause. Think about how to stop it happening again. For example contact and work with the producer to prevent reoccurrence or send the material back to the producer.

You must keep records of all waste received at the site, including the quantity, characteristics, List of Waste Code, origin, delivery date and the identity of the producer. Where the waste may give rise to odour also record the date the waste was first produced. You must keep a record of any quarantined materials and what you did with them.

Section 4 of the permit describes how to keep records. See [Records](#), page 49.

Emissions and monitoring

Emissions of substances not controlled by emission limits

Typical permit condition or rule 3.2.1

Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in table y below and in any approved emissions management plan, have been taken to prevent or, where that is not practicable, to minimise, those emissions.

Typical permit condition or rule 3.2.2

The operator shall:

- if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
- implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

The following sections outline potential types of emissions and identify some appropriate control measures. You need to consider what control measures are necessary and include them in your management system. You may need measures that are not listed here. [Part 7](#) page [94](#), gives references to more detailed guidance.

You do not have the right to cause pollution due to your activities. See page [9](#) for the definition of pollution.

Your neighbours have a right to expect that your activities will not detract from their quality of life. They have a right to expect that their environment will be free from emissions caused by your activities on either a continuous basis, frequent intervals or serious one-off incidents. You need to prevent or minimise these, no matter how near or far people or other receptors may be.

You must identify any such emissions from your site and describe them and the control measures in your management system. We expect you to consider the options by balancing the costs and environmental benefits. The measures you decide to use are up to you, but they will have to meet the objective of the condition.

While there may be no problem at the moment, if circumstances change, for example development occurs around your site such that your activities then affect people outside the site, you will have to take action to prevent or minimise those problems.

Emissions to surface water and groundwater

For surfaces on your site:

- make sure that surfaces and containment or drainage facilities are adequate for all operational areas, taking into consideration collection capacities, surface thicknesses, strength/reinforcement, falls, materials of construction, permeability
- ensure there is adequate resistance to chemical attack
- have an inspection and maintenance programme for impervious surfaces and containment facilities.

Emissions and monitoring

Waste operations

Unless the risk is negligible, have improvement plans in place where operational areas do not already have:

- an impervious surface
- spill containment kerbs
- sealed construction joints
- connection to a sealed drainage system.

A **sealed drainage system** is a drainage system with impermeable components which does not leak and which will ensure that no liquids will run off a surfaced area other than via the system. Except where they are lawfully discharged, all liquids entering the system should be collected in a sealed sump.

Dust, mud and litter

The following control measures may be appropriate but you may need to consider additional or other controls:

- carry out operations inside buildings
- avoid outdoor or uncovered stockpiles
- where you must use outdoor stockpiles, control them by means of sprays, binders, windbreaks, careful siting in relation to sensitive receptors, controlling the moisture content of the material delivered and orientation of long stockpiles in the direction of the prevailing wind
- design to minimise handling operations
- erect litter fences around the site
- enclose conveyors and minimise drops or use pneumatic or screw conveying
- install filters to vents on silos, building extractors and conveying systems
- surface roadways
- plant grass or trees on open ground where appropriate, hydro-seeding can rapidly establish vegetation on waste tips, slag heaps or other apparently infertile ground
- cover vehicles, skips and vessels
- have rigorous maintenance standards
- minimise points of access from the public highway
- make sure vehicles stay on paved areas
- regularly clean and dampen roadways and vehicle wheels
- use water-filled troughs to slow trucks, wash wheels and keep roadways damp
- clean spillages with vacuum cleaners rather than washing down
- avoid certain activities when there are high winds
- clean litter and mud at the end of each working day, unless it is impractical or unsafe to do so.

Fine particulate and fumes

Controls for fine particulate and fumes, particularly from combustion processes, are given in activity specific guidance where relevant.

Volatile organic compounds (VOCs)

The following control measures may be appropriate but you may need to consider additional or other controls:

- enclose open vessels and fit abatement equipment to vents
- install sealed transfer (vapour balance) systems

Waste operations

- use sub-surface filling via (anti-syphon) filling pipes extended to the bottom of the container
- use floating roof tanks and bladder roof tanks
- treat specific releases by techniques such as adsorption or condensation
- use tank vent systems that minimise breathing losses, for example the use of pressure/vacuum valves, and fit knock-out pots and appropriate abatement equipment where necessary
- inventory management
- reduce leakage from pipework or fluid transport systems;
- use white paint, insulation and active temperature control to reduce the temperature in storage tanks.

Substances introduced into the environment by pests

The following control measures may be appropriate but you may need to consider additional or other controls:

- regular inspections by nominated personnel
- isolation and securing/removal of wastes that are attracting scavengers
- employing professional pest controllers, either directly or by contract
- effective scaring or other deterrent methods
- netting.

Odour

Typical conditions or rules 3.3.1

Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable, to minimise, the odour.

Typical conditions or rules 3.3.2

The operator shall:

- if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
- implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

This condition requires you to take appropriate measures to prevent or minimise odour. The measures required need to be what are reasonable, good practice and balances the costs and benefits to prevent or minimise odour. We expect any standards of industry good practice to be met along with any recommendations in our guidance. If there is an odour problem at your site, and you have already implemented some measures, there may be a case to justify further measures or restriction of the activity, depending on the severity of the problem and the cost. Even if you are following normal standards and guidance but the impact is unreasonable, then

Waste operations

you will have put in place further measures and we will judge with you what is reasonable and to what extent further measures are possible, required or justified.

Activities for which odour is a key issue

The following are activities where odour can frequently be a problem. If you operate one of these you must have an odour management plan unless otherwise agreed, in writing, by the Environment Agency. If you are applying for a bespoke permit you submit the plan with your application. If you hold a standard permit you do not need to submit it. We will look at it during inspections or if an odour problem arises. If your activities are not on the list but you know you have an odour problem you should also have an odour management plan.

- landfilling of biodegradable waste
- household, commercial and industrial waste transfer station (available as standard rules)
- composting in open windrows (available as standard rules)
- composting in vessels (available as standard rules)
- mechanical biological treatment (available as standard rules)
- sewage sludge treatment (available as standard rules)
- clinical waste treatment (available as standard rules)
- animal carcass incineration (available as standard rules)
- pet cemetery (available as standard rules)
- mobile plant for landspreading, the treatment of land for land reclamation, restoration or improvement and landspreading of sewage sludge (available as standard rules)
- anaerobic digestion (available as standard rules)
- mobile plant for the treatment of waste soils and contaminated material, substances or products (available as standard rules).

The mobile plant set of rules does not contain a rule requiring the operator to maintain and implement an odour management plan as odour control would normally be addressed within the agreed deployment form.

Odour management plan

You must have an odour management plan if your activity is in the list 'activities for which odour is a key issue'. In other cases if there is a significant possibility that odour from your activities may cause offence beyond your site boundary, you should have a written odour management plan. Use this to show what the sources and risk to receptors are, the measures you will employ and how you will respond to prevent or minimise the odour. The guidance [H4 Odour management](#) explains more about the plan. Having an odour management plan that sets out a number of measures you will take will not necessarily mean you will comply with this condition. Your obligation is to prevent an odour or use all appropriate measure to prevent an odour from your activities. You may need to update your odour management plan with further measures as necessary to ensure that the condition continues to be met.

There are a number of options available to control odour. We will expect you to balance the costs and environmental benefits. The measures you decide to use will have to meet the objective of the condition.

Appropriate measures to reduce odour problems include:

- managing the receipt, storage and handling of materials, for example by choosing raw materials that are less likely to cause odour problems and cutting the quantities and storage times of biodegradable materials

Waste operations

- avoiding operations that give rise to smells, for example avoiding conditions which encourage anaerobic breakdown and reducing temperatures and exposed surface areas
- enclosing smelly materials and activities in a building or vessels
- engaging with your neighbours and responding to their concerns or complaints
- reducing or stopping your activities that are causing the odour until either the circumstances have changed or other appropriate measures have been put in place to allow the operations to re-commence without causing offence.

These and other measures are described in H4 Odour management.

We may impose the condition 'The emission from point x shall not exceed Y odour units'. This sets a quantitative limit on an odorous emission from a specified source. It does not remove your responsibility for controlling odours from all other sources.

Noise and vibration

Typical permit condition or rule 3.4.1

Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable, to minimise, the noise and vibration;

or

The (rating) level of noise emitted from the site (during normal operations/annual shutdown and maintenance) shall not exceed (X) dB, expressed as an LAeqT, between (hhmm) and (hhmm) Mon to Fri and (n) dB at any other time, as measured or assessed on the (specified boundary/boundaries/location) of the site at (locations x,y,z) on plan reference Y attached to this permit. The locations shall be chosen and the measurements and assessment made according to BS4142:1997.

Typical permit condition or rule 3.4.2

The operator shall:

- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;
- (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

This condition requires you to take appropriate measures to prevent or minimise noise. The measures required need to be what are reasonable, good practice and balances the costs and benefits to prevent or minimise noise. We expect any standards of industry good practice to be met along with any recommendations in our guidance. If there is an noise problem at your site, and you have already implemented some measures, there may be a case to justify further measures or restriction of the activity, depending on the severity of the problem and the cost. Even if you are following normal standards and guidance but the impact is unreasonable, then

Waste operations

you will have put in place further measures and we will judge with you what is reasonable and to what extent further measures are possible, required or justified.

If you are likely to cause any significant noise beyond your site boundary, you should have a written noise management plan. Use this to show what the sources and the risks to receptors are, the measures you will employ and how you will respond to prevent or minimise the noise. The guidance [H3 Noise assessment and control](#) and some of the activity-specific guidance notes give more guidance on noise assessment and control and how to draw up a noise management plan.

Having a noise management plan that sets out a number of measures you will take will not necessarily mean you will comply with this condition. Your obligation is to prevent the noise or use all appropriate measure to prevent a noise that amounts to pollution from your activities. You may need to update this plan with further measures to ensure that the condition continues to be met. The situation and your responsibilities for controlling noise are very similar to those for controlling odour (see the previous section).

Appropriate measures to reduce/control noise include:

- monitoring noise levels at different places and times to find where the problem is coming from
- maintaining equipment specifically to reduce noise levels, for example balancing fans and fixing loose covers
- enclosure or abatement, for example acoustic enclosures, silencers, keeping doors and other openings in buildings closed
- timing, for example avoiding noisy work during evenings and weekends
- siting away from sensitive receptors, for example of delivery or vehicle routes or noisy plant
- switching off plant, vehicles and ventilation units when not in use
- reducing or stopping your activities that are causing the noise until either the circumstances have changed or other appropriate measures have been put in place to allow the operations to re-commence without significant noise.

Where we place a numerical limit, it applies only at the designated measurement points. It does not remove your responsibility for controlling noise from your activities at all other points outside the site boundary.

Where very low background levels prevail, site noise levels should not be significantly above the background and, if practicable, should be well below.

Sometimes ambient noise increases over time (creeping background). This increases the environmental value of noise abatement measures. Where this has been identified in discussions with us or previously with the local authority, you must consider it when planning noise control techniques to maintain acceptable noise levels.

You may need to carry out noise surveys, measurements, investigations, for example on sound power levels of individual items of plant, or modelling to resolve more difficult problems.

It is sometimes necessary to carry out temporary works, such as alterations or major maintenance programmes, which will cause more noise than normal. Tell us and your neighbours if you intend to do this. Take reasonable steps to minimise the duration and impact of any such works, for example by carrying out the work only between the hours of 09.00 and 17.00 Monday to Friday excluding bank holidays.

Pests

Typical permit condition or rule 3.6.1

The activities shall not give rise to the presence of pests which are likely to cause pollution, hazard or annoyance outside the boundary of the site. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved pests management plan, have been taken to prevent or where that is not practicable, to minimise the presence of pests on the site.

Typical permit condition or rule 3.6.2

The operator shall:

- if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a pests management plan which identifies and minimises risks of pollution from pests;
- implement the pests management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

This condition requires you to take appropriate measures to prevent or minimise pests. The measures required need to be what are reasonable, good practice and balances the costs and benefits to prevent or minimise pests. We expect any standards of industry good practice to be met along with any recommendations in our guidance. If there is a pest problem at your site, and you have already implemented some measures, there may be a case to justify further measures or restriction of the activity, depending on the severity of the problem and the cost. Having a pest management plan that sets out a number of measures you will take will not necessarily mean you will comply with this condition. Your obligation is to prevent pests or use all appropriate measure to prevent pests that amount to pollution from your activities. You may need to update this plan with further measures to ensure that the condition continues to be met.

Appropriate measures to reduce pest problems are:

- regular inspections by nominated personnel
- isolation and securing removal of wastes that are attracting scavengers or flies
- employing professional pest controllers, either directly or by contract
- effective scaring or other deterrent methods
- netting.

Waste operations

Information

Records

Typical permit condition or rule 4.1.1

All records required to be made by this permit shall:

- be legible
- be made as soon as reasonably practicable
- if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
- be retained, unless otherwise agreed in writing by the Environment Agency, for at least 6 years from the date when the records were made.

Waste records

Keep Duty of Care records for two years.

If you manage hazardous waste you need to comply with the site record and return requirements from part 7 of the Hazardous Waste Regulations.

Site condition records

You need to record the state of the site before you begin operations. If the land was contaminated before your permit began, record details of this contamination.

A good management system and good compliance history will help you demonstrate that the correct precautions and actions were taken to minimise or prevent contamination of land.

Keep records about:

- design, construction, inspection, monitoring and maintenance and failure records for pollution prevention
- the appropriate measures you use to protect the land and groundwater, for example impermeable surfacing and leak tight drains
- spills and incidents and what you have done to deal with them
- action you have taken if we identify relevant non-conformances or failures
- off-site impacts such as pollution incidents that caused, or are alleged to have caused, harm or health effects, these enable us to investigate in future any cumulative effects of the activities.

For landfills and waste recovery operations that involve the permanent deposit of waste, your records must focus on either:

- compliance with the waste acceptance procedures at the site for operations that involved the acceptance of waste that was inert or suitably low risk
- or demonstrating that you have complied with relevant closure procedures, and the waste has stabilised so that pollution control measures are no longer necessary and that the deposits of waste will not cause pollution.

The guidance *H5 Site condition report* provides more advice about what records to keep about the condition of the land.

We will look at your records during compliance checks to make sure you are collating them properly. We will consider these records when you apply to surrender your permit.

Waste operations

Reporting and notification

This condition does not apply to standard rules

Typical permit condition 4.3.5

Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:

- the Environment Agency shall be notified at least 14 days before making the change; and
- the notification shall contain a description of the proposed change in operation.

Change in operation

If you want to change your operation, but the change is acceptable under your permit conditions, then you do not have to vary your permit.

When the proposed change in operation falls within the criteria explained below, you must notify us at least 14 days in advance of making the change and the notification must contain a detailed description of the change.

A change in the **nature** of the activities is a change in what is being done (for example a significant change in the wastes accepted at the site but within your permitted wastes as this may cause odour).

A change in the **functioning** of the activities is a change in how the activities are carried out (for example a change from manual sorting to automated sorting as this may cause noise).

An **extension** is a change in size affecting the capacity of the facility to carry out the activities (for example amending a type of treatment).

Once the change is agreed you must review your management system to reflect the changes.

You cannot make changes to your operations under this condition that would require a permit variation for example increasing your permitted area or adding waste types.

Part 3 – Installations

This section covers general measures that are important for operators running Part A (1) activities listed in Schedule 1 of the *Environmental Permitting Regulations*. You also need to read Part 1 of this document and any guidance that relates to your sector including the BAT (best available technique) conclusion document or BAT reference notes (BREF). See [Part 7](#), page [94](#), for links to other guidance. It includes links to guidance mentioned below.

If you are carrying out a specified waste management activity you also need to read the following sections in Part 2 on waste operations: technical competence and site attendance, waste acceptance.

For any Part B activities you must refer to the Defra guidance for local authorities.

General management

Typical permit condition or rule 1.1.1

The operator shall manage and operate the activities:

- a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and
- b) using sufficient competent persons and resources.

Typical permit condition or rule 1.1.2

Records demonstrating compliance with condition 1.1.1 shall be maintained.

Typical permit condition or rule 1.1.3

Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

Site condition report and closure

Your management system must include information about the condition of the land before you start operations, and how you have protected it during the life of the permit and site closure.

If you apply for a bespoke permit you need to submit a site condition report describing the condition of the land and groundwater with your application. If you apply for a standard rules permit we recommend that you produce a site condition report when you get your permit.

When you come to apply to surrender your permit, you will need to be able to show you have taken the necessary measures to avoid any pollution risk resulting from your activities and the site has been returned to a satisfactory state. Keeping your site condition up to date during the life of your permit will help you demonstrate this.

When you apply to surrender you complete the surrender parts of the sites condition report and submit it to us. This will describe what condition the land and groundwater are in at the time of surrender. If the land and groundwater are not in a satisfactory state, we will not accept your application to surrender your environmental permit.

[Records](#) on site conditions, page [67](#), explains more about what records you need to keep.

Installations

Regulatory guidance note 9 Surrender explains more about what we mean by satisfactory state and the legal tests for surrender.

Incidents and non-conformances

You must have a complaints system and do whatever is necessary to prevent, or where that is not possible to minimise, the causes unless there are overriding security reasons for not doing so.

Display a notice at or near the site entrance telling the public about the nature of the site and who they can contact for further information or who to notify if they have a concern. It needs to be easily readable from outside the site in daylight hours and must include:

- the permit holder's name (company name at least)
- the operator's name if different (company name at least)
- an emergency contact name and the operator's telephone number
- a statement that the site is permitted by the Environment Agency
- the permit number
- Environment Agency national numbers, 03708 506506 and 0800 807060 (incident hotline), (or any other number we subsequently notify you about in writing).

Sufficient competent persons

Make sure your staff have clearly defined roles and responsibilities. Write down the skills required for each post and keep records of how each individual in that post has gained those skills and how they keep their skills up to date, for example by receiving refresher training. Where appropriate, keep written instructions for the work they do. We will refer to these records and instructions if we need to investigate an incident.

You can demonstrate competence in various ways:

- academic qualifications for example a relevant degree
- professional qualifications for example membership of an appropriate institution
- vocational qualifications for example National Vocational Qualifications (NVQs)
- external training qualification/certification for example certificate of technical competence
- attendance at external or in-house training courses
- those with approved training to cascade that training to other staff
- mentoring as part of "on the job" training
- experience (as long as there is evidence that it is kept up to date).

If you are carrying out a specified waste management activity you also need to read the information about Technical competence schemes in [Part 2](#) page [36](#).

Energy efficiency

Typical permit condition or rule 1.2.1

The operator shall:

- take appropriate measures to ensure that energy is used efficiently in the activities or
- take appropriate measures to ensure that energy is recovered with a high level of energy efficiency and energy is used efficiently in the activities (we use the second option for plants that incinerate waste)
- review and record at least every 4 years whether there are suitable opportunities to improve the energy efficiency of the activities; and
- take any further appropriate measures identified by a review.

This section provides basic information. You also need to look at the guidance [H2 Energy efficiency](#) and any information on energy efficiency in sector guidance.

You will satisfy the requirements if you meet either:

- the basic energy requirements below and are a participant to a Climate Change Agreement (CCA); or
- the basic energy requirements and energy supply techniques below.

Even where a Climate Change Agreement is in place, you need to consider whether your decisions on energy efficiency may impact on the production of other pollutants as part of your integrated environmental assessment. For example:

- where the choice of fuel impacts upon emissions other than carbon, for example sulphur in fuel;
- where the minimisation of waste by waste-to-energy does not maximise energy efficiency, for example by Combined Heat and Power (CHP);
- where the most energy-intensive abatement leads to the greatest reduction in other emissions.

If you hold an EU Emissions Trading Scheme (EU ETS) permit we will not impose, through your environmental permit, any requirements to reduce CO₂ emissions directly from those activities covered by your EU ETS permit.

Installations

Basic energy requirements

1. Prepare a list/diagram of where the energy is used in your process.
2. Provide the information in Table 1.2.1 below, annually.

Table 1.2.1 – Example breakdown of delivered and primary energy consumption

Energy Source delivered	Energy Consumption Primary MWh	MWh% of total
Electricity*		
Gas		
Oil		
Other (operator to specify)		
Exported energy	MWh	Source

*Specify source. Multiply delivered energy by 2.4 to obtain primary energy if the electricity is supplied from the national grid. If your electricity is from another source you may be able to justify using a different factor, to reflect the efficiency of generating and supplying the power.

3. Provide the Specific Energy Consumption (SEC) for your main activity or activities based on primary energy consumption for the products or raw material inputs that most closely match the main purpose or production capacity of the installation. For example MWh/tonne of product. Compare this against any benchmarks for your sector.
4. Regularly review your energy use and provide an energy efficiency plan that identifies CO₂ savings of each potential measure.
We ask for the energy efficiency plan to ensure that you have considered all relevant techniques. Where a CCA is in place we will only enforce implementation of measures 1-3 above. If you are not in a CCA turn this into an action plan.
An example format for the energy efficiency plan is shown in Table 1.2.2 below.

Table 1.2.2 – Example format for energy efficiency plan

All applicants		Only applicants without CCA		
Energy efficiency measure	CO ₂ savings (tonnes)	Equivalent Annual Cost (EAC) £k	EAC/CO ₂ saved £/tonne	Date for implementation

H2 Energy efficiency provides an appraisal methodology. If you use a different methodology you must explain in your application how you have done the appraisal, and provide evidence that you have used appropriate discount rates, asset life and expenditure (£/t) criteria.

5. Use operating, maintenance and housekeeping measures in the following areas, wherever this will have a significant impact on the efficient use of energy at the installation: H2 describes measures in section 2.7.2 and gives indicative checklists of appropriate measures in Appendix 2.
6. Use energy-efficient building services to deliver the requirements of the Building Services section of H2.
7. Monitor energy flows and target areas for reductions.

Energy supply techniques

You need to show that you have considered alternative, more efficient forms of generating electricity and heat where a cost/benefit appraisal shows them to be appropriate. Use the methodology in *H2 Energy efficiency* for your cost/benefit appraisal and refer to the sector guidance notes for indicative energy recovery efficiencies.

Efficient use of raw materials and water

Typical permit condition or rule 1.3.1

The operator shall:

- take appropriate measures to ensure that raw materials and water are used efficiently in the activities
- maintain records of raw materials and water used in the activities
- review and record at least every 4 years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and
- take any further appropriate measures identified by a review.

Thinking about raw materials and process techniques gives you an opportunity to control emissions at source by reducing usage or substituting materials that are less harmful or which can be more readily abated. Consider the impact of the materials you use on the environment and what alternatives you have to reduce this impact. Have procedures for controlling the impurity content of raw materials. Consider whether changes to the process could make savings on raw materials or water use. Review your raw materials and process techniques regularly.

If you think you need to continue using any substance for which there is a less hazardous alternative, you need to justify this, for example on the basis of impact on product quality or costs versus environmental benefits.

Carry out a waste minimisation audit at least every four years. The first audit shall take place within two years of the issue of your permit unless your application has included details of a satisfactory audit carried out in the two years prior to submission of the application. Submit the methodology used for the audit and an action plan for reducing the use of raw materials within two months of completing of the audit.

Carry out a review of water use (a water efficiency audit) at least every four years. The first audit shall take place within two years of the issue of your permit unless your application has included details of a satisfactory audit carried out in the two years prior to submission of the application.

Look at your sector guidance note for more information about how to consider these things.

Installations

Avoidance, recovery and disposal of wastes

Typical permit condition or rule 1.4.1

The operator shall take appropriate measures to ensure that:

- a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and
- b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and
- c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

You must demonstrate waste avoidance or reduction measures. Where waste is produced you must consider recycling and recovery options rather than automatically choosing the cheapest waste disposal option. It requires you to think about the impact on the environment of all the available options and select the option which is best for the environment.

You must:

- comprehensively characterise and quantify each waste stream arising from the regulated facility
- use government guidance to decide how each waste stream is to be recycled, recovered or disposed of
- be capable of justifying decisions that deviate from best practice.

If you propose any disposal:

- explain why recycling or recovery is technically and economically impossible; and
- describe the measures planned to avoid or reduce any impact on the environment.

Installations

Emissions and monitoring

Point source emissions to air, water and land

Typical permit condition or rule 3.1.1

There shall be no point source emissions to air, water or land, except from the sources and emission points listed in Schedule x, tables y.y, and z.z.

The limits given in Schedule x, tables y.y, and z.z. shall not be exceeded

Point source emissions to air

Identify the main chemical constituents of your emissions, including the separate compounds that make up your emissions of volatile organic compounds (VOCs) where practicable.

Assess the dispersion capability of your vent and chimney heights and make an assessment of the fate of the substances emitted to the environment.

Aim to avoid visible emissions even where you already meet particulate benchmarks. However, because plume visibility is extremely dependent on the particle size and reflectivity, the angle of the light, and the sky background, we accept that, even when BAT is employed and very low emissions are being achieved, some plumes may still be visible under particular conditions.

Minimise water vapour plumes wherever practicable. However we do not consider using primary energy to reduce a plume simply because it is visible to be a best available technique. It may be appropriate to use waste or recovered heat to reduce a plume. For example, heat from a gas stream prior to wet scrubbing can be used to re-heat the same exhaust stream after scrubbing by means of a gas-gas heat exchanger. The use of energy for exhaust gas re-heat should be balanced against the benefits gained.

The emissions benchmarks in the relevant activity-specific guidance describe levels that are achievable using best available techniques. If you cannot prevent an emission, you should use the appropriate techniques to ensure the emission limits in your permit are met.

Point source emissions to water

Prevent releases of harmful substances to the aquatic environment where practicable, whether releases are direct or via the sewage treatment works. You must use appropriate measures, as defined in *H1 Risk assessment*, to prevent the input of hazardous substances to groundwater. Similarly, you must limit the input of non-hazardous pollutants to groundwater to ensure that they do not cause pollution of groundwater. Prevent releases to surface water and groundwater completely where this is practicable.

Apply the following general principles in sequence to control emissions to water:

- minimise water use and reuse or recycle wastewater
- minimise the risk of contaminating process water, surface water or groundwater
- wherever possible use closed loop cooling systems and use procedures to ensure blow down is minimised
- if you use any potentially harmful materials prevent them from entering the water circuit.

Consider using filtration/osmosis or other techniques which allow the effluent water to be cleaned for release or, preferably, for return to the process. If you use such a technique consider particularly how you dispose of the concentrated residues. These can often be

Installations

returned to furnaces, evaporated, solidified, sent for incineration and so on. Tankering of such residues off the site as waste simply transfers the problem to another place, unless they are sent to a facility with the genuine ability to recycle the materials.

If the pollutants in the waste water are all readily biodegradable or the effluent contains only materials which are naturally occurring in much larger quantities in the receiving water, you may be able to justify not using filtration/osmosis or similar techniques. The emissions benchmarks in the relevant activity guidance describe levels that are achievable using best available techniques (BAT). If you cannot prevent an emission, use the appropriate techniques to ensure the emission limits in your permit are met.

Where effluent is treated off-site at a sewage treatment works the above factors still apply. You must demonstrate that the treatment provided at the sewage treatment works is as good as would be achieved if the emission were treated on-site, based on reduction of load (not concentration) of each substance to the receiving water. The H1 software tool will help you assess this.

Ensure action plans are appropriate to prevent direct discharge of the waste-waters in the event of sewer bypass via storm/emergency overflows or at intermediate sewage pumping stations. Where your discharges are significant, make arrangements with the sewerage undertaker to know when bypass is occurring, and reschedule activities such as cleaning, or even shut down the process entirely if that is necessary to prevent discharge of untreated effluent direct to controlled water.

Put in place a suitable monitoring programme is in place for emissions to sewer.

Ensure that you know the identity of the main chemical constituents of the treated effluent (including the make-up of the chemical oxygen demand (COD) and the presence of any substances of particular concern to the aqueous environment. Assess the fate of these chemicals in the environment.

The concept of BAT requires prevention or minimisation of releases where it is cost effective to do so. In some cases, this may not be sufficient to achieve the water quality standards, meaning that you will need to use techniques which are more environmentally effective than BAT (even if not cost effective) or we may not be able to permit continued operation of the installation.

Installations

Emissions of substances not controlled by emission limits

Typical permit condition or rule 3.2.1

Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in table y below and in any approved emissions management plan, have been taken to prevent or, where that is not practicable, to minimise, those emissions.

Typical permit condition or rule 3.2.2

The operator shall:

- if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
- implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

The following sections outline potential types of emissions and appropriate control measures. You need to consider what control measures are necessary and include them in your management system. You may need measures that are not listed here. See [part 7](#), page [94](#) for links to other guidance.

You do not have the right to cause pollution due to your activities. See page [9](#) for the definition of pollution.

Your neighbours have a right to expect that your activities will not detract from their quality of life. They have a right to expect that their environment will be free from emissions caused by your activities either on a continuous basis, frequent intervals or serious one-off incidents. You need to prevent or minimise these, no matter how near or far people or other receptors may be.

You must identify any such emissions from your site and describe them and the control measures in your management system. We expect you to consider the options by balancing the costs and environmental benefits. The measures you decide to use are up to you, but they will have to meet the objective of the condition.

While there may be no problem at the moment, if circumstances change, for example development occurs around your site such that your activities then affect people outside the site, you will have to take action to prevent or minimise those problems.

Emissions to surface water and groundwater

For surfaces on your site:

- make sure that surfaces and containment or drainage facilities are adequate for all operational areas, taking into consideration collection capacities, surface thicknesses, strength/reinforcement, falls, materials of construction, permeability
- ensure there is adequate resistance to chemical attack
- have an inspection and maintenance programme for impervious surfaces and containment facilities.

Installations

Unless the risk is negligible, have improvement plans in place where operational areas do not already have:

- an impervious surface
- spill containment kerbs
- sealed construction joints
- connection to a sealed drainage system.

A **sealed drainage system** is a drainage system with impermeable components which does not leak and which will ensure that no liquids will run off a surfaced area other than via the system. Except where they are lawfully discharged, all liquids entering the system should be collected in a sealed sump.

Fine particulate and fumes

Controls for fine particulate and fumes, particularly from combustion processes, are given in activity specific guidance where relevant.

Volatile organic compounds (VOCs)

The following control measures may be appropriate:

- enclose open vessels and fit abatement equipment to vents
- install sealed transfer (vapour balance) systems
- use sub-surface filling via (anti-syphon) filling pipes extended to the bottom of the container
- use floating roof tanks and bladder roof tanks
- treat specific releases by techniques such as adsorption or condensation
- use tank vent systems that minimise breathing losses, for example the use of pressure/vacuum valves, and fit knock-out pots and appropriate abatement equipment where necessary
- inventory management
- reduce leakage from pipework or fluid transport systems
- use white paint, insulation and active temperature control to reduce the temperature in storage tanks.

Substances introduced into the environment by pests

The following control measures may be appropriate, but you may need to consider additional or other controls:

- regular inspections by nominated personnel
- isolation and securing/removal of materials that are attracting scavengers
- employing professional pest controllers, either directly or by contract
- effective scaring or other deterrent methods.

Installations

Odour

Typical conditions or rules 3.3.1

Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable, to minimise, the odour.

Typical conditions or rules 3.3.2

The operator shall:

- if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
- implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

This condition requires you to take appropriate measures to prevent or minimise odour. The measures required need to be what are reasonable, good practice and balances the costs and benefits to prevent or minimise odour. We expect any standards of industry good practice to be met along with any recommendations in our guidance. If there is an odour problem at your site, and you have already implemented some measures, there may be a case to justify further measures or restriction of the activity, depending on the severity of the problem and the cost. Even if you are following normal standards and guidance but the impact is unreasonable, then you will have put in place further measures and we will judge with you what is reasonable and to what extent further measures are possible, required or justified.

Activities for which odour is a key issue

The following are activities where odour can frequently be a problem. If you operate one of these you must have an odour management plan unless otherwise agreed, in writing, by the Environment Agency. If you are applying for a bespoke permit you submit the plan with your application. If you hold a standard permit you do not need to submit it. We will look at it during inspections or if an odour problem arises. If your activities are not on the list but you know you have an odour problem you should also have an odour management plan.

- waste activities listed on page [45](#).
- manufacture, use or recovery of compounds containing sulphur, ammonia, amines and amides, aromatic compounds, styrene, pyridine and esters
- abattoirs and Renderers
- food production involving any form of cooking or heating and brewing
- refineries
- distilling or heating tar or bitumen.

Installations

Odour management plan

You must have an odour management plan if your activity is in the list 'activities for which odour is a key issue'. In other cases if there is a significant possibility that odour from your activities may cause offence beyond your site boundary, you should have a written odour management plan. Use this to show what the sources and risk to receptors are, the measures you will employ and how you will respond to prevent or minimise the odour. The guidance *H4 Odour management* explains more about the plan. Having an odour management plan that sets out a number of measures you will take will not necessarily mean you will comply with this condition. Your obligation is to prevent an odour or use all appropriate measure to prevent an odour from your activities. You may need to update your odour management plan with further measures as necessary to ensure that the condition continues to be met.

There are a number of options available to control odour. We will expect you to balance the costs and environmental benefits. The measures you decide to use will have to meet the objective of the condition.

Appropriate measures to reduce odour problems include:

- managing the receipt, storage and handling of materials, for example by choosing raw materials that are less likely to cause odour problems and cutting the quantities and storage times of biodegradable materials
- avoiding operations that give rise to smells, for example avoiding conditions which encourage anaerobic breakdown and reducing temperatures and exposed surface areas
- enclosing smelly materials and activities in a building or vessels
- engaging with your neighbours and responding to their concerns or complaints
- reducing or stopping your activities that are causing the odour until either the circumstances have changed or other appropriate measures have been put in place to allow the operations to re-commence without causing offence.

These and other measures are described in [H4 Odour management](#).

Noise and vibration

Typical permit condition or rule 3.4.1

Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable, to minimise, the noise and vibration;

or

The (rating) level of noise emitted from the site (during normal operations/annual shutdown and maintenance) shall not exceed (X) dB, expressed as an LAeqT, between (hhmm) and (hhmm) Mon to Fri and (Y) dB at any other time, as measured or assessed on the (specified boundary/boundaries/location) of the site at (locations x,y,z) on plan reference Y attached to this permit. The locations shall be chosen and the measurements and assessment made according to BS4142:1997.

Installations

Typical permit condition or rule 3.4.2

The operator shall:

- if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;
- implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

This condition requires you to take appropriate measures to prevent or minimise noise. The measures required need to be what are reasonable, good practice and balances the costs and benefits to prevent or minimise noise. We expect any standards of industry good practice to be met along with any recommendations in our guidance. If there is an noise problem at your site, and you have already implemented some measures, there may be a case to justify further measures or restriction of the activity, depending on the severity of the problem and the cost. Even if you are following normal standards and guidance but the impact is unreasonable, then you will have put in place further measures and we will judge with you what is reasonable and to what extent further measures are possible, required or justified.

If you are likely to cause any significant noise beyond your site boundary, you should have a written noise management plan. Use this to show what the sources and the risks to receptors are, the measures you will employ and how you will respond to prevent or minimise the noise. The guidance *H3 Noise assessment and control* and some of the activity-specific guidance notes give more guidance on noise assessment and control and how to draw up a noise management plan.

Having a noise management plan that sets out a number of measures you will take will not necessarily mean you will comply with this condition. Your obligation is to prevent or use all appropriate measure to prevent a noise that amounts to pollution from your activities.

You may need to update this plan with further measures to ensure that the condition continues to be met.

Appropriate measures to reduce/control noise include:

- monitoring noise levels at different places and times to find where the problem is coming from
- maintaining equipment specifically to reduce noise levels, for example balancing fans and fixing loose covers
- enclosure or abatement, for example acoustic enclosures, silencers, keeping doors and other openings in buildings closed
- timing, for example avoiding noisy work during evenings and weekends
- siting away from sensitive receptors, for example of delivery or vehicle routes or noisy plant
- switching off plant, vehicles and ventilation units when not in use
- reducing or stopping your activities that are causing the noise until either the circumstances have changed or other appropriate measures have been put in place to allow the operations to re-commence without significant noise.

Where we place a numerical limit, it applies only at the designated measurement points. It does not remove your responsibility for controlling noise from your activities at all other points outside the site boundary.

Installations

Where very low background levels prevail, site noise levels should not be significantly above the background and, if practicable, should be well below.

Sometimes ambient noise increases over time (creeping background). This increases the environmental value of noise abatement measures. Where this has been identified in discussions with us or previously with the local authority, you must consider it when planning noise control techniques to maintain acceptable noise levels.

You may need to carry out noise surveys, measurements, investigations, for example on sound power levels of individual items of plant, or modelling to resolve more difficult problems.

It is sometimes necessary to carry out temporary works, such as alterations or major maintenance programmes, which will cause more noise than normal. Tell us and your neighbours if you intend to do this. Take reasonable steps to minimise the duration and impact of any such works, for example by carrying out the work only between the hours of 09.00 and 17.00 Monday to Friday excluding bank holidays.

Monitoring

Typical permit condition or rule 3.5.1 to 3.5.4

The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake monitoring specified in the following tables in Schedule x to this permit:

- Point source emissions specified in tables Sxx, Sxx and Sxx;
- Surface water and groundwater specified in table Sxx;
- Noise specified in table Sxx;
- Ambient air monitoring specified in table Sxx;
- Process monitoring specified in table Sxx;
- Land specified in table Sxx.

Monitoring of emissions to water and sewer

If effluent flow monitoring is included as part of the permit and there is a numeric value such as total daily volume then the MCERTS: self monitoring of effluent flow scheme will apply. This will include all effluent emissions including those to public sewer. An inspection of the flow monitoring arrangements and the associated management system will have to be carried out.

Your permit specifies the parameters to be monitored and the frequency of monitoring. Even if no parameters are specified in your permit, it is good practice to monitor flow rate, pH, temperature, COD, turbidity, and oil content. The frequency of monitoring depends upon the sensitivity of the receiving water and should be proportionate to the scale of your operations.

See our monitoring guidance for more information about analysing substances from your activity.

Monitoring of emissions to air

Your permit will specify the parameters to be monitored and the frequency of monitoring.

Where appropriate, undertake periodic visual and olfactory assessment of releases to ensure that all final releases to air are essentially colourless, free from persistent trailing mist or fume and free from droplets and odour.

Look at our monitoring guidance for more information about what you need to do depending on your activity.

Installations

Monitoring of process variables

Some process variables may affect the environment. Identify and monitor these as appropriate. Examples are:

- monitoring raw materials for contaminants where contaminants are likely and there is inadequate supplier information
- plant efficiency where it has an environmental relevance
- energy consumption across the plant and at individual points of use in accordance with the energy plan
- monitoring pressure drop across a bag filter or the temperature of a process where these confirm that the emissions will be under control.

Periodic monitoring

Typical permit condition or rule 3.5.1 to 3.5.4

Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

This condition is included to meet the requirements of the Industrial Emissions Directive. This systematic appraisal would need to be revisited periodically to ensure that risks had not changed. However, it is reasonable to assume that if baseline monitoring had not been originally required as part of the baseline/site condition report submitted as part of the application, and all risks remain the same, such on-going monitoring would not be required.

Pests

Typical permit condition or rule 3.6.1

The activities shall not give rise to the presence of pests which are likely to cause pollution, hazard or annoyance outside the boundary of the site. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved pests management plan, have been taken to prevent or where that is not practicable, to minimise the presence of pests on the site.

Typical permit condition or rule 3.6.2

The operator shall:

- if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a pests management plan which identifies and minimises risks of pollution from pests;
- implement the pests management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

This condition requires you to take appropriate measures to prevent or minimise pests. The measures required need to be what are reasonable, good practice and balances the costs and benefits to prevent or minimise pests. We expect any standards of industry good practice to be met along with any recommendations in our guidance. If there is pest problem at your site, and you have already implemented some measures, there may be a case to justify further measures or restriction of the activity, depending on the severity of the problem and the cost.

Installations

Having a pest management plan that sets out a number of measures you will take will not necessarily mean you will comply with this condition. Your obligation is to prevent pests or use all appropriate measure to prevent pests that amount to pollution from your activities. You may need to update this plan with further measures to ensure that the condition continues to be met.

Appropriate measures should to reduce pest problems are:

- regular inspections by nominated personnel
- isolation and securing/removal of wastes that are attracting scavengers or flies
- employing professional pest controllers, either directly or by contract
- effective scaring or other deterrent methods
- netting.

This document is out of date and was withdrawn (01/02/2016)

Installations

Information

Records

Typical permit condition or rule 4.1.1

All records required to be made by this permit shall:

- be legible
- be made as soon as reasonably practicable
- if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
- be retained, unless otherwise agreed in writing by the Environment Agency, for at least 6 years from the date when the records were made or in the case of the following records until permit surrender:
 - off-site environmental effects
- matters which affect the condition of land and groundwater.

Waste records

Keep Duty of Care records for two years.

If you manage hazardous waste you need to comply with the site record and return requirements arising from part 7 of the *Hazardous Waste Regulations*.

Site condition records

You need to record the state of the site before you begin operations. If the land was contaminated before your permit began, record details of this contamination.

A good management system and good compliance history will help you demonstrate that the correct precautions and actions were taken to minimise or prevent contamination of land.

Keep records about:

- design, construction, inspection, monitoring and maintenance and failure records for pollution prevention
- the appropriate measures you use to protect the land and groundwater, for example impermeable surfacing and leak tight drains
- spills and incidents and what you have done to deal with them
- action you have taken if we identify relevant non-conformances or failures
- off-site impacts such as pollution incidents that caused, or are alleged to have caused, harm or health effects, these enable us to investigate in future any cumulative effects of the activities.

For landfills and waste recovery operations that involve the permanent deposit of waste, your records must focus on either:

- compliance with the waste acceptance procedures at the site for operations that involved the acceptance of waste that was inert or suitably low risk
- or demonstrating that you have complied with relevant closure procedures, and the waste has stabilised so that pollution control measures are no longer necessary and that the deposits of waste will not cause pollution.

The guidance [H5 Site condition report](#) provides more advice about what records to keep about the condition of the land.

Installations

Notification

Typical permit condition or rule 4.3.1

- (a) In the event that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—
 - (i) inform the Environment Agency,
 - (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and
 - (iii) take the measures necessary to prevent further possible incidents or accidents;
- (b) in the event of a breach of any permit condition the operator must immediately—
 - (i) inform the Environment Agency, and
 - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
- (c) in the event of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.

Typical permit condition or rule 4.3.2

Any information provided under condition 4.3.1 [(a)(i), or 4.3.1 (b)(i) where the information relates to the breach of a limit specified in the permit,] shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.

The notifications condition for installations is written to meet the requirements of the Industrial Emissions Directive.

Installations

Change in operation

This condition does not apply to standard rules.

Typical permit condition or rule 4.3.5

Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:

- the Environment Agency shall be notified at least 14 days before making the change; and
- the notification shall contain a description of the proposed change in operation.

If you want to change your operation, but the change is not contrary to your permit conditions, or would require you to submit an application such as a partial transfer or surrender of your permit, then you do not have to vary your permit.

When the proposed change in operation falls within the criteria set out in the condition, and explained below, you must notify us at least 14 days in advance of making the proposed change and the notification must describe the change.

A change in the **nature** of the activities is a change in what is being done (for example a change in feedstock or by products and so on).

A change in the **functioning** of the activities is a change in how the activities are carried out (for example moving to a batch treatment process from a continuous treatment process).

An **extension** is a change in size affecting the capacity of the facility to carry out the activities (for example removing treatment or storage capacity at the facility within the installation threshold).

Once the change is agreed you must review your management system to reflect the changes.

Mining waste operations

Part 4 - Mining waste operations

This section covers information relevant to mining waste operations defined in Schedule 20 of the *Environmental Permitting Regulations*. You also need to read Part 1 and refer to the technical guidance 6.14 *Mining waste operations*. See [part 7](#), page 92, for links to guidance mentioned below.

General management

Typical permit condition or rule 1.1.1

The operator shall manage and operate the activities:

- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and
- (b) using sufficient competent persons and resources.

Typical permit condition or rule 1.1.2

Records demonstrating compliance with condition 1.1.1 shall be maintained

Typical permit condition or rule 1.1.3

Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

Waste management plan

If you apply for a bespoke permit for a mining waste operation you must submit a waste management plan as part of an application. If you apply for a standard permit you do not send a plan in with your application but you must have one in place when you begin operations. The technical guidance 6.14 *Mining waste* covers what you need to include and provides an example plan.

Emergency plan

If your permit is for a Category A mining waste operation you must have an emergency plan. If you consider your site to be Category A, contact your local regulatory officer before you apply for a permit.

Site condition and closure

Your management system must include information about the condition of the land before you start operations, and how you have protected it during the life of the permit and site closure.

When you come to apply to surrender your permit, you will need to be able to show that you have taken the necessary measures to avoid any pollution risk resulting from your activities and that the site has been returned to a satisfactory state. *Regulatory guidance note 9 Surrender* explains more about what we mean by satisfactory state and the legal tests for surrender.

See the section on [Records](#) page [77](#) for more about what records you need to keep.

Mining waste operations

Sufficient competent persons

The following training requirements do not apply to mining waste facilities for inert waste, unpolluted soils, non-hazardous waste generated from the prospecting of mineral resources (except oil and evaporates other than gypsum and anhydrite) or waste resulting from the extraction, treatment and storage of peat and mining waste operations that do not include a facility.

They do apply if your mining waste operation includes a Category A mining waste facility, a mining waste facility for hazardous waste, or non-hazardous non-inert waste. You must demonstrate that you have appropriate technical management in place for the facility and that technical development and training of staff are provided.

Make sure your staff have clearly defined roles and responsibilities. Write down the skills required for each post and keep records of how each individual in that post has gained those skills and how they keep their skills up to date, for example by receiving refresher training. Where appropriate, keep written instructions for the work they do. We will refer to these records and instructions if we need to investigate an incident.

You can demonstrate competence in various ways:

- academic qualifications for example a relevant degree
- professional qualifications for example membership of an appropriate institution
- vocational qualifications for example National Vocational Qualifications (NVQs)
- external training qualification/certification for example certificate of technical competence
- attendance at external or in-house training courses
- those with approved training to cascade that training to other staff
- mentoring as part of on the job training
- experience (as long as there is evidence that it is kept up to date).

Mining waste operations

Emissions and monitoring

Emissions of substances not controlled by emission limits

Typical permit condition or rule 3.2.1

Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in table y below and in any approved emissions management plan, have been taken to prevent or, where that is not practicable, to minimise, those emissions.

Typical permit condition or rule 3.2.2

The operator shall:

- if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits
- implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

The following sections outline potential types of emissions and appropriate control measures. You need to consider what control measures are necessary and include them in your management system. You may need measures that are not listed here. See [part 7](#), page 92 for links to other guidance.

Emissions to surface water and groundwater

For surfaces on your site:

- make sure that surfaces and containment or drainage facilities are adequate for all operational areas, taking into consideration collection capacities, surface thicknesses, strength/reinforcement, falls, materials of construction, permeability
- ensure there is adequate resistance to chemical attack
- have an inspection and maintenance programme for impervious surfaces and containment facilities.

Unless the risk is negligible, have improvement plans in place where operational areas do not already have:

- an impervious surface
- spill containment kerbs
- sealed construction joints
- connection to a sealed drainage system.

A **sealed drainage system** is a drainage system with impermeable components which does not leak and which will ensure that no liquids will run off a surfaced area other than via the system. Except where they are lawfully discharged, all liquids entering the system should be collected in a sealed sump.

Mining waste operations

Dust and mud

The following control measures may be appropriate but you may need to consider additional or other controls:

- carry out operations inside buildings
- avoid outdoor or uncovered stockpiles
- where you must use outdoor stockpiles, control them by means of sprays, binders, windbreaks, careful siting in relation to sensitive receptors, controlling the moisture
- content of material and orientation of long stockpiles in the direction of the prevailing wind
- design to minimise handling operations
- enclose conveyors and minimise drops, or use pneumatic or screw conveying
- install filters to vents on silos, building extractors and conveying systems
- surface roadways
- plant grass or trees on open ground where appropriate, hydro-seeding can rapidly establish vegetation on waste tips, slag heaps or other apparently infertile ground
- cover vehicles, skips and vessels
- have rigorous maintenance standards
- minimise points of access from the public highway
- make sure vehicles stay on paved areas
- regularly clean and dampen roadways and vehicle wheels
- use water-filled troughs to slow trucks, wash wheels and keep roadways damp
- clean spillages with vacuum cleaners rather than washing down
- avoid certain activities when there are high winds
- clear mud on highways at the end of each working day, unless it is impractical or unsafe to do so.

Odour

This condition only applies to bespoke permits for the management of extractive waste which is hazardous or for Category A facilities.

Typical conditions or rules 3.3.1

Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable, to minimise, the odour.

Typical conditions or rules 3.3.2

The operator shall:

- if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
- implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

Mining waste operations

This condition requires you to take appropriate measures to prevent or minimise odour. The measures required need to be what are reasonable, good practice and balances the costs and benefits to prevent or minimise odour. We expect any standards of industry good practice to be met along with any recommendations in our guidance. If there is an odour problem at your site, and you have already implemented some measures, there may be a case to justify further measures or restriction of the activity, depending on the severity of the problem and the cost. Even if you are following normal standards and guidance but the impact is unreasonable, then you will have put in place further measures and we will judge with you what is reasonable and to what extent further measures are possible, required or justified.

If there is a significant possibility that odour from your activities may cause offence beyond your site boundary, you should have a written odour management plan. Use this to show what the sources and risk to receptors are, the measures you will employ and how you will respond to prevent or minimise the odour. The guidance *H4 Odour management* explains more about the plan. Having an odour management plan that sets out a number of measures you will take will not necessarily mean you will comply with this condition. Your obligation is to prevent an odour or use all appropriate measures to prevent an odour from your activities. You may need to update this plan with further measures as necessary to ensure that the condition continues to be met.

There are a number of options available to control odour. We will expect you to balance the costs and environmental benefits. The measures you decide to use will have to meet the objective of the condition.

Appropriate measures to reduce odour problems include:

- managing the receipt, storage and handling of materials, for example by choosing raw materials that are less likely to cause odour problems and cutting the quantities and storage times of biodegradable materials
- avoiding operations that give rise to smells, for example avoiding conditions which encourage anaerobic breakdown, and reducing temperatures and exposed surface areas
- enclosing smelly materials and activities in a building or vessels
- engaging with your neighbours and responding to their concerns or complaints
- reducing or stopping your activities that are causing the odour until either the circumstances have changed or other appropriate measures have been put in place to allow the operations to re-commence without causing offence.

These and other measures are described in [H4 Odour Management](#).

In exceptional circumstances we may impose the condition 'The emission from point x shall not exceed Y odour units'. This sets a quantitative limit on an odorous emission from a specified source. It does not remove your responsibility for controlling odours from all other sources.

Mining waste operations

Noise and vibration

Typical permit condition or rule 3.4.1

Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable, to minimise, the noise and vibration;

or

The (rating) level of noise emitted from the site (during normal operations/annual shutdown and maintenance) shall not exceed (X) dB, expressed as an LAeqT, between (hhmm) and (hhmm) Mon to Fri and (Y) dB at any other time, as measured or assessed on the (specified boundary/boundaries/location) of the site at (locations x,y,z) on plan reference Y attached to this permit. The locations shall be chosen and the measurements and assessment made according to BS4142:1997.

Typical permit condition or rule 3.4.2

The operator shall:

- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;
- (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

This condition requires you to take appropriate measures to prevent or minimise noise. The measures required need to be what are reasonable, good practice and balances the costs and benefits to prevent or minimise noise. We expect any standards of industry good practice to be met along with any recommendations in our guidance. If there is a noise problem at your site, and you have already implemented some measures, there may be a case to justify further measures or restriction of the activity, depending on the severity of the problem and the cost. Even if you are following normal standards and guidance but the impact is unreasonable, then you will have put in place further measures and we will judge with you what is reasonable and to what extent further measures are possible, required or justified.

If you are likely to cause any significant noise beyond your site boundary, you should have a written noise management plan. Use this to show what the sources and the risks to receptors are, the measures you will employ and how you will respond to prevent or minimise the noise. The guidance H3 Noise assessment and control and some of the activity-specific guidance notes give more guidance on noise assessment and control and how to draw up a noise management plan.

Having a noise management plan that sets out a number of measures you will take will not necessarily mean you will comply with this condition. Your obligation is to prevent or use all appropriate measure to prevent a noise that amounts to pollution from your activities. You may need to update this plan with further measures to ensure that the condition continues to be met. The situation and your responsibilities for controlling noise are very similar to those for controlling odour (see the previous section).

Mining waste operations

Appropriate measures to reduce/control noise include:

- monitoring noise levels at different places and times to find where the problem is coming from
- maintaining equipment specifically to reduce noise levels, for example balancing fans and fixing loose covers
- enclosure or abatement – for example acoustic enclosures, silencers, keeping doors and other openings in buildings closed
- timing – for example avoiding noisy work during evenings and weekends
- siting away from sensitive receptors – for example of delivery or vehicle routes or noisy plant
- switching off plant, vehicles and ventilation units when not in use
- reducing or stopping your activities that are causing the noise until either the circumstances have changed or other appropriate measures have been put in place to allow the operations to re-commence without significant noise.

Where we place a numerical limit, it applies only at the designated measurement points. It does not remove your responsibility for controlling noise from your activities at all other points outside the site boundary.

Where very low background levels prevail, site noise levels should not be significantly above the background and, if practicable, should be well below.

Sometimes ambient noise increases over time (creeping background). This increases the environmental value of noise abatement measures. Where this has been identified in discussions with us or previously with the local authority, you must consider it when planning noise control techniques to maintain acceptable noise levels.

You may need to carry out noise surveys, measurements, investigations (for example on sound power levels of individual items of plant) or modelling to resolve more difficult problems.

It is sometimes necessary to carry out temporary works, such as alterations or major maintenance programmes, which will cause more noise than normal. Tell us and your neighbours if you intend to do this. Take reasonable steps to minimise the duration and impact of any such works, for example by carrying out the work only between the hours of 09.00 and 17.00 Monday to Friday excluding bank holidays.

Mining waste operations

Information

Records

Typical permit condition or rule 4.1.1

All records required to be made by this permit shall:

- be legible
- be made as soon as reasonably practicable
- if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
- be retained, unless otherwise agreed in writing by the Environment Agency, for at least 6 years from the date when the records were made or in the case of the following records until permit surrender:
 - o off-site environmental effects
 - o matters which affect the condition of land and groundwater.

Waste records

Keep duty of care records for two years.

If you manage hazardous waste you need to comply with the site record and return requirements arising from part 7 of the *Hazardous Waste Regulations*.

Records on site condition

Keep records about the condition of your land. Record the state of the site before you begin operations. If the land was contaminated before your permit began, record details of this contamination. The amount of information you need to provide when you surrender will depend on the risk of your mining waste operation. RGN 9 Surrender explains about this.

Keep records about:

- design, construction, inspection, monitoring and maintenance and failure records for pollution prevention
- the appropriate measures you use to protect the land and groundwater for example impermeable surfacing and leak tight drains
- spills and incidents and what you have done to deal with them
- action you have taken if we identify relevant non-conformances or failures
- off-site impacts such as pollution incidents that caused, or are alleged to have caused, harm or health effects. This enables us to investigate in future any cumulative effects of the activities.

For operations that involve permanent deposits of extractive wastes your records must focus on waste characterisation, which show that the extractive waste was inert or sufficiently low risk; or to demonstrate that emissions are shown to meet the risk-based closure or completion criteria for your operation.

The guidance *H5 Site condition report* provides more advice about what records to keep about the condition of the land.

We will look at your records during compliance checks to make sure you are collating them properly. We will consider these records when you apply to surrender your permit.

Discharge of sewage or trade effluent

Part 5 – Discharge of sewage or trade effluent

This section covers general measures that are important for operators carrying out water discharge activities defined in Schedule 21 and groundwater water activities in Schedule 22 of the *Environmental Permitting Regulations*.

You also need to read Part 1 of this document. You may need to implement further measures in addition to those in this section, such as those that are recognised as industry good practice and are in industry guidance. See [part 7](#), page [94](#) for links to other guidance. It includes links to guidance mentioned below.

If you are also carrying out a waste operation, for example combustion of biogas at a sewage treatment works, then you also need to read Part 2 of this document.

General management

Typical permit condition or rule 1.1.1

The operator shall manage and operate the activities:

- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances and those drawn to the attention of the operator as a result of complaints; and
- (b) using sufficient competent persons and resources.

Typical permit condition or rule 1.1.2

Records demonstrating compliance with condition 1.1.1 shall be maintained

The management system condition requires the operator to manage the activities to minimise the risk of pollution. However, if the permit specifies an emission limit or a treatment process, the operator is not required to achieve a higher standard or change the treatment process from that specified. The requirement to have a written management system applies to all types of water discharge activities, but the complexity of the management system depends on the type and size of the regulated activity and environmental impact. Low risk activities such as small sewage treatment works will require a management system of relatively low complexity, such as the template we have produced for these types of discharges and available on our website. More complex water discharge activities such as municipal sewage treatment works require a more complex written management system, but the basic requirement to understand the activity and its impact on the environment and mitigate identified risks is the same.

For a simple combined sewer overflow (CSO) the operator's management system may include the inspection and maintenance of an individual CSO in an inspection and maintenance schedule that covers many CSOs.

We expect that water company management systems will ensure that trade effluent discharges are effectively controlled and where necessary numeric limits are set in trade effluent consents to prevent water company discharges downstream of the trade input causing pollution. Companies will also have an effective trade effluent monitoring programme.

Discharge of sewage or trade effluent

Site security

Any need for security and signage at sites must take account of the:

- environmental risk that could follow a security breach or accident/incident
- practicalities of providing security measures and display notices at sites, and scale of the operation.

For example, many storm water overflow sites are underground and have restricted access in built up urban areas where fencing and signage is impractical. The discharge may also be remote from the main body of the site. Small private rural sewage treatment plants may be within the boundary of houses or businesses, or remote and of low environmental risk and so will not require signage or fencing.

Many large or high impact sites such as municipal sewage works already show the name of the operator, the site and an emergency contact number at the entrance to the site. For existing water discharge and groundwater activities there will be no need for existing signs to be replaced or additional information to be added to them.

This document is out of date and was withdrawn (01/02/2016)

Discharge of sewage or trade effluent

Emissions and monitoring

Point source emissions to air, water and land

Typical permit condition or rule 3.1.1

There shall be no point source emissions to air, water or land, except from the sources and emission points listed in Schedule x.

The limits given in Schedule x, tables y.y, and z.z. shall not be exceeded.

Your permit will specify emission limit values and the compliance method that will be used to assess compliance with the limit.

For storm sewage discharges a separate condition and table in Schedule 3 will provide storm sewage discharge settings such as overflow setting, screening arrangements and storm storage requirements.

Emissions of substances not controlled by emission limits

Typical permit condition or rule 3.2.1

Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in table y below and in any approved emissions management plan, have been taken to prevent or, where that is not practicable, to minimise, those emissions.

Typical permit condition or rule 3.2.2

The operator shall:

- if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits
- implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

Substances within the permitted discharge that do not have specific emission limits are considered as emissions of substances not controlled by emission limits.

If there are substances in your permitted discharge that could result in a significant environmental impact, as described in and assessed using [H1 Environmental risk assessment annex \(e\) surface water discharges \(complex\)](#), we will specify emission limits, unless we agree that they can be adequately controlled by using the emissions of substances not controlled by emission limits condition.

Similarly, specific emission limits and / or the above conditions will apply to groundwater activities if your discharge could result in the input into groundwater of hazardous substances or non-hazardous pollutants as described in H1 annex (j).

Discharge of sewage or trade effluent

The operator will not have breached this condition if they have caused pollution by substances without emission limits where they have taken appropriate measures. See page 9 for the definition of pollution.

For water discharge activities, we may choose not to set specific emission limits for some substances from the permitted discharge. Examples include:

- polymer dosing is used to enhance a treatment process and we do not set a limit for the polymer
- fish farm with an emissions management plan covering the use of prophylactic chemicals
- where a continuous discharge is liable to contain a substance but at levels which do not require a numeric limit when we apply our hazardous pollutants tests of significance.
- storm sewage discharges where the impact of the discharge is controlled by overflow settings such as pass forward flow, screen arrangements and other requirements such as storage
- emergency overflows at sewage pumping stations where the impact of the discharge is minimised by a management system and mitigation measures to deal with electrical or mechanical failure
- small sewage treatment works where effluent quality is wholly controlled by descriptive conditions.

We expect operators to consider appropriate measures on the basis of balancing costs and environmental benefits, but they will still have to meet the objective of the condition. The appropriate measures defence means that a pollution caused by the permitted discharge may not constitute a breach of the condition, for example where it is not reasonable to expect a fully competent operator to manage the emission of the substance, though this will depend on the measures used by the operator to mitigate impact.

We will not require an emissions management plan to be submitted to support applications for new water discharge activity or point source groundwater activity permits or applications to vary existing ones, except in exceptional circumstances.

Emissions management plans are not required if your discharge causes pollution by substances without emission limits unless we confirm to you in writing that we require you to provide one by a specified date.

Groundwater activities

Typical permit condition or rule 3.X

Appropriate measures shall be taken to prevent the input of hazardous substances to groundwater by avoiding the entry of those substances into groundwater and by avoiding any significant increase in their concentration in groundwater.

The Groundwater Daughter Directive (2006/118/EC) requires “all necessary measures” to prevent and limit the input to groundwater of hazardous substances and non-hazardous pollutants. *H1 risk assessment annex (j)* describes this in detail. It considers the extent to which measures also need to be reasonable. Provided this guidance is followed, this will satisfy the “appropriate measures” required by the above condition.

Discharge of sewage or trade effluent

Monitoring

Typical permit condition or rule 3.3.1 to 3.3.4

The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake monitoring specified in the following tables in Schedule x to this permit:

- point source emissions specified in tables Sxx, Sxx and Sxx
- surface water or groundwater specified in table Sxx
- noise specified in table Sxx
- ambient air monitoring specified in table Sxx
- process monitoring specified in table Sxx
- land specified in table Sxx.

The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.

Your permit will specify what, if anything, you will need to monitor and how often.

Unless operators have been required to monitor their own discharges in the permit, we will retain the responsibility for monitoring them.

We have the responsibility for monitoring surface water and groundwater quality, however in some exceptional circumstances it may still be necessary for an operator to carry out some surface water or groundwater environmental impact monitoring.

If you operate a groundwater activity and your permit requires you to install monitoring boreholes these must be completed in a manner that prevents contamination from the surface and as far as practicable made secure from interference or accidental damage. You must restore or replace any monitoring borehole that becomes inaccessible at the surface or blocked or ceases to function.

Discharge of sewage or trade effluent

Information

Reporting and notification

Typical permit condition or rule 4.3 1

The Environment Agency shall be notified without delay following the detection of:

- any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution
- the breach of a limit specified in the permit
- any significant adverse environmental effects.

Typical permit condition or rule 4.3 2

Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in Schedule xx to this permit within the time period specified in that schedule.

For discharges subject to ultra violet disinfection, flow measurement, operator self monitoring or Urban Waste Water Treatment Directive (UWWTD) self monitoring we have specified how notifications of when limits are exceeded and of failures must be made to us and how soon. See technical guidance for water discharge activities referred to in [part 7](#), page [92](#).

This includes all discharges from storm sewage overflows caused by a blockage or other equipment failure, but not in the case of the permitted operation of a storm overflow caused by wet weather.

You must notify us in the event of a significant pollution incident from a regulated site as soon as reasonably practicable. This will normally be within 24 hours of the operator becoming aware of the incident.

You can notify us by calling our incident hotline and/or by sending us a copy of the notification form provided in Schedule 5 of your permit or your own similar version. You may choose to agree specific notification arrangements in writing with us.

In the event of an equipment failure or malfunction which does not result in a release to the environment we do not normally expect to be notified unless the impact on the receiving water could have been severe, or the future operation of the facility is compromised and there is a significantly increased risk of a severe impact.

Discharge of sewage or trade effluent

Change in operation

Typical permit condition (does not apply to standard rules) 4.3.5

Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:

- The Environment Agency shall be notified at least 14 days before making the change and
- The notification shall contain a description of the proposed change in operation.

If you want to make a material change to your operation and the change will have a significant adverse impact on the receiving water body, but the change is not contrary to your permit conditions, then you do not have to vary your permit.

If the proposed change in operation falls within the criteria set out in the condition, and explained below, you must notify us at least 14 days in advance of making the proposed change and the notification must contain a description of the change.

A change in the **nature** of the activities is a change in what is being done, for example a new trade effluent input of a hazardous pollutant into the sewerage network upstream of a water discharge activity.

A change in the **functioning** of the activities is a change in how the activities are carried out, for example moving to a batch treatment process from a continuous treatment process.

An **extension** is a change in size affecting the capacity of the facility to carry out the activities (for example removing treatment or storage capacity at the facility).

Once the change is agreed you must review your management system to reflect the changes.

General management

Groundwater activities, waste sheep dip and other pesticides

Part 6 - Groundwater discharges (land spreading activities)

This section covers general measures that are important for operators carrying out groundwater activities involving permitted discharges containing hazardous substances as defined in Schedule 22 of the *Environmental Permitting Regulations*, such as the land spreading waste sheep dip, other pesticides and pesticides washings. It also applies to land spreading activities for non-hazardous pollutants, such as some biocides / disinfectants, etc. You also need to read Part 1 of this document.

General management

Typical permit condition or rule 1.1.1

The operator shall manage and operate the activities:

- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances and those drawn to the attention of the operator as a result of complaints; and
- (b) using sufficient competent persons and resources.

Typical permit condition or rule 1.1.2

Records demonstrating compliance with condition 1.1.1 shall be maintained.

Typical permit condition or rule 1.1.3

Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

We encourage you to follow the good practice guidelines and advice that are contained in the groundwater protection codes of practice. Following such guidance and adopting good practice will help you prevent pollution on your farm and ultimately save you money. See [part 7](#) for the list of groundwater documents.

To comply with your permit you must keep good records so we know what you are discharging, how much and where. We provide simple management system templates you can use to help you keep good records. There is more information about what records to keep in the following sections. See the horizontal guidance section in [part 7](#) for a link to the templates.

Operations

Groundwater activities – waste sheep dip and other pesticides

Operations

Typical permit condition 2.3.2

The discharge shall be made by application onto an area of land (optional <with an established vegetation cover>) of minimal wildlife value. The area of land shall not include hedgerows, woodlands or wildflower meadows, or land that is bare as part of a crop rotation. (Optional <The spreading shall be conducted in strips across the discharge area such that there are strips at least ## metres (for example 2 metres) wide between the strips on which the discharge has taken place.>)

Typical permit condition 2.3.3

No discharge shall take place within:

- (a) 10 metres of the nearest watercourse (which includes ditches and open land drains which may run dry for part of the year) <(optional) or 30 metres <or other distance> of a river designated as a European Site or a Site of Special Scientific Interest (SSSI)>
- (b) 50 metres of any well, spring or borehole, irrespective of its current use
- (a) (c) 500 metres <or other distance> of any well, spring or borehole where the water is intended for human consumption
- (c) (optional) 25 metres of an identified swallow hole.

Typical permit condition 2.3.4

No discharge shall be made within 2 metres <or other distance> of any field boundary or footpath.

Typical permit condition 2.3.5

No discharge shall take place on land which:

- (a) is under drained <(optional) has been under drained or mole drained within 12 months> prior to any discharge operation, or is cracked down to the drain or any backfill
- (b) has a slope greater than 11 degrees (approximately 1 in 5)
- (c) is frozen hard or snow covered
- (d) is liable to flooding
- (e) is severely compacted or waterlogged.

Typical permit condition or rule 2.3.6

Discharge equipment and / or methods shall be designed and operated such that the requirements of Conditions 2.3.7 and 2.3.11 (or 2.3.10 for pesticide washings) are met.

Groundwater is vulnerable to contamination and very difficult to clean up (remediate) if it occurs. Therefore it is important that specified distances are maintained from other water features such as abstraction wells, springs and boreholes. You must adhere to the dilution rates and application rates and employ appropriate methods of disposal so that the soil is not overloaded either chemically or hydraulically.

Operations

Groundwater activities – waste sheep dip and other pesticides

Volume

Typical permit condition or rule 2.3.7

The maximum volume of used / waste sheep dip (or working strength pesticide solution) before any dilution to assist safe spreading, shall not exceed xx cubic metres per day and xx cubic metres per annum discharged to the land identified in Schedule 7.

The determination of your permit will have been based partially on the quantity of waste product which you wish to discharge / dispose. Therefore it is a condition of your permit not to discharge more waste substance than is stated.

Discharge period

Typical permit condition or rule 2.3.8

The discharge of used sheep dip (or pesticide washings) shall **only** be carried out **between** the dates of AA BB and XX YY each year inclusive.

Typically a permit is issued for use all year but in some situations it is necessary to limit the discharge period for environmental reasons, for example, to avoid a particular nesting time.

Typical permit condition or rule (waste pesticide washings only) 2.3.9

Washing of spray equipment and vehicles after use shall take place in an area selected for the purpose, which can not drain into drains, ditches and surface watercourses;

Contaminated wash water should be stored and re-used later as make-up water for a further batch of pesticide spray solution;

Where re-use is impractical, pesticide washings should be applied to the treated crop if this is within the terms of the product approval. The maximum dose must not be exceeded;

Where application to the treated crop is either not practicable or not possible, discharge shall be to an area of land specified in Schedule 7 and shall comply with the Conditions set out in this Permit.

Following a pesticide application to crops you can, in some situations including those identified above, minimise or eliminate waste pesticide washings. This will reduce your waste disposal problems and save you money. However, in other situations you may not always be able to avoid having dilute pesticide left over at the end of the treatment. You must dispose of all dilute pesticide waste (including any leftover pesticides and all sprayer washings) safely and legally to protect humans, wildlife and the environment, especially groundwater and surface water.

Typical permit condition or rule (used sheep dip disposal only) 2.3.9

The discharge of used / waste sheep dip shall not be made to land on which crops are currently being grown for human consumption

Operations

Groundwater activities – waste sheep dip and other pesticides

Do not discharge waste sheep dip onto land that is being used to grow crops for human consumption.

Typical permit condition or rule (used sheep dip disposal only) 2.3.10

The discharge to the land identified in Schedule 7 shall not be undertaken more frequently than once per year

or

The discharge to the same individual area of land within the overall disposal site identified in Schedule 7 shall not be undertaken more frequently than once per year. A maximum of xx discharges may be made per year, but the area of land used must be rotated within the overall disposal site. The site plan identified in Schedule 7 shall clearly show sub-divisions highlighting individual areas for each discharge.

The Landfill Directive prohibits the disposal of liquid waste to landfill. An environmental permit can be used to regulate the discharge or disposal of waste sheep dip providing that the manner in which the discharge is carried out does not bring the activity within the remit of Landfill Directive. Applying these principles the basic requirements are that the total area of land identified in your permit is authorised for use not more than once a year; or any individual plots within this area are used no more than once per year. You must keep a record of such discharges to show you are complying with this requirement.

Application rate

Typical permit condition or rule (for use when discharge is of working strength sheep dip) 2.3.11

The maximum daily application rate of used / waste working strength sheep dip shall not exceed xx cubic metres spread evenly on a minimum of xx hectares of the land identified in Schedule 7.

Typical permit condition or rule (for use when dip is diluted before discharge) 2.3.11

The maximum daily application rate of used / waste working strength sheep dip further diluted in the ratio of 1 part(s) dip to 3 parts slurry or water shall not exceed AAA cubic metres spread evenly on a minimum of BBB hectares of the land identified in Schedule 7.

Typical permit condition or rule (for use when waste pesticides are diluted before discharge) 2.3.10

The maximum daily application rate of working strength pesticide further diluted with slurry or shall not exceed xx cubic metres spread evenly on a minimum of xx hectares of the land identified in Schedule 7.

Operations

Groundwater activities – waste sheep dip and other pesticides

Working strength used/waste sheep dip must not be spread at rates greater than 5m³/ha. Although you may have a reliable method of spreading at this rate, in many cases, a vacuum tanker will be used. Most vacuum tankers have a fixed application rate of approximately 20m³/ha. This is four times higher than that proposed for safe spreading. Therefore the dip must be diluted with at least three parts slurry or water in order to maintain the recommended discharge rate.

For pesticide washings there is potentially a far wider range of substances and concentrations involved than for sheep dip. The Code of good agricultural practice - protecting our water, soil and air (Defra or Welsh Government version) allows for various spreading rates. Therefore, for pesticide washings **only**, higher spreading rates (that is, above 30 m³/ha/day) are potentially acceptable, but would be subject to more rigorous and detailed site specific assessment.

It is government policy to keep pesticide use to the lowest possible level while making sure that pests, diseases and weeds are effectively controlled in a way which protects the health of people, plants or creatures you do not intend to treat and the environment. Using pesticides when you do not need to is not just a waste of money, it can also contribute to pests building up a resistance to products which then become less effective in the future.

Typical permit condition or rule (waste pesticides washings only) 2.3.12

The operator of the spray equipment shall take appropriate measures to eliminate or minimise the amount of working strength pesticide solution requiring discharge.

Always:

- use a pesticide in a carefully planned way
- use the correct pesticide at the right time and in the right way
- know the principles of using pesticides over the long term; and consider the long-term implications whenever you use a pesticide.

Emissions and monitoring

Groundwater activities –waste sheep dip and other pesticides

Emissions and monitoring

Emissions of substances not controlled by emission limits

Typical permit condition or rule 3.2.4

Appropriate measures shall be taken to prevent the input of hazardous substances to groundwater by avoiding the entry of those substances into groundwater and by avoiding any significant increase in their concentration in groundwater.

The Groundwater Daughter Directive (2006/118/EC) requires “all necessary measures” to prevent and limit the input to groundwater of hazardous substances and non-hazardous pollutants. This is described in detail in *H1 risk assessment annex (j)* which considers the extent to which measures also need to be reasonable. Provided this guidance is followed, this will satisfy the “appropriate measures” required by the above condition.

Information

Groundwater activities-waste sheep dip and other pesticides

Information

Records

Typical permit condition or rule 4.1.3

Records for discharges of waste sheep dip (or waste pesticides) shall include :

- daily volumes of undiluted waste sheep dip discharged (or the estimated volumes of working strength pesticide solution discharged)
- rates of discharge
- location and area of discharge
- nature of used dip (marketing authorisation name will suffice); (or the pesticides present in any discharge (brand names will suffice)
- any materials added to dilute or treat the waste sheep dip, including water or slurry
- for multiple discharges (sheep dip only), clear records demonstrating compliance with only one permitted discharge per designated area of land per year shall be kept.

Accurate record keeping is a condition of your permit and is fundamental in demonstrating compliance. You must make sure records are available for inspection by us or the Rural Payments Agency where applicable. The objective of this condition is to quantify the rate of discharge and the quality of the discharge as well as indicating that the conditions of the permit are being met.

Change in operation

Typical permit condition (does not apply to standard rules) 4.3.5

Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:

- The Environment Agency shall be notified at least 14 days before making the change; and
- The notification shall contain a description of the proposed change in operation.

If you want to change your operation, but the change is not contrary to your permit conditions, then you do not have to vary your permit.

When the proposed change in operation falls within the criteria set out in the condition, and explained below, you must notify us at least 14 days in advance of making the proposed change and the notification must contain a description of the change.

A change in the **nature** of the activities is a change in what is being done, for example a change in the brand of sheep dip.

A change in the **functioning** of the activities is a change in how the activities are carried out, for example using a mobile dipping contractor rather than a static dip or vice versa.

An **extension** is a change in size affecting the capacity of the facility to carry out the activities for example removing treatment or storage capacity at the facility.

Once the change is agreed you must review your management system to reflect the changes.

More information

Part 7 – Where to find more information

Our website www.environment-agency.gov.uk provides:

- cross cutting and industry or sector technical guidance;
- information about how to apply for permits and how we charge for them;
- information about pollution prevention;
- guidance on monitoring techniques;
- regulatory guidance which explains legal interpretations of aspects of the Environmental Permitting Regulations for example the meaning of operator.

The [Environmental permitting home page](#) summarises what is available.

The 'What's new' page <http://www.environment-agency.gov.uk/business/topics/permitting/default.aspx> highlights when we publish new or updated documents and changes to the Regulations.

We have listed the titles of the main documents we provide below. If you are not sure what you need to look at ask your local site officer. If you do not have internet access you can phone us on 03708 506506 to get copies of the documents you need or speak to your local site officer.

For information on how to apply for permits and pre-application discussion see <http://www.environment-agency.gov.uk/business/topics/permitting/32318.aspx>

For information about enforcement see

<http://www.environment-agency.gov.uk/business/regulation/31851.aspx>

Environmental management systems guidance

Our website: including toolkits: <http://www.environment-agency.gov.uk/business/144678.aspx>

- Find details at [ISO 14000 - Environmental management - ISO](#)
- Details can be found at <http://www.jema.net/ems/emas>
- EMAS EasyDetails can be found at <http://ec.europa.eu/environment/emas/toolkit/>
- UKAS Accredited Bodies - <http://www.ukas.com/about-accreditation/accredited-bodies/>

Our cross cutting (horizontal) guidance

See <http://www.environment-agency.gov.uk/business/topics/permitting/36414.aspx>

H1 Environmental risk assessment

H2 Energy efficiency

H3 Noise

H4 Odour

H5 Site condition report guidance

For the management system templates see

<http://www.environment-agency.gov.uk/business/topics/pollution/113738.aspx>

How to comply with your landspreading permit - <https://publications.environment-agency.gov.uk/ms/DFxqy1>

Our sector based guidance

See <http://www.environment-agency.gov.uk/business/sectors/default.aspx>

EPR 1.01 Combustion

EPR 1.02 Oil, gas, coke and coal

EPR 2.01 Coke, iron and steel

EPR 2.03 Non-ferrous metals and the production of carbon and graphite

EPR 2.04 Hot rolling of ferrous metals

EPR 2.07 Surface treatment of metals and plastics

More information

EPR 3.01 Cement and lime
EPR 3.03 Glass manufacturing
EPR 4.01 Large volume organic chemicals
EPR 4.02 Speciality organic chemicals
EPR 4.03 Inorganic chemicals
EPR 5.01 Incineration of waste and fuel made from waste
EPR 5.02 Landfill
EPR 5.03 Parts 1 and 2 Treatment of landfill leachate
EPR 5.07 Clinical waste
EPR 6.01 Pulp and paper
EPR 6.05 Textiles
EPR 6.08 Tanning of hides and skins
EPR 6.09 Intensive farming
EPR 6.10 Food and Drink general
EPR 6.11 Poultry processing
EPR 6.12 Red meat processing
EPR 6.13 Dairy and milk products
EPR 6.14 Mining waste operations
EPR 6.15 The use on land of compost-like outputs from the mechanical-biological treatment of mixed municipal solid wastes
S5.06 Guidance for the Recovery and Disposal of Hazardous and Non Hazardous waste
EPR 7.01 Surface water and groundwater point source discharge activities

Pollution prevention guidance

We provide guides on pollution prevention for different issue which can help you with appropriate measures. You can find them here <http://www.environment-agency.gov.uk/business/topics/pollution/39083.aspx>

The most relevant titles are listed below.

PPG2 Above-ground oil storage tanks gives information on tanks and bunding which have general relevance beyond just oil

PPG 3 Use and design of oil separators in surface water drainage systems

PPG 6 Working at Construction and Demolition-sites

PPG 8 Safe storage and disposal of used oil

PPG 18 Managing Fire-water and major spillages

PPG 21 Pollution incident response planning

PPG 22 Dealing with spills

PPG26 Storage and handling of drums and intermediate bulk containers (IBCs)

PPG 28 Controlled burn

CIRIA/Environment Agency joint guidelines:

Concrete Bunds for Oil Storage Tanks

Masonry Bunds for Oil Storage Tanks

The Control of Pollution (Oil Storage) (England) Regulations 2001. SI 2001 No 2954 – are generally applicable to the storage of any potentially polluting liquid

Monitoring

For information about monitoring see

<http://www.environment-agency.gov.uk/business/regulation/31829.aspx>

For monitoring technical guidance notes see

<http://www.environment-agency.gov.uk/business/regulation/31831.aspx>

More information

Releases to land and groundwater

See <http://www.environment-agency.gov.uk/business/topics/water/117529.aspx>

Groundwater Protection Policy and Practice (GP3)

Protecting our Water Soil and Air: A Code of Good Agricultural Practice for Farmers, Growers and Land Managers

Groundwater Protection Code: Use and disposal of sheep dip compounds

Pesticides: Code of Practice for Using Plant Protection Products

Groundwater Protection Code: Solvent use and storage

Groundwater Protection Code: Petrol stations and other fuel dispensing facilities involving underground storage tanks

EU Emissions Trading Scheme (EU ETS)

See <http://www.environment-agency.gov.uk/business/topics/pollution/32232.aspx>

Regulations

The Environmental Permitting (England and Wales) Regulations 2010 SI 675

Environmental Permitting Core Guidance

see <http://www.defra.gov.uk/environment/quality/permitting/>

Other organisations' information about appropriate measures

Installations

Best available techniques reference notes BREF see <http://eippcb.jrc.es/reference/>

BS 5908 Code of practice for fire precautions in the chemical and allied industries

CIRIA 164 Design of containment systems for the prevention of water pollution from industrial incidents – CIRIA Report 164

COMAH guides – www.hse.gov.uk/pubns

Guidance on the Trading Scheme for the National Emission Reduction Plan (NERP)

Waste treatment and recovery

The Composting Industry code of practice: Industry guide for the prevention and control of odours at biowaste processing facilities available at www.organics-recycling.org.uk/dmdocuments/Composting_Industry_Code_of_Practice.pdf

Guidance on the evaluation of bioaerosol risk assessments for composting facilities available at <http://publications.environment-agency.gov.uk/PDF/GEHO0809BQUO-E-E.pdf>

Storing hazardous wastes at household waste recycling centres available at <http://www.hse.gov.uk/pubns/waste12.pdf>

Depolluting end-of-life vehicles guidance for authorised treatment facilities available at <http://www.bis.gov.uk/files/file30651.pdf>

Depollution guidance for end-of-life vehicles over 3.5 tonnes

Available at <http://archive.defra.gov.uk/environment/waste/producer/vehicles/documents/elv-depollution.pdf>

Guidance on best available treatment recovery and recycling techniques (BATRRRT) and treatment of Waste Electrical and Electronic Equipment (WEEE). Available at <http://archive.defra.gov.uk/environment/waste/producer/electrical/documents/weee-batrtrt-guidance.pdf>

Record of changes

Record of changes

Version	Date	Change
1.0	April 2010	Issued for launch of EPR 2010
2.0	June 2010	Corrections to tables of site attendance for technically competent managers on pages 50 and 64. Correction to odour management plan requirements for mobile plant standard facilities on page 101.
3.0	November 2010	Guidance on how to comply with the 'permitted activities' and 'emissions of substances not controlled by emission limits' conditions has been clarified for water discharge activities. Guidance on how to comply with the 'change in operation' condition has been clarified for water discharge and groundwater activities. References to guidance on bioaerosols at composting facilities added to Part 3.
4.0	April 2011	New information to cover changes to conditions to take account of the Waste Framework Directive. Edits to energy efficiency, pages 31 and 33; waste avoidance and recovery, pages
5.0	28 August 2012	No change to standards. Edits to improve layout, language, content and signposting to other guidance. Improved information: • explaining how the application, permit and guidance together; • explaining what we expect in management systems; • explaining what we expect for noise and odour issues; • to take account of changing weather patterns in accident management; • on what we mean by means of access to monitoring points.
6.0		Added content on management systems to replace H6 management systems guidance. Edits to include • new pests condition • new conditions added due to implementing the Industrial Emissions Directive • improved information on management system for stand alone water discharge activities • improvements layout, language, content and signposting to other guidance.

**Would you like to find out more about us,
or about your environment?**

Then call us on

03708 506 506 (Mon-Fri 8-6)

Calls to 03 numbers cost the same as calls to standard geographic numbers
(i.e. numbers beginning with 01 or 02).

email

enquiries@environment-agency.gov.uk

or visit our website

www.environment-agency.gov.uk

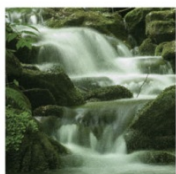
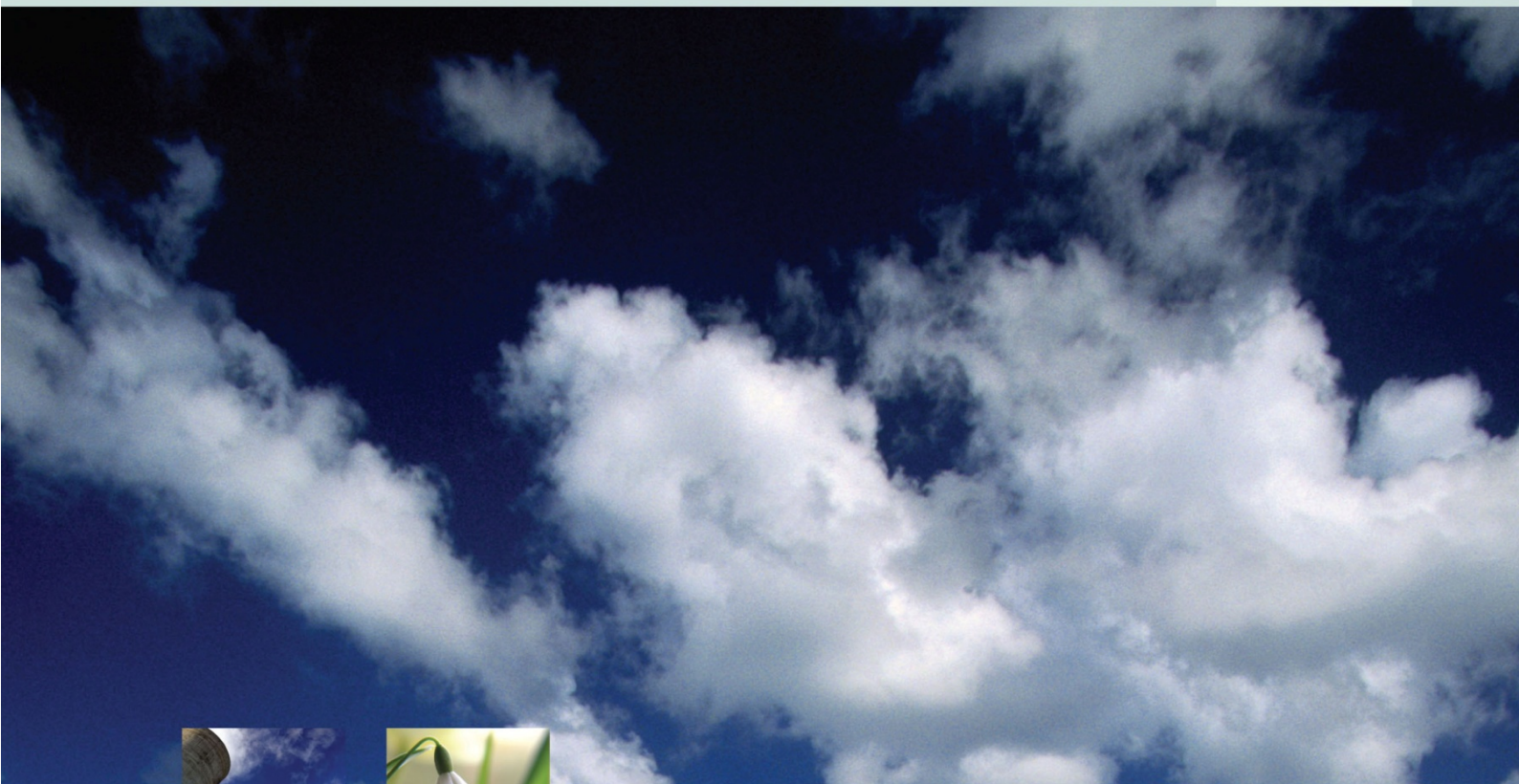
incident hotline 0800 80 70 60 (24hrs)

floodline 0845 988 1188



Environment first: Are you viewing this on screen? Please
consider the environment and only print if absolutely necessary.

If you are reading a paper copy, please don't forget to reuse and
recycle if possible.



EPR PERMIT APPLICATION

**Earth Science Partnership Ltd
Building 2 (Former Alcoa Buildings),
Westfield Industrial Estate,
Swansea**

Date:
January 2013

Project or Issue Number:
SOL0113ESP01

..

Contract/Proposal No:	SOL0113ESP01
Issue:	1
Author: (signature):	Steve Butler
	
Date:	February 2013

This report has been prepared by Sol Environment with all reasonable skill, care and diligence, and taking account of the Services and the Terms agreed between Sol Environment and the Client. This report is confidential to the client, and Sol Environment accepts no responsibility whatsoever to third parties to whom this report, or any part thereof, is made known, unless formally agreed by Sol Environment beforehand. Any such party relies upon the report at their own risk.

Sol Environment disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the Services.

VERSION CONTROL RECORD				
Issue	Description of Status	Date	Reviewer Initials	Authors Initials
1	First Submission to Environment Agency	January 2013	HW	SB

CONTENTS

	Page
1 INTRODUCTION	1
NON TECHNICAL SUMMARY	5
2 PLANNING STATUS	8
3 PROPOSED NEW PERMIT	9
3.1 Type of Permit	9
3.2 The Existing Site	10
3.3 Description of the Process	13
4 EMISSIONS & THEIR ABATEMENT	28
4.1 Emissions to air	28
4.2 Emissions to water	28
4.3 Emissions to Sewer	28
4.4 Emissions to Land	28
4.5 Odour	28
4.6 Noise Impacts	28
4.7 Fugitive emissions	28
4.8 Waste Generation and Management	28
4.8.1 Types and Amounts of Waste	28
4.8.2 Throughput of Waste	29
4.8.3 Waste Storage	29
4.8.4 Resource Efficiency and Climate Change	29
5 ENVIRONMENTAL MONITORING	30
5.1 Emissions to air	30
5.2 Emissions to water	30
5.3 Emissions to Sewer	30
5.4 Emission to Land	30
5.5 Monitoring frequency	30
6 IMPACT TO THE ENVIRONMENT	31
6.1 Impacts to Air	31
6.2 Impacts to Controlled Waters	31
6.3 Impacts to sewer	31
6.4 Impacts to Land	31

SCHEDULE OF ANNEXES

Annex 1:	Maps and Site Plans
	Figure A1: Site Location
	Figure A2: Site Buildings
	Figure A3: Site Lease and Installation Boundary
	Figure A4: Wider Site Use
Annex 2:	Planning Permission (Certificate of Lawful Use)
Annex 3:	Material Safety Data Sheets
Annex 4:	Certificates of Competence
Annex 4:	Accident Management Plan

SCHEDULE OF FIGURES

Figure 1.1:	Site Ownership and lease boundary - ESP Limited	Page 3
Figure 1.2:	Proposed Internal Site Layout	Page 4
Figure 3.1	Simplified Process Schematic	Page 10
Figure 3.2	Installation Boundary	Page 14
Figure 3.3	Waste Acceptance process	Page 17
Figure 3.4	Waste treatment	Page 19
Figure 3.5	Validation	Page 21

SCHEDULE OF TABLES

Table 2.1	Planning History	Page 8
Table 3.1	Proposed Waste Quantities	 Page 15
Table 3.2	Raw Materials Use	Page 16
Table 3.3	Working Plan	Page 22
Table 4.1	Waste Summary	Page 28

1 INTRODUCTION

This document provides supporting evidence as required by Environmental Permit Application Forms Part B2 and B3. The application is made on the behalf of Earth Science Partnership Ltd (*'The Company'* or *'The Applicant'*) by Sol Environment Ltd, and relates to a New Bespoke Installation Permit Application for the installation of a physical and chemical immobilisation facility at Alcoa Manufacturing (GB) Ltd existing site at Westfield Industrial Park, Waunarlwydd, Swansea, SA5 4SF.

The applicant has leased Building 2 from the site owners Alcoa Manufacturing (GB) who previously used the building for the operation of an aluminium hot rolling mill and associated ancillary production operations.

The activity is housed entirely within an existing industrial process building (the former hotmill building), which constitutes a single high bay, portal framed industrial building of approximately 7,641m². The building is provided with external access, parking and turning areas.

The proposed Installation will use the building for the operation of a proprietary hazardous and non-hazardous waste treatment (physical and chemical immobilization) process incorporating the use of modified clays and binding chemicals.

It is the intention to use the facility as a regional specialist soils and materials treatment hub. The process will utilise natural bentonite clay formulations (referred to as 'Environmental-Clays' or 'E-Clays') to recover the wastes for use as raw materials for the manufacture of brick/block products, landscaping, or safe disposal.

The treatment process will be permitted by the Environment Agency as a Waste Recovery Installation and be operated in accordance with the EPR 2010 Regulations. The proposed Installation meets the description of a Part A(1) process activity as defined by Section 5.4 'Recovery of Waste', Paragraph A(1)c(iii) namely;

'Unless carried on as part of other Part A activity, recovering hazardous waste in a plant with a capacity of more than 10 tonnes per day by means of the following operation-

(iii) recycling/reclamation of inorganic materials other than metals and metal compounds (R5).

All activities associated with the proposed Installation will be carried out within the main building. There will be no storage or treatment activities carried out in any external areas.

A pre application meeting has been carried out with Paul Gibson, Environment Agency Wales in February 2013.

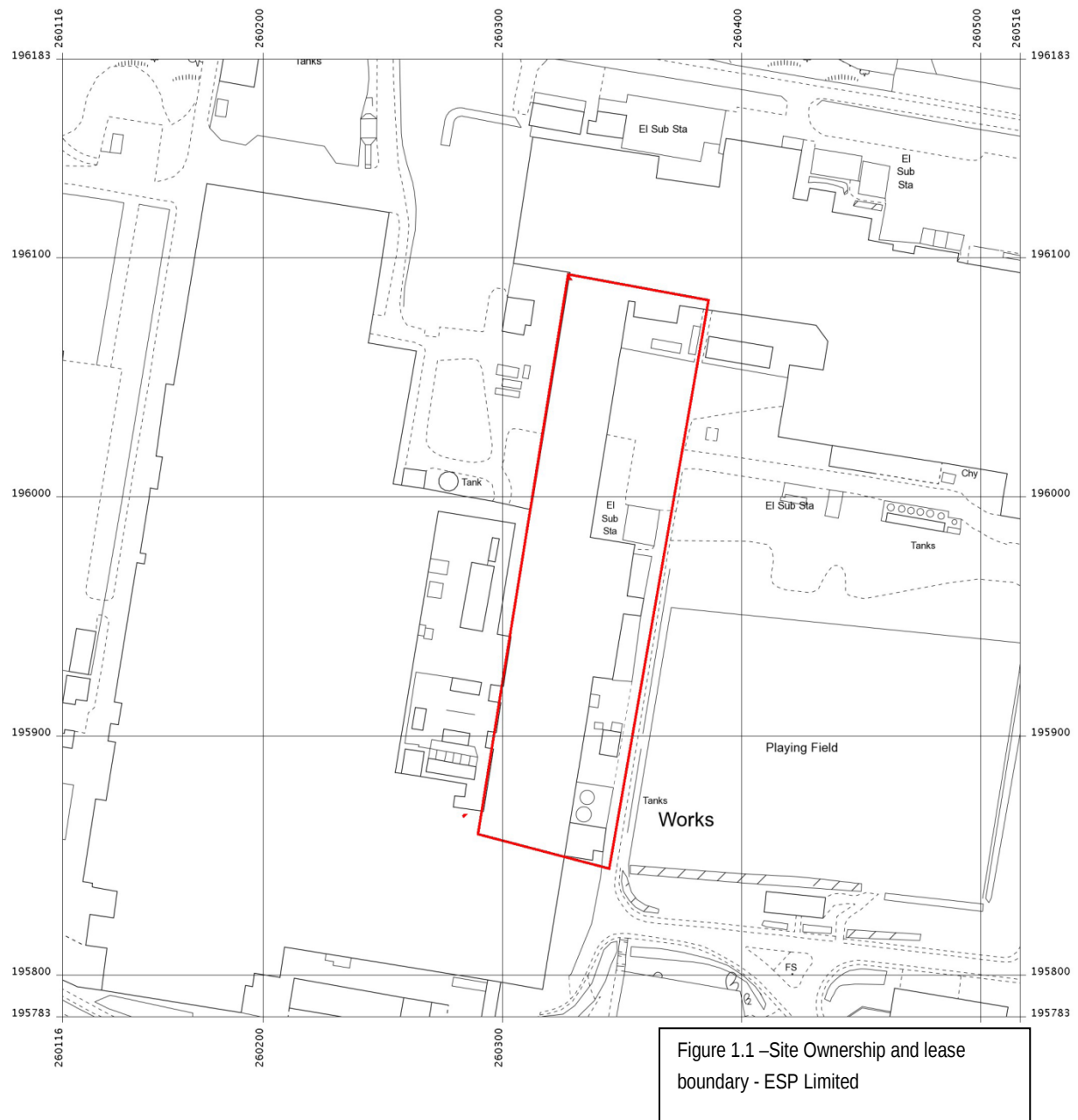
Further details of plant and equipment, emissions and impacts are detailed within the remaining sections of this document. The document should be read in conjunction with the following Application Support Documents:

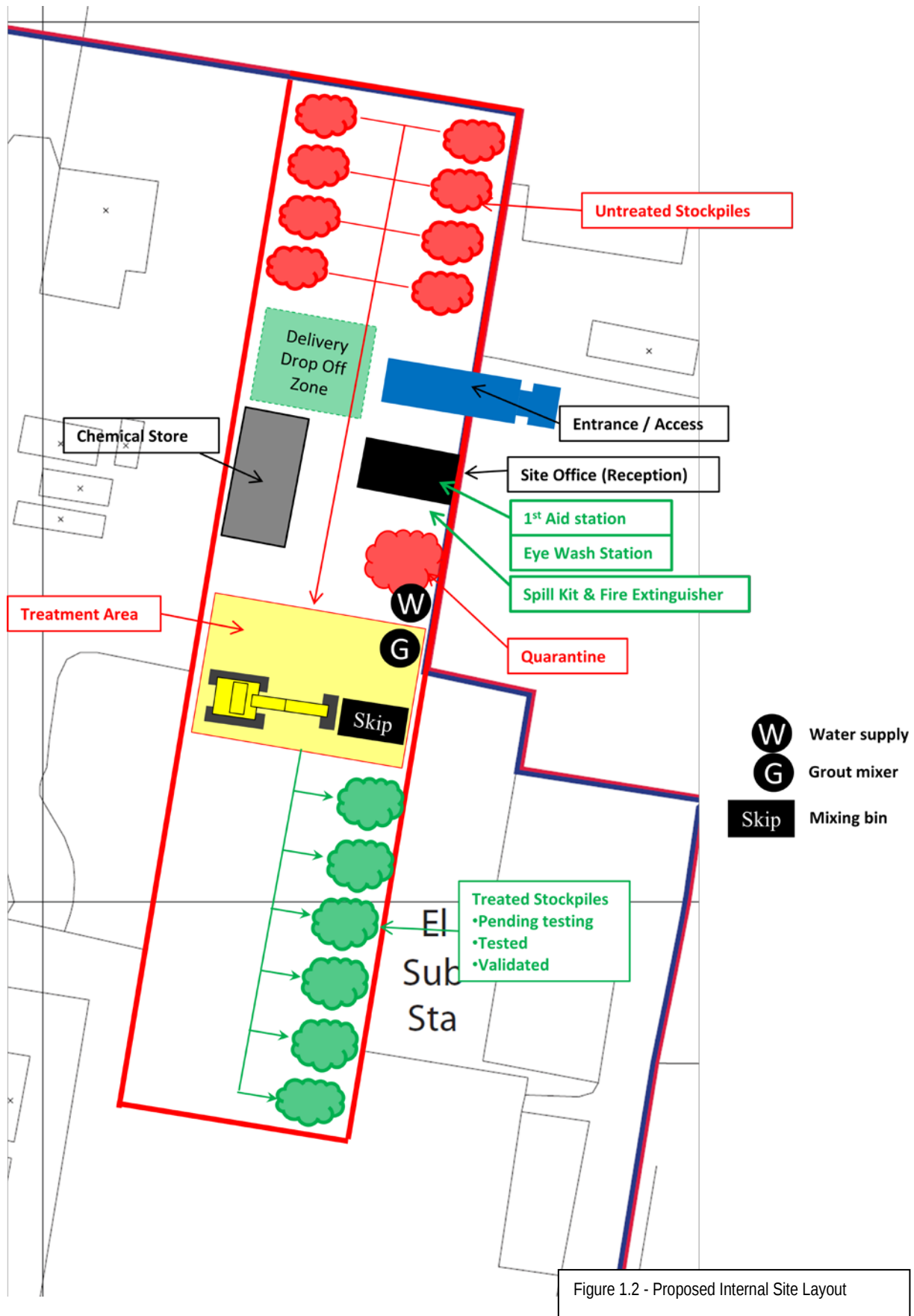
- EA Application Forms A, B2, B3 and F
- Operator Risk Assessment (SOL0113ESP_OPRA)
- Application Site Condition Report (SOL0113ESP_ASCR)
- Accident Management Plan (SOL0113ESP_AMP)

The remainder of this application support document is structured accordingly:

- Section 2: Provides a detailed planning history of the site and associated activities;
- Section 3: Provides specific details associated with the New Bespoke Installation Permit Application;
- Section 4: Provides specific nature and detailed description of the emissions to air and water associated with the installation;
- Section 5: Provides details of all environmental monitoring associated with the Installation;
- Section 6: Provides an Environmental Impact and Assessment of the Installation.

The Installation boundary of the installation is provided Figure 3.1.





NON TECHNICAL SUMMARY

The Applicant ('Earth Science Partnership Ltd') is making this application for a New Bespoke Installation Permit Application at Alcoa Manufacturing (GB) Ltd existing site at Westfield Industrial Park, Waunarlwydd, Swansea. The company wishes to introduce a new physical and chemical immobilisation operation.

This constitutes a New Bespoke Installation Permit Application under The Environmental Permitting (England and Wales) Regulations 2010.

Earth Science Partnership seek to nominally process approximately 20,000 tonnes per annum of materials sourced from the local area for the production of clean raw materials and finished products (aggregate and insulation materials) for supply into the construction sector and other appropriate markets. The site will be designed to accept both hazardous and non-hazardous granular materials and soils in accordance with stringent site waste acceptance procedures.

The proposed facility has been initially specifically designed to process, recover and treat industrial filter cake but will also be used for the treatment of some similar hazardous materials in the same manner, in order to facilitate beneficial re-use and recovery.

It is the applicant's intention to provide this service to a number of local industrial businesses, predominantly within the steel and metals manufacturing sectors, as well as providing a regional hub for the treatment of material arising from the contaminated land sector within the Swansea and South Wales region.

The end product produced by ESP's processes will both be transferred to an end user and used as a granular raw material feedstock for the manufacture of construction materials, or in the case of contaminated land derived materials is exported back to the original site for safe inert use or disposal.

For materials that are suitable as granular feedstock, ESP considers their processed material to be 'fully recovered' and therefore 'ceasing to be waste'. ESP have therefore completed an 'End of Waste' determination application for consideration by Environment Agency Wales and are able to demonstrate that the material produced by their process can be regarded as a marketable product and therefore is not considered to be a waste product.

Technology Overview

Earth Science Partnership Ltd wishes to operate a waste recovery Installation for the treatment and processing of granular hazardous and non-hazardous materials. The wastes will comprise waste water effluent treatment filter cakes, contaminated soils and other similar materials.

The installation shall be located entirely within the existing site building and will generally comprise:

- **Materials Delivery Area:** Materials will be delivered by articulated lorries and stored for around one to two weeks within the building.
- **Materials Handling:** Material handling will be via 360 excavator and telehandlers.

- **Material Processing:** The process involves the introduction of water to activate/mix the E-Clay products, however this is absorbed into the soil matrix – it is in essence a non-liquid process. Physical plant includes the use of water tanks and E-Clay mixer pans and vessels.
- **Collection Areas:** Weekly/fortnightly treatment runs will be carried out and the output (non leachable) will be stored ready for collection by articulated lorries.

The proposed process is a proprietary treatment and recovery technology which utilises chemical and physical immobilisation techniques that incorporates the use of specially modified clays (referred to and marketed as E-Clays®).

The properties of this clay combined with their specialist formation can be applied for the effective remediation of soils and groundwater, enabling otherwise unusable materials to be brought back into effective use on a sound technical and commercial basis. The clays can be employed to treat both inorganic and organic materials.

E-clays® incorporate reactive reagents which chemically immobilise materials within the clay matrix. The clay formulations are designed on a specific project basis taking into account site specific requirements including the nature and concentrations of identified contaminants of concern and the preferred methodology.

By using a selected clay formulation (or in some cases a combination of clay formulations) the following group of pollutants/contaminants can be successfully treated:

- Aliphatic hydrocarbons;
- Aromatic hydrocarbons;
- Metals;
- Problematic species (e.g. hexavalent chromium, free and complex cyanides, ammonium etc.);
- Radionuclides; and
- Tributyltin (TBT).

Cementitious additives are often incorporated into the process, primarily to improve the physical and chemical properties of the treated material. The objective is to produce a chemically and physically stabilised treated material which can then be used as a product.

In summary, ESP wish to operate a chemical treatment process which stabilises and recovers contaminated soils, hazardous and non hazardous granular materials for use as an alternative to virgin mineral aggregates or to facilitate safe inert use or disposal.

Emissions to Air

There will be no point-source or fugitive emissions to air arising from the process.

Emissions to Water

Due to nature of process there will be no point source or fugitive emissions to water. All liquid waste emissions will be tinkered off site for disposal.

Emissions to Land

There will be no emissions to land arising from the installation, all materials processed at the site will either be fully recovered or rendered inert and will be transferred off site for safe inert reuse or disposal.

Waste Management

All materials processed at the site will either be fully recovered or rendered inert and will be transferred off site for safe inert reuse or disposal.

All materials are treated and stored internally within the confines of the existing site buildings.

2 PLANNING STATUS

ESP will be operating their process within the existing 'former Hotmill buildings' owned by Alcoa Manufacturing (GB) Ltd.

These building were constructed prior to the existence of the Town and Country Planning Act and therefore have existing extant permission for industrial uses.

The buildings have historically been used for the manufacture of rolled aluminium products and have as part of their ancillary uses, produced, treated and processed hazardous and non-hazardous filter cake materials. Alcoa decommissioned their hot rolling mill processes in 2006/7 and since then the building have remained dormant.

In bringing the buildings back into serviceable use the Applicant have consulted with The City and County of Swansea Planning and Development team and have subsequently made an application for 'Existing Lawful Use' of the buildings.

This permission was granted by The City and County of Swansea on the 7th January 2013.

Table 2.1: Planning History

Reference	Description	Status	Date Granted
2012/1587	Use of former industrial building (class B2) for the proposed use of a materials recovery plant (applications for Certificate of Proposed Lawful Use)	Final Decision	14/06/95

All documentation associated with the Planning Permission is provided within Annex 2.

3 PROPOSED NEW PERMIT

3.1 Type of Permit

Earth Science Partnership Ltd (the '*Operator*' or '*Applicant*') are making an application for a new Bespoke Installation Permit for the proposed installation of a Waste Recovery Process that uses physical and chemical immobilisation techniques.

Earth Science Partnership seek to nominally process approximately 130 tonnes per week of granular hazardous and non-hazardous materials (industrial effluent treatment cake and contaminated soils) sourced from the local area for the production of clean raw materials and finished products (aggregate and insulation materials) for supply into the construction sector and other appropriate markets.

The site will be designed to accept both hazardous and non-hazardous granular materials and soils in accordance with stringent site waste acceptance procedures.

The anticipated throughput of the plant is not expected to exceed 20,000 tonnes per annum. The processes are all generally static, in situ treatment that requires plant/machinery use on a one day per week basis.

All aspects of the activity will be carried out internally. No processing or storage will be carried out externally.

The technical guidance note used in the preparation of this application document is '*EPR5.06 – The storage and treatment of hazardous and non hazardous wastes.*'

3.2 The Existing Site

3.2.1 Installation Boundary

All proposed new operations will be entirely contained within the existing buildings as shown in Figure A2, Annex A. The Installation boundary is shown in **GREEN**.

The Installation boundary does not extend beyond the building envelope and is shown in green below. All vehicular access roads and car parking areas are outside of the Installation Boundary.

It should be noted that the 'planning red line' against which permission was achieved extends to a far greater area than currently proposed for use, thus allowing for future expansion of the site when required.



Figure 3.1 Installation Boundary

3.2.2 Infrastructure and design

There are no plans for the alterations or addition of new access, hardstanding of drainage facilities, providing no notable change to external site appearance or layout beyond the completion of minor fabric repairs if deemed necessary.

Existing Site Drainage Arrangements

The drainage arrangements on site will remain as existing, with no changes proposed as a result of this variation.

The existing drainage arrangements are as follows:

- All internal areas comprise impermeable concrete slabs with no internal drains;
- Tertiary containment is provided by the building floor slabs and building lower walls;
- There are no effluent emissions arising from the proposed process.
- All domestic effluent (toilets, sinks etc) discharge to a foul drainage system.

In the event of a fire, all fire water would be contained on site.

Hardstanding

All internal areas and comprise impermeable concrete slab construction with no internal drains being present.

The building is constructed with solid masonry walls which in turn provide a high degree of tertiary containment. Threshold protection across all access doorways will be provided to ensure that any liquids, hazardous or non-hazardous are retained within the main building.

The previous use of the buildings as rolling mill necessitated substantial reinforced concrete foundations and load bearing flooring to be installed throughout. The thickness of the flooring is known to exceed 300mm in all areas and be in excess of 10m thickness in areas immediately adjacent to the former mill structures.

There are no external surface water drains on site, therefore all external surface water 'runs off' to the wider surface water drainage system provided by the industrial estate.

Tanks and Bunds

The process requires the use of proprietary admixtures and chemicals all of which are stored in small volume containers and tanks.

The entire chemical storage area is located on a dedicated secondary containment area located away from the vehicle access and delivery areas.

All static and mobile tanks present on site will be equipped with secondary containment round bund. All tanks are labeled to identify contents and will be compliant with the Oil Storage Regulations (OSR) requirements and pollution prevention Guidance Note PPG2 'Above Ground Storage Tanks'.

Chemicals will generally be stored in small volume containers and/or IBC's. There are no large volume process related storage tanks associated with the Installation.

3.2.3 Building design and layout

Earth Science Partnership will be utilizing the existing buildings, as shown in Figure 2.1. There will be no changes to the existing buildings.

The building is a substantial high bay industrial building, with masonry lower walls and clad portal frame. Externally the building is finished with metal profile clad sheeting above a facing brick lower course. The roof structure is predominantly steel profile cladding on a pitched steel truss frame. A series of roof lights helps to give the building good interior lighting.

The internal process layout has been provided in Section 2.

3.3 Description of the Process

3.3.1 Description of the Process

The treatment/recovery process is a physico-chemical operation designed to stabilise any potential contamination issues associated with the hazardous and non-hazardous industrial filter cake and contaminated soils. The treatment process transforms the waste feedstocks into an inert granular material that can be used as a raw material for the construction industry or for safe inert uses such as landscaping or aggregates.

The process involves the treatment of filter cake waste with a combination of cementitious materials, which will provide the requisite properties of the product, and a suitable E-Clay formulation to chemically immobilise potential pollutants of concern and to ensure that the product is non-polluting. The treatment process essentially involves encapsulation in which there are no material changes to the individual components.

The designated E-Clay formulation will comprise of a modified pillared organoclay designed to sorb and chemically immobilise the identified contaminants of concern, which are predominantly relatively inert long-chain hydrocarbons. These hydrocarbons are not considered to be volatile and would not be expected to be volatilised during the drying process.

The use of E-Clays provides additional safeguards in this respect as the hydrocarbons will be chemically immobilised within the clay matrix structure. This immobilisation process will also significantly reduce the risks associated with potentially leachability of the hydrocarbons contained within the treated medium, thereby addressing the requirement for the treated material to be non-polluting.

The cementitious additives will provide the necessary physical properties to enable the treated material to be used as a product.

The main processes of the operations are summarised below:

- **Reception:** Operator-owned vehicles or registered waste carriers will deliver appropriate waste to the site in approximately four daily delivers. All unsuitable waste will be returned or disposed of. Suitable waste will be unloaded and fed into the treatment operation.
- **Treatment Operation:** Filter cake will be cut into smaller pieces and mixed with E-Clay and cementitious additives. The treated material will then be stockpiled.
- **Validation Process:** All material will be subject to visual assessment as well as physical and chemical analysis.
- **Final Storage:** All material is stored until distributed.

A simple process flow diagram is provided in Figure 3.2

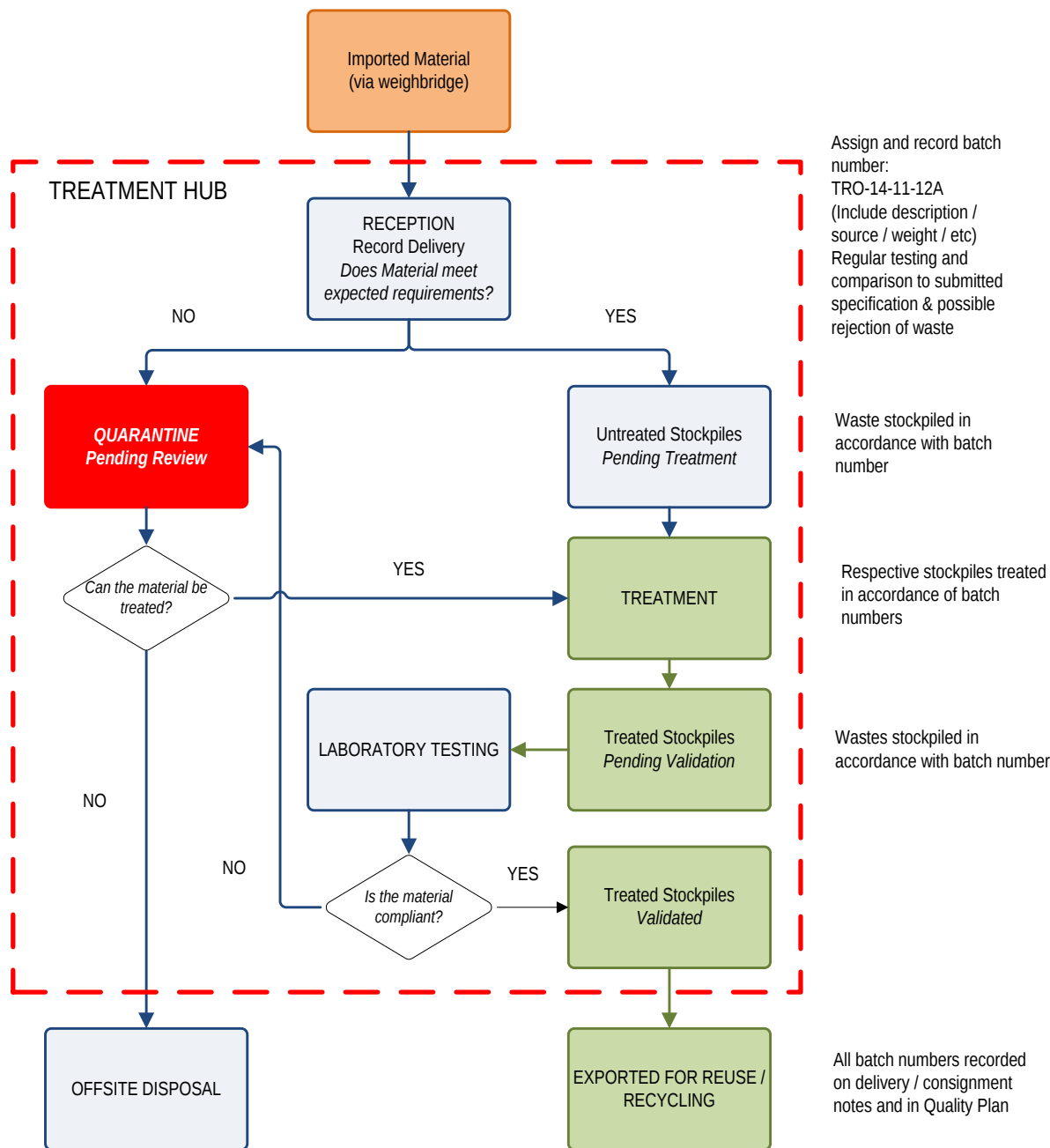


Figure 3.2. Simplified Process Schematic

3.3.2 Raw Materials

3.3.2.1. Waste Feedstock's

Table 3.1 shows the types of waste to be accepted on the site.

Table 3.1: Proposed Waste Quantities	
Waste general type	Applicable EWC Codes
11. Wastes from chemical surface treatment and coating of metals and other materials; non-ferrous hydro-metallurgy	
Sludges and filter cake containing dangerous substances	11 01 09
Sludges and filter cakes other than those mentioned in 11 01 09	11 01 10
17. Construction and demolition wastes (excluding soil from contaminated sites)	
Soil and stones containing dangerous substances	17 05 03*
Soil and stones other than other mentioned in 17 05 03	17 05 04
19. Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use	
Filter cake from gas treatment	19 01 05
Bottom ash and slag containing dangerous substances	19 01 11
Bottom ash and slag other than those mentioned in 19 01 11	19 01 12
Fly ash containing dangerous substances	19 01 13
Fly ash other than those mentioned in 19 01 13	19 01 14
Sludges from physic/chemical treatment containing dangerous substances	19 02 05
Sludges from physic/chemical treatment other than those mentioned in 19 02 05	19 02 06
Wastes marked as hazardous, solidified	19 03 06
Solidified wastes other than those mentioned in 19 03 06	19 03 07
Sold wastes from soil remediation containing dangerous substances	19 13 01
Solid wastes from soil remediation other than those mentioned in 19 13 01	10 13 02
Sludges from soil remediation containing dangerous substances	19 13 03
Sludges from soil remediation other than other mentioned in 19 13 03	19 13 04
Sludges from groundwater remediation containing dangerous substances	19 13 05
Sludges from groundwater remediation other than those mentioned in 19 13 05	19 13 06

3.3.2.1. Chemicals and consumable products

The installation will require the use of a number of natural raw materials and proprietary chemicals to enable the stabilisation and recovery of the waste feedstocks.

Table 3.2 below provides an outline summary of all raw materials, their key ingredients and the annual consumption quantity.

Table 3.2 Raw Material Use			
Raw Material	Chemical Nature	Use	Quantity per annum
E-Clays	Spectrite mineral clay	Key ingredient for stabilization / remediation	
Envirotreat A	INSERT DETAILS		
Envirotreat B	INSERT DETAILS		
Envirotreat C	INSERT DETAILS		
Cementacious	INSERT DETAILS		
Water			

Material Safety Data sheets relating to all process raw materials are provided in Annex 3.

3.3.3 Reception

All materials received by at the site will be subject to inspection and Acceptance procedures. All wastes arriving at site will be subject to pre-agreed contractual arrangements and in accordance to Pre-Acceptance criteria (as defined by Working Plan Procedure FA-1.0).

Upon arrival the material will be stockpiled within a dedicated bunded containment pad. The concrete pad has been designed to ensure that there is no potential subsurface contamination or any form of material to escape outside of the permit boundary.

Each stockpile will represent a single batch of material and subsequently be allocated a unique batch reference for the identification of the material throughout the entire treatment operation. The batch identity reference number will be retained throughout the treatment lifecycle and will be used as a means of unique identification with the end user.

The batch reference number enables the following information to be collated and is used to track the material as it progresses through the plant:

- Period of time when the filter cake was produced;
- Quantities of “as received” filter cake;
- Analytical data relating to the “as received” filter cake;
- Details of treatment operation (dates, personnel, treatment, etc);
- Analytical data relating to the treated material; and
- Date shipped offsite, associated quantities and customer.

All material accepted onto site will undergo chemical analysis to determine the “as received” composition. Regular duplicate analysis, for example every 10th batch, will also be undertaken to ensure compliance.

This analysis will form the basis of the facility Waste Acceptance Criteria into the recovery facility on site. In the unlikely event that the “as received” filter cake fails the required Waste Acceptance Criteria the failing material will be quarantined. Based on the previous 2 year history of operation, no exceedences of the Facility WAC has been known to occur for any batch accepted onto site.

In the event that the “as received” filter cake fails the Facility Waste Acceptance Criteria, it would be necessary to implement one of the two possible scenarios described below:

1. Laboratory treatability trialing to determine whether the material can be retreated for compliance purposes and if successful, subsequent treatment as necessary; or
2. The material would be pre-treated to enable offsite disposal to an inert landfill. The untreated filter cake is currently disposed of as non-hazardous).

Figure 3.3 shows the waste acceptance process and rejection procedure schematically:

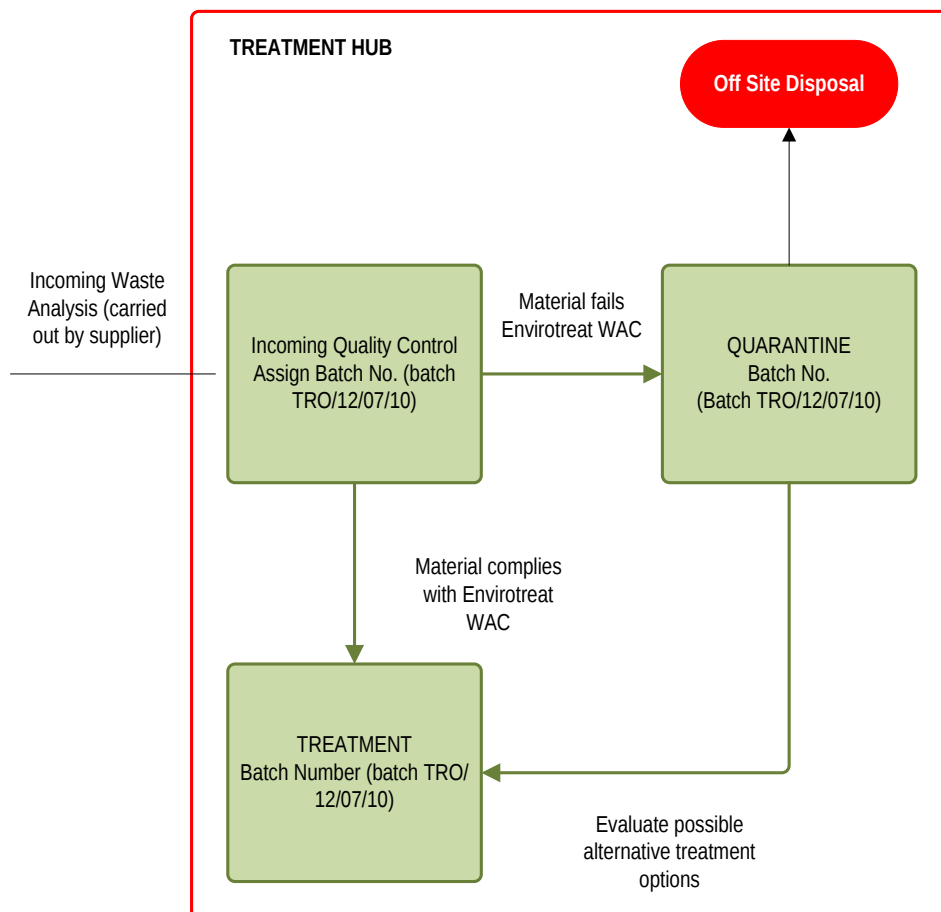


Figure 3.3 – Facility Waste Acceptance Process

3.3.4 Treatment Operation

Upon acceptance into the treatment facility the waste will be stockpiled in batches in readiness for the treatment operation.

The treatment operation will be carried out within an engineered containment cell and has two key criteria:

1. Chemical stabilization/immobilisation of targeted chemical pollutants.
2. Physical improvement of waste material to enable recovery as a product for the purpose intended.

Treatment will be achieved in a single operation. The waste feedstock will be fed into a mobile screening plant (Extec 6000) which mechanically grades and mixes the material into a homogenous formation and allows (controls) the addition of E-Clay and the c additives required.



Photo 1: Extec Mobile Screen (similar to equipment proposed by Applicant)

The E-Clays are added to the waste feedstocks in the form of a liquid slurry mixture. All other admixtures are added as a dry cementitious powder to act as a binding agent.

All clay and feedstock material are passed through a mobile screening plant (Extec 6000 or similar) which mixes the untreated filter cake and additives to form a uniform mixture. The screening plant has a series of rotating “teeth” which break up and homogenise the waste feedstock, whilst mixing in the cementitious and E-Clay additives. Once treated, the materials are conveyed to the main stockpile storage area.

The E-Clays used by the process are derived from the modification of naturally-occurring Smectite Clays¹ using selected chemical reagents. This modified clay produces a reactive treatment medium, which is capable of chemically absorbing and immobilising a range of pollutants present within soils and water.

The addition of Quaternary Ammonium Salts (QAS) to the clay structure produces an ‘inorgano-organo’ E-Clay. This material has organophilic properties which are capable of absorbing organic compounds such as aliphatic hydrocarbons of varying chain length and polarity.

¹ Smectite group- is a naturally occurring mineral group which includes montmorillonite, bentonite, nontronite, hectorite, saponite and sauconite; formed by the alteration of mafic igneous rocks rich in Ca and Mg; weak linkage by cations (e.g. Na⁺, Ca⁺⁺) results in high swelling/shrinking potential. This property is key in the use as a remediation technology.

The reactivity of E-Clays towards aromatic hydrocarbons and other substituted organic groups is enhanced by the introduction of transition metals to the clay structure, which has been proven to be more effective than other commercially available organoclays in treating pure hydrocarbons (i.e. benzene).

E-Clays function using multiple chemical bonding reactions (i.e. Van Der Waals attraction forces / transition metal ligand bonding / dipole-dipole effects, ionic bonding to full covalent bonding and / or molecular alteration) enabling the treatment of mixed waste materials / contaminated soils.

Pillared E-clays are produced that have the ability to withstand excessive dehydration without loss of stability. Pillared E-Clays contain molecular props creating basal separation within the clay structure. This creates interlamellar spacing sufficient to provide access for larger molecules such as polychlorinated biphenyls and polyaromatic hydrocarbons to be absorbed within the clay matrix.

ESP along with their technology partner 'Envirotrete' are able to design E-Clays on a site specific basis to enable the treatment of a range of inorganic and organic pollutants, in most cases using one E-Clay design applied in a single process.

The mixed and treated materials are then stockpiled into individual batches and covered with a membrane to prevent the release of any volatile contaminants present within the waste feedstock materials.

The treatment process creates a stable granular 'aggregate' like material that can be used for a number of safe 'inert' uses.

Figure 3.4 below shows the treatment operation schematically.

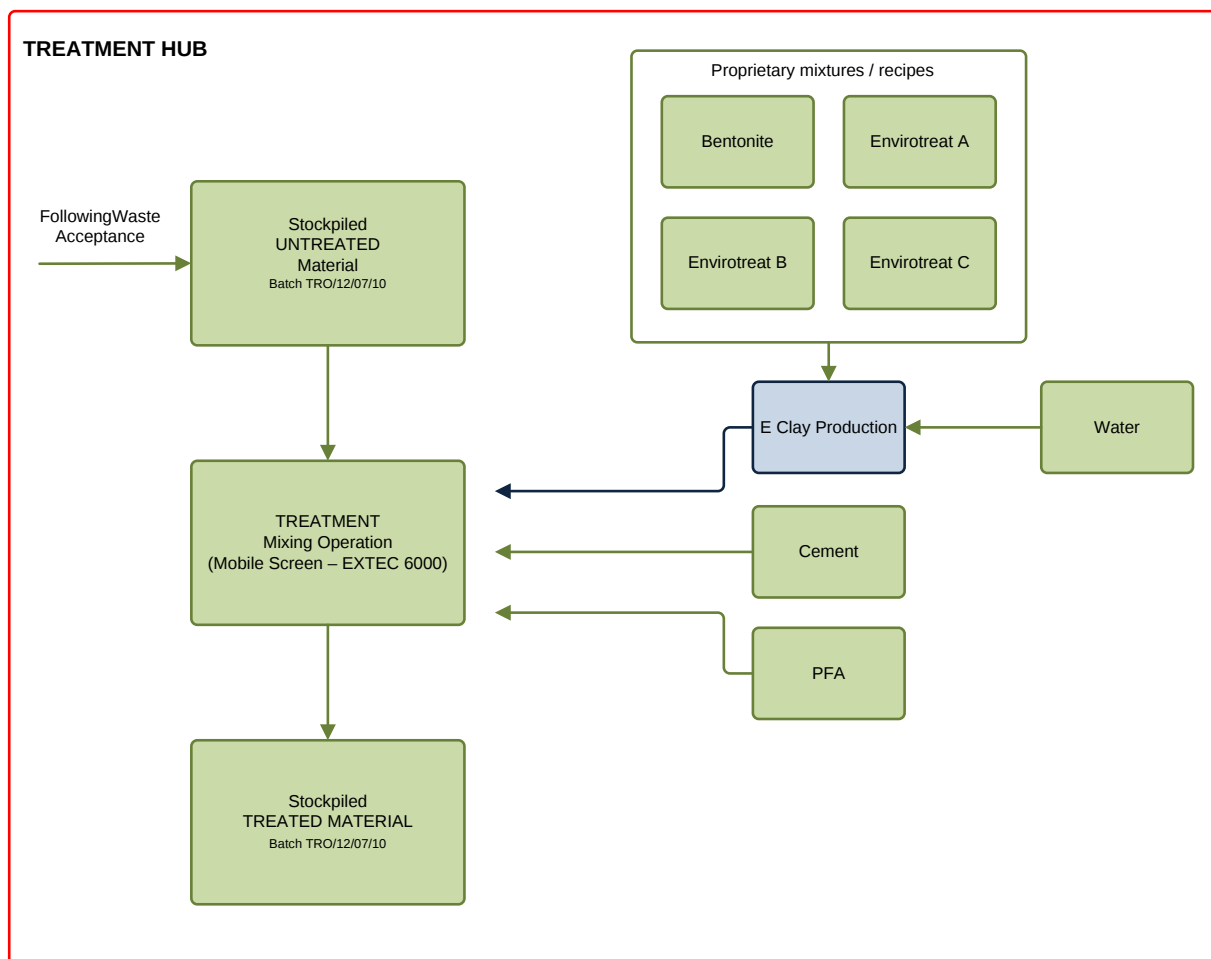


Figure 3.4 Treatment

Throughout the treatment process key environmental aspects, i.e. water quantity, chemical additions etc will be monitored in accordance to the Quality Control and Management Plan.

3.3.5 Validation Process

Once treated, the recovered product will be validated for compliance with product and environmental criteria. This will involve a change of visual assessment as well as physical and chemical analysis.

If a batch of treated material fails any of the validation criteria then the batch will be quarantined pending further action. In this event it would be necessary to consider and implement one of two possible scenarios:

1. Laboratory treatability trailing to determine whether the failed material could be retreated to produce a complaint material and if successful, subsequent retreatment as necessary; or
2. The material would be assessed to enable offsite disposal to an inert landfill or as a worst case scenario, for disposal to a non-hazardous landfill.

In the unlikely event that material used in the field is seemed not satisfactory then the material will be returned into a quarantined area where it will be evaluated,

In addition to this, environmental/chemical criteria will also be determined. Each batch treated will be evaluated against these environmental criteria for suitability:

- Total Petroleum Hydrocarbon content – less than 500mg/kg
- Leachable Petroleum Hydrocarbon content – less than 0.1mg/l
- Leachable Polyaromatic Hydrocarbon content – less than 0.1mg/l
- Arsenic – less than 0.05mg/l
- Cadmium – less than 0.004mg/l
- Chromium – less than 0.05mg/l
- Copper – less than 0.2mg/l
- Nickel – less than 0.04mg/l
- Zinc – less than 0.4mg/l
- Lead – less than 0.05mg/l
- Mercury – less than 0.001mg/l
- Selenium – less than 0.01mg/l

These criteria are based on Waste Acceptance Criteria (WAC) as defined by The waste acceptance procedures and criteria are set out in the Council Decision (2003/33/EC), and in Schedule 10 of the Environmental Permitting (England and Wales) Regulations 2010.

These criteria have been derived for total petroleum hydrocarbon (TPH) and leachate values for inert WAC status, with the exception of leachable TPH and polycyclic aromatic hydrocarbon (PAH) which have derived from risk base assessment.

Figure 3.5 below shows the validation process schematically.

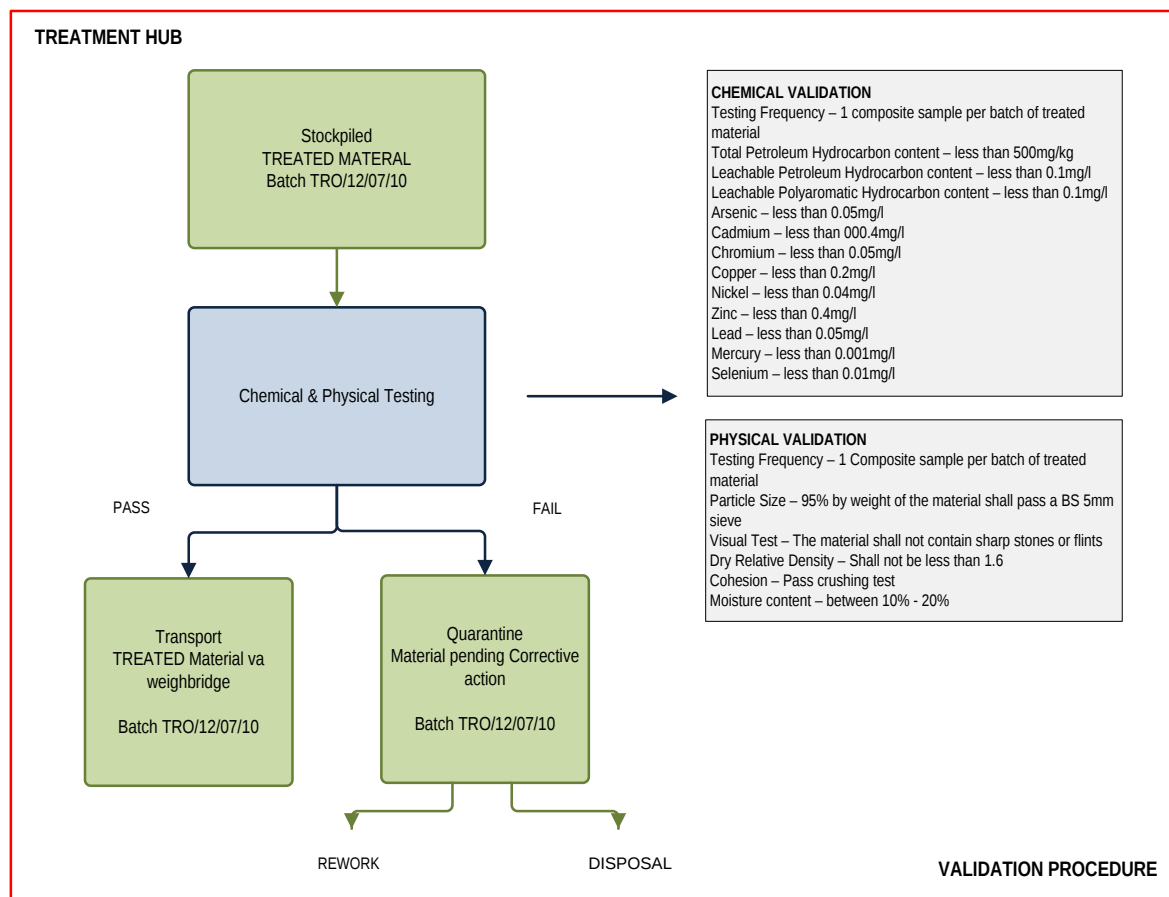


Figure 3.5: Validation

3.3.6 Final Storage

Once the materials have passed validation, they will be transported off site for reuse. No materials will be stored or transferred to any other part of the site on site once they have passed validation.

3.3.7 Environmental Management & Quality Plan

Earth Science Partnership have an established Environmental and Quality Management System for their existing operations which is certified to ISO 9001:2000 – Quality Management; ISO OHSAS 18001 – Health and Safety Management Systems and ISO 14001:2004 – Environmental Management Systems.

Although it is recognised that the operation is a joint venture between ESP and Envirotreat and hence is outside of the scope of their current management system certifications, all of the sites activities will be managed using the same structure and working procedures currently employed in the other areas of the company.

All aspects of the operation will be managed in accordance within a formal Environmental Management and Quality Plan. The plan will define all activities throughout the lifecycle of the treatment process (i.e. pre-acceptance, acceptance, treatment, validation and final off-site transfer).

The Environmental and Quality Management system will be designed to meet the requirements of the Environmental Permitting Regulations and associated pollution prevention guidance.

The EMS has been designed to ensure:

- The identification of all foreseeable environmental impacts and risks that Earth Science Partnership activities pose to the environment.
- Prevention or minimisation of any identified risks to practical minimum.
- Legal Compliance assurance.
- Activities at the site will be managed in accordance with the management system, which will be subject to continuous review, audit and improvement. Specific detailed management system reviews will take place if there is a significant change to the activities, following an accident or if a non compliance is found.
- Furthermore, the whole management system will be subject to annual external audit by competent third parties.
- The key aspects of the EMS for the site will include:
 - Preventative maintenance;
 - Operator requirements;
 - Training and competence;
 - Emergency response and incident management;
 - Monitoring, measurement and reporting.

The environmental and quality management system and procedures will be written to ensure that the environmental risks and impact of the normal running of the site activities are documented and minimised.

The system will be fully developed, implemented and operation at the time of commissioning and permit issue.

Table 3.3 shows the structure of the proposed working plan.

Table 3.3 Working Plan		
Ref No:	Title	Purpose
FC- 1.0	Waste Pre-Acceptance	This procedure defines the screening, checking and pre-acceptance of all incoming waste prior to its arrival on site.
FC-1.1	Waste Acceptance	This procedure outlines the onsite controls and considerations that need to be applied when waste material arrives on site for processing. Acceptance of non-conforming wastes will be a direct breach of the permitted conditions of the sites Environmental Permit.
FC-1.2	Waste and Material Storage	This procedure outlines the waste storage requirements for all wastes that are processed on site.
FC-1.3	Document and Data Control	This procedure defines the necessary documentation such as the Batch Reference Note that is required to ensure compliance.
FC-1.4	Purchasing	Purchasing controls are designed to ensure that all material processed is within defined parameters so as to ensure that the products and services provided by the Company conform to customer requirements.
FC-1.5	Chemical stabilization/immobilisation	To outline the control activities for the safe and managed chemical stabilization and immobilisation of the filter cake.
FC-1.6	Validation Process	This procedure is to ensure that the product is validated for compliance with product and environmental criteria
FC-1.7	Control of Records	This procedure describes the way in which the company maintains records in a

		manner that prevents loss or damage. Records retained to provide objective evidence that the Documented Management System is being operated within the company and that customer and permit requirements are being complied with. The system used to retain records will ensure that all traceability requirements are met.
FC-1.8	Training	To ensure that all training needs are identified for all relevant personnel. In addition, educational and training qualifications and records are maintained.
FC-1.9	Security	To ensure that all site and driver security controls are implemented and maintained to minimise security risks at Earth Science Partnership.
FC-1.10	Emergency Procedures	To ensure the safe evacuation of the site and protection of the environment in the event of a site emergency.

3.3.7.1. Site Maintenance

All maintenance activities on site will be carried out in accordance to the manufacturers' recommendations and will be integrated within the company's environmental management system.

The key aspects of the maintenance management programme will include:

- Infrastructure inspection: A programme of inspection of all bunded areas and concrete storage pads;
- A programme of Planned Preventative Maintenance (PPM) on key plant and equipment (i.e. Extec screening plant) to ensure that the screen consistently produces homogenous grade material. This programme also will ensure critical components such as belts and motors are replaced early rather than waiting for equipment to fail.
- The inspection and maintenance schedules that the manufacturer recommends are adhered to, including any period of recommended shut-down.
- Maintenance and calibration of all company laboratory and testing equipment to ensure compliance with Quality Control / UKAS requirements.

The sites maintenance programme will ensure that all equipment or infrastructure that is deemed essential in the prevention of pollution to the environment (e.g. hard-standing, bunds etc.) or the prevention of local nuisance impacts is maintained and kept in good operating condition.

It is proposed that all maintenance activities will be carried out under contract by a suitably qualified and competent third party organisation.

3.3.7.2. Operator Competence

There will be 2 or 3 operatives required to operate the facility. These operatives will work on a day shift basis. All site operatives will be assessed as competent and appropriately trained in accordance with the site Environmental Permit.

The site manager holds WAMITAB qualifications 4MTNHR6² which is considered suitable for the in-situ and ex-situ treatment of contaminated land and materials.

All staff working for and on the behalf of the site will be suitably trained and competent. (e.g. professional maintenance engineers, electricians, equipment operators etc).

Certificates of Competence for key operational personnel are provided in Annex 4.

3.3.7.3. Operation

The site will be operated on a continuous 24/7 basis with deliveries, loading and unloading operations being carried out in accordance to the schedule below:

- Monday – Friday 7.00 – 18.00
- Saturday 7.00 – 18.00
- Sunday No deliveries or collections
- Bank Holidays No deliveries or collections

Additional activities will include general site housekeeping and administration activities. The site will maintain written operation instructions all for the plant and monitoring equipment present on site.

All personnel working at the facility will be trained in the necessary sections of the Working Plan and associated Procedures.

3.3.7.4. Site security

The Alcoa site (Westfield Industrial Site) is a secure site and is provided with 24 hour security personnel who man the main gatehouse on a 24/7 basis.

As such, all personnel and vehicles entering the site are strictly controlled and managed; no vehicles or personnel will be allowed access to the facility without prior authorization.

The ESP facility will generally only be manned on daytime only basis. At all times when the facility is not manned or occupied, it will securely locked and protected.

The entire Westfield Industrial Estate is equipped with CCTV monitoring of all external areas.

² This qualification carries the Ofqual Code: 600/0331/5

3.3.7.5. Accidents and Emergencies

The site has developed an Accident Management Plan based around the specific risks associated with the site operations.

The key aspects of the Sites Accident Management Plan are:

- Reviewed by Site Management annually and as soon as practicable after an accident.
- Considers hazards presented by emergency shut-down procedures;
 - actions in case of fire/explosion;
 - contaminated firewater;
 - failure of any equipment;
 - spillages and uncontrolled releases;
 - plant or equipment failure
 - vandalism;
 - flooding;
- Identify events or failures that could damage the environment.
- Assesses the likelihood and the potential environmental consequences from accidents at the site.
- Proposes action to minimise the potential causes and consequences of accidents.

The Accident Management Plan has been included in Annex B. Specific emergency response procedures will be developed by the operator in conjunction with the plant manufacturer, local fire offices and the company's Site Manager.

These procedures will be complete and fully developed and implemented prior to operations commencing at the site.

The Accident Management Plan is provided in Annex 5.

3.3.7.6. Incident Reporting

The reporting of Incidents and non-conformities will form a key component of the companies Working Plan / Management System. Identified non-conformities under the system include, but are not limited to the following:

- Uncontrolled leaks and spillages of any materials with the potential to cause pollution to the environment (chemicals, hydraulic fluid, oils);
- Non compliance to any permitted condition or consent limit (missing of reporting deadlines, breach of any permitted consent limits;
- Internal Audit findings (legal non compliances, EMS procedural breaches, system non compliances);
- External and Internal Complaints; and
- Whenever a plant malfunction, breakdown or failure, or any near miss occurs.

The company's EMS will undergo periodic external audit and review to ensure that both compliance and continuous improvement is achieved. The EMS requires that all identified incidents and non conformities will be investigated and closed out.

Furthermore, the site management system will have documented procedures and registers to:

- Ensure that any members of the public/residents are alerted and informed if a significant plant issue arises (fire, explosion etc);
- Record, report and investigate any internal or external complaints to ensure that any necessary measures are taken to prevent, or where that is not possible to minimise, the causes; and
- Inform any members of the public about the nature of the site, key contacts and sources of further information.

4 EMISSIONS & THEIR ABATEMENT

4.1 Emissions to air

The proposed installation will not have any emissions to air.

4.2 Emissions to water

The proposed Installation will not have any emissions or effluents that will be discharged to controlled waters.

4.3 Emissions to Sewer

The proposed Installation will not have any emissions or effluents that will be discharged to sewer.

4.4 Emissions to Land

There will be no direct emissions to land arising from the installation.

4.5 Odour

The nature of the materials processed at the site will not be malodourous or likely to have the potential for offsite odour impact. The proposed operation is not considered to have a potential for offsite odour impact.

4.6 Noise Impacts

The proposed Installation will not give rise to any adverse noise impacts.

With the exception of the fixed and mobile plant, the process is largely static and unable to give rise to noise impacts.

All fixed and mobile plant will be operated internally and restricted to daytime use only.

The site does not have any external discharge points or external / roof mounted plant and equipment that has the potential to give rise to offsite noise impacts.

Furthermore, the location of the plant in the approximate centre of the site ensures that any noise created by the 'delivery and collections will be fully screened by the retained 'former; ingot plant buildings which lie on the southern boundary of the site. The screening is considered sufficient to avoid the potential for any noise nuisance along the sensitive southern boundary.

4.7 Fugitive emissions

There are no new fugitive emissions arising from the proposed new plant.

4.8 Waste Generation and Management

4.8.1 Types and Amounts of Waste

Due to the nature of the raw materials used and the marketable products that are produced, the applicant has applied for and achieved an End of Waste determination. In accordance with End of Waste Quality Protocol the finished products will have ceased to be waste, and therefore not subject to waste management controls.

Table 4.1 below shows a tabular summary of site wastes.

Table 4.1: Waste summary

Waste	EWC Code	Approx Quant (tonnes)	Source	R / D Code	Environmental Fate
Treated Inert wastes	19-03-05	20,000	Treated materials	R5	Construction Materials Landscaping

4.8.2 Throughput of Waste

The facility principally produces a product which can then be used by brick and block manufacturing companies as an additive in brick/block formation. The plant will typically process approximately 130 tonnes per week of hazardous and non hazardous waste.

The site will not exceed the currently permitted maximum treatment and handling quantities stipulated by the permit of 20,000 tonnes.

Under IIB of the Waste Framework Directive the Installation activities fall under the generic description R5.

4.8.3 Waste Storage

All waste materials are stored internally in stockpiles in accordance with the batch code and treatment programme. The materials are all located internally on dedicated concrete pads and are covered for protection.

No more than 1000 tonnes of material will be stored internally at any time.

4.8.4 Resource Efficiency and Climate Change

The energy use of the proposed operation is very low so there is no need for improvements involving energy efficiency.

5 ENVIRONMENTAL MONITORING

5.1 Emissions to air

There are no point source emissions to air. Therefore no monitoring is required.

5.2 Emissions to water

There are no point source emissions to water from within the process. Therefore no monitoring is required.

5.3 Emissions to Sewer

There are no point source emissions to sewer arising from the process. Therefore no monitoring is required.

5.4 Emission to Land

There are no point source emissions to land arising from the process. Therefore no monitoring is required

5.5 Monitoring frequency

No formal environmental monitoring is required.

6 IMPACT TO THE ENVIRONMENT

6.1 Impacts to Air

There will be no impacts to the air relating to the proposed installation

6.2 Impacts to Controlled Waters

There will be no process effluents discharged to controlled waters from the Installation.

6.3 Impacts to sewer

All discharges to sewer relate to the domestic sewage arisings. There are no process emissions which will arise from the plant.

6.4 Impacts to Land

There are no impacts to land relating to the proposed installation.

ANNEX 1: Figures and Maps

Figure A1 Site Location

Figure A2: Site Buildings

Figure A3: Site Lease and Installation Boundary

Figure A4: Wider Site Use

Annex 2: Planning Permission (Certificate of Lawful Use)

Annex 3: Material Safety Data Sheets

Annex 4: Certificates of Competence

Annex 5: Accident Management Plan

**Environmental Permitting (England and Wales) Regulations 2016
Regulation 37(1) and (5)**

SUSPENSION NOTICE AND REQUIREMENT TO TAKE STEPS

To: **The Directors
Treatment Hub Limited
Brook House,
Moss Grove,
Kingswinford,
West Midlands,
DY6 9HS**

Environmental permit number: EPR/ZP3933NJ

**Regulated facility: The Treatment Hub Swansea, Building 2, Westfield Industrial Park,
Wunarlwydd, Swansea, SA5 4SF**

Under Regulation 37(1) and (5) of the Environmental Permitting (England and Wales) Regulations 2016, **Natural Resources Wales** may suspend an environmental permit if, **Natural Resources Wales** consider that the manner of operating a regulated facility contravenes an environmental permit condition, and that such contravention involves a risk of pollution. Accordingly, **Natural Resources Wales** has decided to suspend the environmental permit to the extent specified in Schedule 1 with immediate effect.

In addition, you are required to take the steps specified in Schedule 2 to remove that risk. Further, in relation to any activities that you are still authorised to carry out under the environmental permit, you are required to take the steps specified in Schedule 3.

The reason for this decision is that, **Natural Resources Wales** consider that the operation of the regulated facility involves a risk of pollution namely: Failure to comply with condition 2.3.1(a) of the Environmental Permit EPR/ZP3933NJ. This condition states that *"The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by Natural Resources Wales"*. The two operating techniques listed in table S1.2 are, EPR 1 - How to Comply With Your Environmental Permit and the document referenced SOL0113ESP01 received as part of the application EPR/ZP3933NJ/A001.

The Treatment Hub Limited has not operated the facility or undertaken the treatment activities listed in the document referenced SOL0113ESP01. Storing waste in volumes that exceed the permitted limit restricts the capacity to treat waste in segregated batches and has resulted in

mixing of hazardous wastes. Failing to store, treat and manage hazardous waste in breach of the permit, leads to a risk of pollution from these wastes leaving the facility and entering the environment at the receiving sites. These sites are not permitted to receive hazardous wastes and do not have the appropriate controls in place.

The environmental permit ceases to have effect to the extent specified until this notice is withdrawn.

Date: 17th July 2020

Signed: 

Gavin Bown
Rheolwr Gweithrediadau / Operations Manager

Natural Resources Wales
Llys Afon
Haverfordwest
Pembrokeshire
SA61 2BQ

Please see over for notes.

Environmental Permitting (England and Wales) Regulations 2016 Regulation 37(1) and (5)

Notes:

General

1. This notice suspends the environmental permit to the extent specified in Schedule 1 because Natural Resources Wales consider the manner in which the regulated facility is being operated contravenes an environmental permit condition and that contravention involves a risk of pollution. Consequently, operating any of the activities which this notice has suspended is an offence and legal action may be taken against you.
2. You remain bound by any conditions of the environmental permit that are not specified in Schedule 1.
 1. Failure to comply with these conditions is an offence and legal action may be taken against you.
3. You may wish to seek independent legal advice.

Appeal provisions

You are entitled to appeal against this notice under Regulation 31(1)(f) of the Environmental Permitting (England and Wales) Regulations 2016. Notice of appeal must be made within 2 months of the date of this Notice. An appeal does not affect the requirements of this notice.

You must send written notice of the appeal and the documents listed below to:

The Planning Inspectorate
Crown Building
Cathays Park
CARDIFF
CF10 3NQ

Tel: 029 2082 3866

Email: wales@pins.gsi.gov.uk

Website: <http://www.planningportal.gov.uk/planning/appeals>

At the same time you must send a copy of the appeal notice and documents to Natural Resources Wales.

The required documents are:

- A statement of the grounds of appeal
- A copy of any relevant application
- A copy of any relevant environmental permit
- A copy of any relevant correspondence between the appellant and the regulator
- A copy of any decision or notice which is the subject matter of the appeal
- A statement indicating whether you wish the appeal to be in the form of a hearing or dealt with by way of written representations.

You may withdraw an appeal by notifying The Planning Inspectorate in writing and sending a copy of that notification to Natural Resources Wales. Further information about making an appeal and the forms that you will need are available from The Planning Inspectorate detailed above.

Legislation note

In this document “Natural Resources Wales” means the Natural Resources Body for Wales established by Article 3 of the Natural Resources Body for Wales (Establishment) Order 2012. On 01 April 2013 the Natural Resources Body for Wales (Functions) Order 2013 transferred the relevant functions of the Countryside Council for Wales, and functions of the Environment Agency and the Forestry Commission in Wales to the Natural Resources Body for Wales.

Environmental Permitting (England and Wales) Regulations 2016
Regulation 37(1) and (5)

SCHEDULE 1
EXTENT TO WHICH THE ENVIRONMENTAL PERMIT IS SUSPENDED
Extent
The following parts of the Environmental Permit are suspended with immediate effect: Input of waste within the boundary of the permit (defined by Schedule 7) pursuant to condition 2.2.1.

Environmental Permitting (England and Wales) Regulations 2016
Regulation 37(1) and (5)

SCHEDULE 2 STEPS TO BE TAKEN TO REMOVE RISK OF POLLUTION	
Steps to be taken	By date
STEP 1: Cease the acceptance of waste onto site. The Operator shall cease to receive waste onto site with immediate effect.	With immediate effect
STEP 2: Reduce the quantity of stored waste to 5,250 tonnes as authorised by the Environmental Permit The Operator shall reduce the quantity of stored waste on site to 5,250 tonnes as authorised by the Environmental Permit. The quantity of waste must be reduced on site to enable wastes to be treated in the manner authorised by the permit.	31 st January 2021

Environmental Permitting (England and Wales) Regulations 2016
Regulation 37(1) and (5)

SCHEDULE 3
ADDITIONAL STEPS FOR NON-SUSPENDED OPERATIONS

Steps to be taken	By date
STEP 3: Classify stored waste and submit to NRW prior to commencing removal. The Operator must classify the waste stored on site in accordance with Guidance on the classification and assessment of waste (1st Edition v1.1) Technical Guidance WM3 and HWR06 Classifying and coding wastes from physio-chemical treatment facilities version 5. Prior to the removal of any waste from site, the Operator must submit to Natural Resources Wales for agreement, the determined waste classification and details on the intended destination of the waste.	With immediate effect all waste must be assessed and classified prior to removal.