

TRECATTI Multipurpose Waste Treatment & Remediation PAD

Environmental Permit Variation Application

**TRECATTI MULTIPURPOSE WASTE TREATMENT & REMEDIATION PAD
ENVIRONMENTAL PERMIT VARIATION APPLICATION
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Application Forms

Application for an environmental permit

Part A – About you

You will need to fill in this part A if you are applying for a new permit, applying to change an existing permit or want to transfer an existing permit to yourself. Please check that this is the latest version of the form available from our website.

Please read through this form and the guidance notes that came with it. All relevant guidance documents can be found on our website. Please write clearly in the answer spaces.

Note: if you believe including information on a public register would not be in the interests of national security you must tick the box in section 5 of F1 or F2 and enclose a letter telling us that you have told the Welsh ministers. We will not include the information in the public register unless directed otherwise.

It will take less than one hour to fill in this part of the application form.

Where you see the term 'document reference' on the form, give the document references and send the documents with the application form when you've completed it.

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1 About you

Are you applying as an individual, an organisation of individuals (for example, a partnership), a company (this includes Limited Liability Partnerships) or a public body?

An individual

An organisation of individuals (for example, a partnership)

A public body

A registered company or other corporate body

☐ Now go to section 2

☐ Now go to section 3

☐ Now go to section 4

☒ Now go to section 5

2 Applications from an individual

2a Please give us the following details

Name

Title (Mr, Mrs, Miss and so on)

First name

Last name

Date of birth (DD/MM/YYYY)

Now go to section 6

3 Applications from an organisation of individuals

3a Type of organisation

For example, a charity, a partnership, a group of individuals or a club

3b Details of the organisation

If you are an organisation of individuals, please give the details of the main representative below. If relevant, provide details of other members (please include their title Mr, Mrs and so on) on a separate sheet and tell us the document reference you have given this sheet.

Contact name

Title (Mr, Mrs, Miss and so on)

First name

3 Applications from an organisation of individuals, continued

Last name

Date of birth (DD/MM/YYYY)

Now go to section 6

4 Applications from public bodies

4a Type of public body

For example, local health boards and unitary authorities

4b Name of the public body

4c Please give us the following details of the executive

An officer of the public body authorised to sign on your behalf

Name

Title (Mr, Mrs, Miss and so on)

First name

Last name

Position

Now go to section 6

5 Applications from a registered company or other corporate body

5a Name of the company

Biffa Waste Services Limited

5b Company registration number

00946107

Date of registration (DD/MM/YYYY)

16/01/1969

If you are applying as a corporate organisation that is not a limited company, please provide evidence of your status and tell us below the reference you have given the document containing this evidence.

Document reference

Now go to section 6

6 Your address

6a Your main (registered office) address

For companies this is the address on record at Companies House.

Contact name

Title (Mr, Mrs, Miss and so on)

First name

Last name

Address

Coronation Road, Cressex

High Wycombe

Buckinghamshire

Postcode

HP12 3TZ

Contact numbers, including the area code

Phone

01494 521 221

Fax

01494 463 368

Mobile

Email

keith.woodward@biffa.co.uk

6 Your address, continued

For an organisation of individuals every partner needs to give us their details, including their title Mr, Mrs and so on. So, if necessary, continue on a separate sheet and tell us below the reference you have given the sheet.

Document reference for the extra sheet

6b Main UK business address (if different from above)

Contact name

Title (Mr, Mrs, Miss and so on)

First name

Last name

Address

Postcode

Contact numbers, including the area code

Phone

Fax

Mobile

Email

Now go to section 7

7 Contact details

7a Who can we contact about your application?

This can be someone acting as a consultant or an 'agent' for you.

Contact name

Title (Mr, Mrs, Miss and so on)

First name

Last name

Address

Postcode

Contact numbers, including the area code

Phone

Fax

Mobile

Email

Mrs

Clare

Boles

SLR Consulting Ltd

Fulmar House

Beignon Close

Ocean Way, Cardiff

CF24 5PB

02920 491 010

07919 574 655

cboles@slrconsulting.com

7 Contact details, continued

7b Who can we contact about your operation (if different from question 7a)?

Contact name

Title (Mr, Mrs, Miss and so on)

First name

Last name

Address

Postcode

Contact numbers, including the area code

Phone

Fax

Mobile

Email

Mr

Graham

Peacock

Environmental Regulation Manager

Biffa Waste Services Ltd

Hoods Close

Leicester

LE4 2BH

0121 661 6726

07850 479516

graham.peacock@biffa.co.uk

7c Who can we contact about your billing or invoice?

As in question 7a

As in question 7b

Please give details below if different from question 7a or 7b.

Contact name

Title (Mr, Mrs, Miss and so on)

First name

Last name

Address

Postcode

Contact numbers, including the area code

Phone

Fax

Mobile

Email

☐☐

Mrs

Emma

Hill

Biffa Waste Services Limited

Coronation Road

Cressex, High Wycombe

Buckinghamshire

HP12 3TZ

01494 556 502

01494 529 105

8 How to contact us

If you need help filling in this form, please contact the person who sent it to you or contact us as shown below.

General enquiries: 0300 065 3000 (Monday to Friday, 8am to 6pm)

Email: enquiries@naturalresourceswales.gov.uk / ymholiadau@cyfoethnaturiolcymru.gov.uk

Website: www.naturalresourceswales.gov.uk / www.cyfoethnaturiolcymru.gov.uk

If you are happy with our service, please tell us. It helps us to identify good practice and encourages our staff. If you're not happy with our service, please tell us how we can improve it.

Please tell us if you need information in a different language or format (for example, in large print) so we can keep in touch with you more easily.

Feedback

(You don't have to answer this part of the form, but it will help us improve our forms if you do.)

We want to make our forms easy to fill in and our guidance notes easy to understand. Please use the space below to give us any comments you may have about this form or the guidance notes that came with it.

How long did it take you to fill in this form?

We will use your feedback to improve our forms and guidance notes, and to tell the Government how regulations could be made simpler.

Would you like a reply to your feedback?

Yes please

☐

No thank you

☐

Application for an environmental permit

Part C1 – Varying a permit – to change to or add a standard facility



Fill in this part of the form, together with parts A and F1 or F2, if you are applying to vary (change) a standard facility or add a standard facility. Please check that this is the latest version of the form available from our website.

You cannot vary the conditions of a standard permit but you can add new standard facilities.

If you want to vary (change) the conditions you will change to a bespoke permit and you must fill in part C2 and the relevant parts of C3 to C7.

You only need to give us details in this application for the parts of the permit that will be affected (for example, if you are adding a new facility or making changes to existing ones). You do not need to resend any information from your original permit application if it is not affected by your proposed changes.

Please read through this form and the guidance notes that came with it. All relevant guidance documents can be found on our website. Please write clearly in the answer spaces.

It will take less than one hour to fill in this part of the application form.

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- 1 About the permit
- 2 About your proposed changes
- 3 Standard facilities
- 4 General information
- 5 Your ability as an operator
- 6 How to contact us

Appendix 1 – Low impact installation checklist

Appendix 2 – Waste management plan checklist for standard permit applications for mining waste operations

1 About the permit

What is your customer reference number?

If you do not have a customer reference number, leave this blank.

The customer reference number is a unique identification number which tells us who you are. It is always made up of one letter and nine numbers in this order A111111111.

Discussions before your application

If you have had discussions with us before your application, provide the case reference number or details on a separate sheet and tell us below the reference you have given the document.

Case or document reference

Pre-application meeting with Dave Griffiths, April 2015

1a Permit number

What is the permit number that this application relates to?

EPR/RP3733PC/V008

1b Site details

What is the name, address and postcode of the site?

Site name

Trecatti Landfill Site

Address

Fochriw Road

Merthyr Tydfil

Glamorgan

Postcode

CF48 4AB

2 About your proposed changes

2a What are your proposed changes?

Are you applying to change your existing permit to a standard permit?

No ☒

Yes ☐

2 About your proposed changes, continued

Are you applying to add a standard rules set to your current permit?

No ☐

Yes ☒

If you want to change your existing permit to a standard permit and also add a standard rules set to your existing permit, please give us more detail in a separate document.

Document reference of this separate document

Minor technical

☐

If your proposed change above is to consolidate (combine) a number of permits, now answer question 2b. If not, go to section 3.

~~2b Consolidating existing permits~~

~~Identify all the permits you want to consolidate by listing the permit numbers in Table 1 below.~~

Table 1 – Permit numbers

3 Standard facilities

3a Tick the relevant boxes below to show which standard rules you are applying for

Table 2 – Sets of standard rules that are available for your permit

Plain English Campaign's Crystal Mark does not apply to Table 2.

Standard rule description	Tonnes per annum (tpa)	Standard rule reference (office use only)
Household, commercial and industrial waste transfer station	Less than 75,000 tpa ☐	SR2008No1 75kte
Household, commercial and industrial waste transfer station (no building)	Less than 5,000 tpa ☐	SR2008No2 5kte
Household, commercial and industrial waste transfer station with treatment	Less than 75,000 tpa ☐	SR2008No3 75kte
Household, commercial and industrial waste transfer station with treatment (no building)	Less than 5,000 tpa ☐	SR2008No4 5kte
Household, commercial and industrial waste transfer station with asbestos storage	Less than 75,000 tpa ☐	SR2008No5 75kte
Household, commercial and industrial waste transfer station with asbestos storage (no building)	Less than 5,000 tpa ☐	SR2008No6 5kte
Household, commercial and industrial waste transfer station with treatment and asbestos storage	Less than 75,000 tpa ☐	SR2008No7 75kte
Household, commercial and industrial waste transfer station with treatment and asbestos storage (no building)	Less than 5,000 tpa ☐	SR2008No8 5kte
Asbestos waste transfer station	Less than 3,650 tpa ☐	SR2008No9 3650te
Inert and excavation waste transfer station	Less than 75,000 tpa ☐	SR2008No10 75kte
Inert and excavation waste transfer station with treatment	Less than 75,000 tpa ☐	SR2008No11 75kte
Non-hazardous household waste amenity site	Less than 75,000 tpa ☐	SR2008No12 75kte
Non-hazardous and hazardous household waste amenity site	Less than 75,000 tpa ☐	SR2008No13 75kte
Materials recycling facility	Less than 75,000 tpa ☐	SR2008No14 75kte
Materials recycling facility (no building)	Less than 5,000 tpa ☐	SR2008No15 5kte
Non-hazardous mechanical biological (aerobic) treatment (MBT) facility	Less than 75,000 tpa ☐	SR2008No18 75kte
Non-hazardous sludge biological, chemical and physical treatment site	Less than 250,000 tpa ☐	SR2008No19 250kte
Vehicle storage, depollution and dismantling (authorised treatment) facility	Less than 75,000 tpa ☐	SR2008No20 75kte
Metal recycling site	Less than 75,000 tpa ☐	SR2008No21 75kte
Storage of furnace ready scrap metal for recovery	Less than 75,000 tpa ☐	SR2008No22 75kte

3 Standard facilities, continued

Table 2 – Sets of standard rules that are available for your permit, continued

Standard rule description	Tonnes per annum (tpa)	Standard rule reference (office use only)
Waste Electrical and Electronic Equipment authorised treatment facility (ATF) excluding ozone depleting substances.	Less than 75,000 tpa ☐	SR2008No23 75kte
Clinical waste and healthcare waste transfer station	Less than 75,000 tpa ☐	SR2008No24 75kte
Clinical waste and healthcare waste treatment and transfer station	Less than 75,000 tpa ☐	SR2008No25 75kte
Mobile plant for the treatment of waste soils and contaminated material, substances or products	Tonnes per annum does not apply ☐	SR2008No27 Rem MP
Pet cemetery	Tonnes per annum does not apply ☐	SR2009No1
Low impact Part A installation	Tonnes per annum does not apply ☐	SR2009No2
Low impact Part A installation for the production of biodiesel	No more than 2,000 tpa ☐	SR2009No3
Combustion of biogas in engines at a sewage treatment works	Tonnes per annum does not apply ☐	SR2009No4
Inert and excavation waste transfer station	Less than 250,000 tpa ☐	SR2009No5
Inert and excavation waste transfer station with treatment	Less than 250,000 tpa ☐	SR2009No6
Storage of furnace ready scrap metal for recovery	Less than 1,000,000 tpa ☐	SR2009No7
The management of inert extractive wastes at mines and quarries (and appendix 2; see below)	Tonnes per annum does not apply ☐	SR2009No8
Discharge to surface water: cooling water and heat exchangers	Max volume 1,000 cubic metres per day ☐	SR2010No2
Discharge to surface water: secondary treated domestic sewage	Max volume between 5 and 20 cubic metres per day ☐	SR2010No3
Mobile plant for land spreading	Spreading of waste for agricultural or ecological benefit. Up to 10 wastes types 50 hectares per deployment ☐	SR2010No4
Mobile plant for reclamation, restoration or improvement of land	Spreading of waste to create a soil profile. Up to 10 wastes types per hectare over 50 hectares ☐	SR2010No5
Mobile plant for land spreading of sewage sludge	Deployment max 250 tonnes per hectare over 50 hectares ☐	SR2010No6
Use of waste in construction	Less than 50,000 tonnes per site ☐	SR2010No7
Use of waste in construction	Less than 100,000 tonnes per site ☐	SR2010No8
Use of waste for reclamation, restoration or improvement of land	Less than 50,000 tonnes per site ☐	SR2010No9
Use of waste for reclamation, restoration or improvement of land	Less than 100,000 tonnes per site ☐	SR2010No10
Mobile plant for the treatment of waste to produce soil, soil substitutes and aggregate	Less than 75,000 tonnes per deployment ☐	SR2010No11
Treatment of waste to produce soil, soil substitutes and aggregate	Less than 75,000 tonnes per year ☐	SR2010No12
Use of waste to manufacture timber and construction products	Less than 75,000 tonnes per year ☐	SR2010No13

3 Standard facilities, continued**Table 2 – Sets of standard rules that are available for your permit, continued**

Standard rule description	Tonnes per annum (tpa)	Standard rule reference (office use only)
Composting biodegradable waste	Open and contained systems. Less than 500 tonnes on site at any one time ☐	SR2010No14
Storage of digestate from anaerobic digestion plant	Less than 75,000 tonnes storage at any one time ☐	SR2010No17
Discharge to land: enzyme treated sheep dip	5 cubic metres per day ☐	SR2010No19
Composting biodegradable waste (in open and contained systems)	Open and contained systems. Less than 500 tonnes on site at any one time ☐	SR2011 No1_500t
Metal recycling site	Less than 25,000 tonnes per site ☐	SR2011 No2
Vehicle storage, depollution and dismantling (authorised treatment) facility	Less than 5,000 tonnes per site ☐	SR2011 No3
Treatment of waste wood for recovery	Less than 75,000 tonnes per site ☐	SR2011 No4
Composting in closed systems – waste operation	Limit of 75 tonnes per day ☐	SR2012 No3
Composting in closed systems – Part A installation	Less than 75,000 tonnes ☐	SR2012 No4
Composting in open systems – waste operation	Limit of 75 tonnes per day ☐	SR2012 No7
Composting in open systems – part A installation	Less than 75,000 tonnes ☒	SR2012 No8
Part A installation – on farm anaerobic digestion facility including the use of the resultant biogas	Over 100 tonnes per day and up to 100,000 tonnes per year and 5MW thermal input ☐	SR2012 No9
Waste recovery operation – on farm anaerobic digestion facility including the use of the resultant biogas	Less than 100 tonnes per day ☐	SR2012 No10
Part A installation – anaerobic digestion facility including the combustion of the resultant biogas	Over 100 tonnes per day and up to 100,000 tonnes per year and 5MW thermal input ☐	SR2012 No11
Waste recovery operation – anaerobic digestion facility including the combustion of the resultant biogas	Less than 100 tonnes per day ☐	SR2012 No12
Part A installation – treatment of incinerator bottom ash (IBA)	Over 75,000 tonnes per site ☐	SR2012 No13
Metal recycling, vehicle storage, depollution & dismantling (authorised treatment) facility	Less than 25,000 tonnes a year of waste metal and less than 5,000 tonnes a year of waste motor vehicles. ☐	SR2012 No14
Storage of electrical insulating oils	Less than 500 tonnes a year ☐	SR2012 No15

~~3b SR 2009No8 Management of inert extractive wastes at mines and quarries~~

~~Tick the box to confirm that you have filled in the waste management plan checklist in appendix 2 if you are applying for a standard permit for a mining waste operation~~

☐

3 Standard facilities, continued

For mining waste only please tick which of the following applies

Standalone water discharge ☐

Integral water discharge ☐

3c SR 2009No4 Combustion of biogas in engines at a sewage treatment works

Please tick if answer is yes

3c1 Is the effective stack height more than 3 metres or is the stack height more than 7 metres? ☐

3c2 Do the engine stack gas releases not exceed 500 mg/m³ for oxides of nitrogen and 1400 mg/m³ carbon monoxide? ☐

If both boxes are ticked, the distance limit to dwellings of 200 metres no longer applies, for further guidance see the relevant web page.

3d SR 2010Nos 7, 8, 9 and 10 Deposit for recovery purposes (see the guidance notes on part C1)

3d1 Are you applying for a waste recovery activity involving the permanent deposit on waste on land for construction or land reclamation?

No ☐

Yes ☐

3d2 Have we told you during discussions we have had with you before your application that we believe the activity is waste recovery?

No ☐

Yes ☐

3d3 Have there been any changes to your proposal since the discussions?

No ☐

Yes ☐

3d4 Please send us a copy of your waste recovery plan that complies with Regulatory Guidance Note 13. You need to highlight any changes made since any discussions and tell us below the reference you have given the document.

Document reference

3e SR 2010Nos 2 or 3 Discharges to surface water (see the guidance notes on part C1)

What date do you want this effluent to start?

Please note that charges will start on this date, even if you have not started to discharge, unless you contact us to change (delay) the start date (see guidance notes on part C1).

Please give name of watercourse

We recommend that you contact us during pre-application discussions to find out if your proposed activity meets the nature conservation risk criteria (see guidance notes on part C1).

Please tick this box if we have confirmed that you can meet the nature conservation risk criteria ☐

3f SR 2012No10 On-farm anaerobic digestion facility including use of the resultant biogas

Please tick if answer is yes.

3f1 Is the effective stack height more than 3 metres or is the stack height more than 7 metres? ☐

If this box is ticked, the distance limit to dwellings of 200 metres no longer applies, for further guidance see the relevant web page.

3g Low impact installations (installations only)

Are any of the regulated facilities low impact installations?

No ☐ Now go to section 4

Yes ☐ Please give us a description of your proposed activity and tell us how you meet the conditions for a low impact installation (see the guidance notes on part C1 – appendix 1)

Document reference for the explanation

Tick the box to confirm you have filled in the low impact installation checklist in appendix 1 for each regulated facility ☐

4 General information

4a Provide a plan or plans for the site (see the guidance notes on part C1)

Plan document reference or references

See Section 4.0 Drawings

5 Your ability as an operator (see the guidance notes on part C1 for what needs to be marked on the plan)

5a Relevant offences (installations and waste operations – see the guidance notes)

Have you, or any other relevant person, been convicted of any relevant offence?

No ☐ Now go to question 5b

Yes ☒ Please give details below

Name of the relevant person

Title (Mr, Mrs, Miss and so on)

First name

Last name

Date of birth (DD/MM/YYYY)

Position at the time of the offence

Name of the court

Date of the conviction (DD/MM/YYYY)

Offence and penalty set

Date any appeal against the conviction will be heard (DD/MM/YYYY)

If necessary, use a separate sheet to give us details of other relevant offences (and post conviction plans if relevant) and tell us below the reference number you have given the extra sheet.

Document reference of the extra sheet

Have you sent us a post conviction plan for this offence?

No ☐ You must send us a post conviction plan with this application and give us the document reference below

Document reference

Yes ☒ Please give us the reference for the post conviction plan you have sent and the date sent in

Post conviction plan reference

Date sent in (DD/MM/YYYY)

Now go to question 5b

5b Technical ability (specified waste management activities and waste operations only – see the guidance notes on part C1)

Please tick the scheme you are using to show you have the suitable technical skills and knowledge to manage your facility.

CIWM/WAMITAB



ESA/EU



Please send in a registration letter from your scheme as above



Now go to question 5c

5c Finances (installations, waste operations and mining waste operations only – see the guidance notes on part C1)

Do you or any relevant person have current or past bankruptcy or insolvency proceedings against you?

No ☒

Yes ☐ Please give details below, including the required set-up costs (including infrastructure), maintenance and clean up costs for the proposed facility against which a credit check may be assessed.

We may want to contact a credit reference agency for a report about your business's finances.

6 How to contact us

If you need help filling in this form, please contact the person who sent it to you or contact us as shown below.

General enquiries: 0300 065 3000 (Monday to Friday, 8am to 6pm)

Email: enquiries@naturalresourceswales.gov.uk / ymholiadau@cyfoethnaturiolcymru.gov.uk

Website: www.naturalresourceswales.gov.uk / www.cyfoethnaturiolcymru.gov.uk

If you are happy with our service, please tell us. It helps us to identify good practice and encourages our staff. If you're not happy with our service, please tell us how we can improve it.

Please tell us if you need information in a different language or format (for example, in large print) so we can keep in touch with you more easily.

Feedback

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We want to make our forms easy to fill in and our guidance notes easy to understand. Please use the space below to give us any comments you may have about this form or the guidance notes that came with it.

How long did it take you to fill in this form?

We will use your feedback to improve our forms and guidance notes, and to tell the Government how regulations could be made simpler.

Would you like a reply to your feedback?

Yes please

☐

No thank you

☐

Plain English Campaign's Crystal Mark does not apply to appendices 1 and 2.**Appendix 1 – Low impact installation checklist (see the guidance notes on part C1)**

Installation reference				
Condition	Response			Do you meet this?
A – Management techniques	Provide references to show how your application meets A.			Yes ☐
	References			No ☐
B – Aqueous waste	Effluent created		m ³ /day	Yes ☐ No ☐
C – Abatement systems	Provide references to show how your application meets C.			Yes ☐ No ☐
	References			
D – Groundwater	Do you plan to release any hazardous substances or non-hazardous pollutants into the ground?		Yes ☐ No ☐	Yes ☐ No ☐
E – Producing waste	Hazardous waste		Tonnes per year	Yes ☐ No ☐
	non-hazardous waste		Tonnes per year	
F – Using energy	Peak energy consumption		MW	Yes ☐ No ☐
G – Preventing accidents	Do you have appropriate measures to prevent spills and major releases of liquids? (See 'How to comply'.)		Yes ☐ No ☐	Yes ☐ No ☐
	Provide references to show how your application meets G.			
	References			
H – Noise	Provide references to show how your application meets H.			Yes ☐ No ☐
	References			
I – Emissions of polluting substances	Provide references to show how your application meets I.			Yes ☐ No ☐
	References			
J – Odours	Provide references to show how your application meets J.			Yes ☐ No ☐
	References			
K – History of keeping to the regulations	Say here whether you have been involved in any enforcement action as described in Compliance History Appendix 1 explanatory notes.		Yes ☐ No ☐	

Appendix 2 – Waste management plan checklist for standard permit applications for mining waste operations

Waste management plan checklist for standard rules SR2009No8 – the management of inert wastes and unpolluted soil resulting from the prospecting, extraction, treatment and storage of mineral resources and the working of quarries, at mines and quarries

Name of operator

Name of site

Please confirm whether the standard answers apply to you in the Yes/No/NA column.

Questions	Answers
Do you have a waste management plan that you will operate to for the minimisation, treatment, recovery and safe disposal of extractive waste?	Yes ☐ No ☐
Is it available for inspection by the Natural Resources Wales on request?	Yes ☐ No ☐
If the waste will be deposited, or will accumulate in a waste facility, does your waste management plan provide justification that it is not a Category A facility?	Yes ☐ No ☐ NA ☐
Does your waste management plan characterise the waste in accordance with Annex II of the Directive?	Yes ☐ No ☐
Does your waste management plan confirm that the waste is inert?	Yes ☐ No ☐
Does your waste management plan provide an estimate of the total quantity of extractive waste to be generated during the operational phase?	Yes ☐ No ☐
Does your waste management plan describe the operation generating the waste and any subsequent treatment of the waste?	Yes ☐ No ☐
Does your waste management plan contain a description of how the environment and human health could be adversely affected by the deposit of extractive waste and the preventive measures that you will take in order to minimise the environmental impact during operation and after closure, including any control and monitoring procedures? Note: the plan should include, but not be limited to, selection of the location of the facility, preventive measures to minimise dust, noise, vibration and the run-off of waste from the activities.	Yes ☐ No ☐
Does your waste management plan contain a proposed plan for the closure of the site?	Yes ☐ No ☐
If you operate a mining waste facility, does your waste management plan contain a survey of the condition of the land to be affected by the waste facility?	Yes ☐ No ☐ NA ☐

Does the mining waste operation includes one or more inert mining waste facilities?

No ☐

Yes ☐ Provide the number of inert mining waste facilities

Sector category

Tick the correct category below:

Construction minerals

☐

Metallic minerals

☐

Industrial minerals

☐

Energy minerals

☐

Other sectors

☐

Please provide details below

Explanatory notes to checklist

- This checklist applies only to standard permit applications.
- The Natural Resources Wales will not need to see the waste management plan as part of the application for a standard permit.
- The waste management plan itself may include material prepared for other purposes, such as planning applications and health and safety legislation.
- You must review your waste management plan at least every five years and, where necessary, amend the plan.
- We will monitor the implementation of the waste management plan as part of our compliance work.

Application for an environmental permit – Part C2 – General – varying a bespoke permit



**Cyfoeth
Naturiol
Cymru
Natural
Resources
Wales**

Fill in this part of the form, together with part A and the relevant parts of C3 to C7 and part F1 or F2, if you are applying to vary (change) the conditions or any other part of the permit. Please check that this is the latest version of the form available from our website.

You only need to give us details in this application for the parts of the permit that will be affected (for example, if you are adding a new facility or changing existing ones).

You do not need to resend any information from your original permit application if it is not affected by your proposed changes.

Please read through this form and the guidance notes that came with it. All relevant guidance documents can be found on our website. Please write clearly in the answer spaces.

It will take less than two hours to fill in this form.

Contents

- 1 About the permit
- 2 About your proposed changes
- 3 Your ability as an operator
- 4 Consultation
- 5 Supporting information
- 6 Environmental risk assessment
- 7 How to contact us

Appendix 1 – Low impact installation checklist

1 About the permit

Note: If you are applying to convert your existing permit to a standard permit or add a standard facility you need to fill out form C1.

1a Discussions before your application

If you have had discussions with us before your application, provide the case reference number or details on a separate sheet and tell us below the reference you have given the document.

Case or document reference

Pre-application meeting with Dave Griffiths, April 2015

1b Permit number

What is the permit number that this application relates to?

EPR/RP3733PC/V008

1c Site details

What is the name, address and postcode of the site?

Site name

Trecatti Landfill Site

Address

Fochriw Road

Merthyr Tydfil

Mid Glamorgan

Postcode

CF48 4AB

2 About your proposed changes

2a Type of variation

What type of variation are you applying for? (Please tick)

Standalone water discharge activity or point source groundwater activity

☐

Minor technical

☐

Normal variation

☐

Substantial

☒

2 About your proposed changes, continued

2b Changes or additions to existing activities

Please give us brief details in the box below. More detailed information can be given in Table 1 below.

The addition of a Directly Associated Activity in the form of a Waste Treatment facility and listed composting activity to the existing Trecatti Landfill site (reference 407.00034.00461/NTS)

Fill in Table 1 with details of all the proposed changes to current activities. In the final column of the table, give us the document reference for the proposed changes and send them to us with your filled in application form.

Fill in a separate table for each activity you are applying to vary or add. Use a separate sheet if you have a long list and send it to us with your application form. Tell us below the reference you have given this document.

Document reference

You only need to fill in one table for your mining waste operations.

If your proposed change is to modernise (update) your permit, now answer 2c1 otherwise go to 2d.

If your proposed change is to consolidate (combine) a number of permits, now answer 2c2 otherwise go to 2d.

Note: In both cases we may require additional information from you about, for example your management system. Therefore we would always advise you to talk to us before you submit any application to modernise or consolidate permits.

2c Consolidating existing permits

2c1 Do you want to have a modern style permit?

No ☐

Yes ☒

2c2 Identify all the permits you want to consolidate by listing the permit numbers in Table 2 below.

Table 2 – Permit numbers

2d Treating batteries

Are you proposing to treat batteries?

No ☒

Yes ☐ Tell us how you will do this and send us a copy of your explanation

Document reference for the explanation

2e Low impact installations (installations only)

Will any changes mean that any of the regulated facilities will become low impact installations?

No ☒ Now go to section 3

Yes ☐

If yes, tell us how you meet the conditions for a low impact installation (see the guidance in appendix 1).

Document reference for the explanation

Tick the box to confirm you have filled in the low impact installation checklist in appendix 1 for each regulated facility. ☐

Now go to section 3

Table 1 – Changes to existing activities

Name	Installation schedule 1 references	Description of the installation activity	Description of waste operation	Description of the mining waste operations	Description of water discharge activity	Description of groundwater activity	Proposed changes document reference
i.e. name of installation, waste operation, mining waste operation, water discharge activity or groundwater activity							
Example – Effluent unique name					Example – treated sewage effluent		
If you do not have enough room, go to the line below or send a separate document and give us the document reference here							
Trecatti landfill	S5.2 Part A(1)(a)	Disposal of Waste					See 407.00034.00461
		By Landfill					Non Technical
							Summary

3 Your ability as an operator

If you are applying to add waste installations or waste operations to a permit that has not previously had them, you need to fill in all of section 3.

If you are applying to consolidate two or more permits or have an updated permit you must fill in question 3d.

This section does not apply for applications to surrender a permit.

3a Relevant offences (installations and waste operations only – see the guidance notes on part C2)

Have you, or any other relevant person, been convicted of any relevant offence?

No ☐ Now go to question 3b

Yes ☒ Please give details below

Name of the relevant person

Title (Mr, Mrs, Miss and so on)

First name

Last name

Date of birth (DD/MM/YYYY)

Position at the time of the offence

Name of the court

Date of the conviction (DD/MM/YYYY)

Offence and penalty set

Date any appeal against the conviction will be heard

(DD/MM/YYYY)

If necessary, use a separate sheet to give us details of other relevant offences (and post conviction plans if relevant) and tell us below the reference number you have given the extra sheet.

Document reference of the extra sheet

Have you sent us a post conviction plan for this offence?

No ☐ You must send us a post conviction plan with this application and give us the document reference below

Document reference

Yes ☒ Please give us the reference for the post conviction plan you have sent and the date sent in

Post conviction plan reference

Date sent in (DD/MM/YYYY)

Now go to question 3b

3b Technical ability (specified waste management activities and waste operations only – see the guidance notes on part C2)

Please tick the scheme you are using to show you have the suitable technical skills and knowledge to manage your facility.

CIWM/WAMITAB ☒

ESA/EU ☐

Please send in a registration letter from your scheme as above ☒

Now go to question 3c

3c Finances (installations, waste operations and mining waste operations – see the guidance notes on part C2)

Do you or any relevant person have current or past bankruptcy or insolvency proceedings against you?

No ☒

Yes ☐ Please give details below, including the required set-up costs (including infrastructure), maintenance and clean up costs for the proposed facility against which a credit check may be assessed.

We may want to contact a credit reference agency for a report about your business's finances.

3 Your ability as an operator, continued**Landfill, Category A mining waste facilities and mining waste facilities for hazardous waste only**

How do you plan to make financial provision (to operate a landfill or a mining waste facility you need to show us that you are financially capable of meeting the obligations of closure and aftercare)?

- Bonds ☐
- Escrow account ☐
- Trust fund ☐
- Lump sum ☐
- Other ☐

Provide a plan of your estimated expenditure on each phase of the landfill or mining waste facility.

Give the document plan reference number

Now go to question 3d

3d Management systems

You can find guidance on management systems in both 'How to Comply' and 'Horizontal Guidance Note 6 – Environmental Management Systems'. We have also developed environmental management toolkits for some business sectors which you can use to produce your own management system. You can get these by calling 0300 065 3000 or by downloading them from our guidance webpages.

Does your management system meet the conditions set out in our guidance?

No ☐

Yes ☒

What management system will you provide for your regulated facility?

- EC Eco-Management and Audit Scheme (EMAS) ☒
- ISO 14001 ☐
- BS 8555 (Phases 1–5) ☐
- Green Dragon ☐
- Own management system ☐

You must send us a summary of your management system with your application.

Document reference or references for this summary

4 Consultation (fill in 4a to 4c for installations and waste operations and 4d for installations only)

Could the waste operation or installation involve releasing any substance into any of the following?

4a A sewer managed by a sewerage undertaker?

No ☐

Yes ☒ Please name the sewerage undertaker

Dwr Cymru Welsh Water

4b A harbour managed by a harbour authority?

No ☒

Yes ☐ Please name the harbour authority

4c Directly into relevant territorial waters or coastal waters within the sea fisheries district of a local fisheries committee?

No ☒

Yes ☐ Please name the fisheries committee

4 Consultation (fill in 4a to 4c for installations and waste operations and 4d for installations only), continued

4d Is the installation on a site for which

4d1 a nuclear site licence is needed under section 1 of the Nuclear Installations Act 1965?

No ☒

Yes ☐

4d2 a policy document for preventing major accidents is needed under regulation 5 of the Control of Major Accident Hazards Regulations 1999, or a safety report is needed under regulation 7 of those regulations?

No ☒

Yes ☐

5 Supporting information

5a Provide a plan or plans for the site (see the guidance notes on part C2 for what needs to be marked on the plan)

Document plan reference or references

See Section 4.0 Drawings

5b Do any of the variations you plan to make need extra land to be included in the permit?

No ☒

Yes ☐ Please provide a site report for the extra land.

Document report reference or references

5c Provide a non-technical summary of your application

Document reference

407.00034.00461/NTS

5d Adding an installation

If you are applying to add an installation, tick the box to confirm that you have sent in a baseline report and provide a reference.

☐

Document reference of the report

6 Environmental risk assessment (if you need one – see the guidance notes on part C2)

Provide an assessment of the risks each of your proposed activities cause to the environment. The risk assessment must use H1 or an equal method.

Document reference of the assessment

407.00034.00461/H1

7 How to contact us

If you need help filling in this form, please contact the person who sent it to you or contact us as shown below.

General enquiries: 0300 065 3000 (Monday to Friday, 8am to 6pm)

Email: enquiries@naturalresourceswales.gov.uk / ymholiadau@cyfoethnaturiolcymru.gov.uk

Website: www.naturalresourceswales.gov.uk / www.cyfoethnaturiolcymru.gov.uk

If you are happy with our service, please tell us. It helps us to identify good practice and encourages our staff. If you're not happy with our service, please tell us how we can improve it.

Please tell us if you need information in a different language or format (for example, in large print) so we can keep in touch with you more easily.

Feedback

(You don't have to answer this part of the form, but it will help us improve our forms if you do.)

We want to make our forms easy to fill in and our guidance notes easy to understand. Please use the space below to give us any comments you may have about this form or the guidance notes that came with it.

How long did it take you to fill in this form?

We will use your feedback to improve our forms and guidance notes, and to tell the Government how regulations could be made simpler.

Would you like a reply to your feedback?

Yes please

☐

No thank you

☐

Plain English Campaign's Crystal Mark does not apply to appendix 1.**Appendix 1 – Low impact installation checklist**

Installation reference				
Condition	Response			Do you meet this?
A – Management techniques	Provide references to show how your application meets A.			Yes ☐
	References			No ☐
B – Aqueous waste	Effluent created		m ³ /day	Yes ☐ No ☐
C – Abatement systems	Provide references to show how your application meets C.			Yes ☐
	References			No ☐
D – Groundwater	Do you plan to release any hazardous substances or non-hazardous pollutants into the ground?		Yes ☐ No ☐	Yes ☐ No ☐
E – Producing waste	Hazardous waste		Tonnes per year	Yes ☐
	Non-hazardous waste		Tonnes per year	No ☐
F – Using energy	Peak energy consumption		MW	Yes ☐ No ☐
G – Preventing accidents	Do you have appropriate measures to prevent spills and major releases of liquids? (See 'How to comply'.)		Yes ☐ No ☐	Yes ☐ No ☐
	Provide references to show how your application meets G.			
	References			
H – Noise	Provide references to show how your application meets H.			Yes ☐
	References			No ☐
I – Emissions of polluting substances	Provide references to show how your application meets I.			Yes ☐
	References			No ☐
J – Odours	Provide references to show how your application meets J.			Yes ☐
	References			No ☐
K – History of keeping to the regulations	Say here whether you have been involved in any enforcement action as described in Compliance History Appendix 1 explanatory notes.		Yes ☐ No ☐	

Application for an environmental permit

Part C3 – Variation to a bespoke installation permit



Fill in this part of the form, together with part A, part C2 and part F1, if you are applying to vary (change) the conditions or any other part of the permit. Please check that this is the latest version of the form available from our website.

You only need to give us details in this application for the parts of the permit that will be affected (for example, if you are adding a new facility or making changes to existing ones).

You do not need to resend any information from your original permit application if it is not affected by your proposed changes.

Please read through this form and the guidance notes that came with it. All relevant guidance documents can be found on our website. Please write clearly in the answer spaces.

It will take less than three hours to fill in this part of the application form.

Contents

- 1 What activities are you applying to vary?
- 2 Emissions to air, water and land
- 3 Operating techniques
- 4 Monitoring
- 5 Environmental impact assessment
- 6 Resource efficiency and climate change
- 7 How to contact us

Appendix 1 – Specific questions for the combustion sector

Appendix 2 – Specific questions for the chemical sector

Appendix 3 – Specific questions for the intensive farming sector

Appendix 4 – Specific questions for the clinical waste sector

Appendix 5 – Specific questions for the hazardous and non-hazardous waste recovery and disposal sector

Appendix 6 – Specific questions for the waste incineration sector

Appendix 7 – Specific questions for the landfill sector

1 What activities are you applying to vary?

Fill in Table 1a below with details of all the activities listed in schedule 1 of the Environmental Permitting Regulations (EPR) and all directly associated activities (DAAs) (in separate rows), that you propose to carry out at the installation.

Fill in a separate table for each installation you are applying to vary. Use a separate sheet if you have a long list and send it to us with your application form. Tell us below the reference you have given the document.

Document reference

Please see 407.00034.00461/NTS

Table 1a – Types of activities

Schedule 1 listed activities						
Installation name	Schedule 1 references (See note 1)	Description of the Activity (See note 2)	Activity capacity (See note 3)	Annex IIA or IIB (disposal and recovery) codes and descriptions	Hazardous waste treatment capacity (if this applies) (See note 3)	Non-hazardous waste treatment capacity (if this applies) (See note 3)
Add extra rows if you need them. If you do not have enough room, go to the line below or send a separate document and give us the document reference here	Put your main activity first			For installations that take waste only	For installations that take waste only	For installations that take waste only
Trecatti Landfill	Section 5.2 Part A(1) (a)	407.00034.00461/NTS		No Change		
Directly associated activities (See note 4)						
Name of DAA		Description of the DAA (please identify the schedule 1 activity it serves)				
Add extra rows if you need them						
Trecatti Waste Treatment Facility		Section 5.3 A(1)(a)(vi), Section 5.4 A(1)(b)(i)				
		Section 5.3 A(1)(a)(iii), Section 5.6 A(1)(a)				
For installations that take waste		Total storage capacity (See note 5 below) 22,500.00				
		Annual throughput (tonnes each year) 30,000.00				

1 What activities are you applying to vary?, continued

Notes

- 1 Quote the section number, part A1 or A2 or B, then paragraph and sub paragraph number as shown in part 2 of schedule 1 to the regulations.
- 2 Use the description from schedule 1 of the regulations. Include any extra detail that you think would help to accurately describe what you want to do.
- 3 By 'capacity', we mean:
 - the total incineration capacity (tonnes every hour) for waste incinerators;
 - the total landfill capacity (cubic metres) for landfills;
 - the total treatment capacity (tonnes each day) for waste treatment;
 - the total storage capacity (tonnes) for waste storage operations;
 - the processing and production capacity for manufacturing operations; or
 - the thermal input capacity for combustion activities.
- 4 Fill this in as a separate line and give an accurate description of any other activities associated with your schedule 1 activities. You cannot have DAAs as part of a mobile plant application.
- 5 By 'total storage capacity', we mean the maximum amount of waste, in tonnes, you store on the site at any one time.

Types of waste accepted

For those installations that take waste, for each line in Table 1a (including DAAs), fill in a separate document to list those wastes you will accept on to the site for that activity. Give the List of Wastes catalogue code and description. If you need to exclude waste from your activity or facility by restricting the description, quantity, physical nature, hazardous properties, composition or characteristic of the waste, include these in the document. Send it to us with your application form.

Please provide the reference for each document

You can use Table 1b as a template.

If you want to accept any wastes with a code ending in 99, you must give us more information and a full description.

Document reference for this extra information

See Appendix C3_1

Table 1b – Template example – types of waste accepted and restrictions

Waste code	Description of waste
Example 02 01 08*	Example Agrochemical waste containing dangerous substances
06 01 02*	Hydrochloric acid

2 Emissions to air, water and land

Fill in Table 2 below with details of the emissions that result from the operating techniques at each of your installations.

Fill in one table for each installation.

Table 2 – Emissions

Installation name	Trecatti Waste Treatment Facility			
Point source emissions to air				
Emission point reference and location	Source	Parameter	Quantity	Unit
N/A				

2 Emissions to air, water and land, continued

Table 2 – Emissions, continued

Point source emissions to water (other than sewers)				
Emission point reference and location	Source	Parameter	Quantity	Unit
N/A				
Point source emissions to sewers, effluent treatment plants or other transfers off site				
Emission point reference and location	Source	Parameter	Quantity	Unit
407.00034.00461/BATOT & H1				
Point source emissions to land				
Emission point reference and location	Source	Parameter	Quantity	Unit
n/a - not affected by the proposed variation				

Supporting information

3 Operating techniques

3a Technical standards

Fill in Table 3 for each activity, at the installation you have referred to in Table 1a above. List the relevant technical guidance note (TGN) or notes you are planning to use. If you are planning to use the standards set out in the TGN, there is no need to justify using them.

You must justify your decisions in a separate document if:

- there is no technical standard;
- the technical guidance provides a choice of standards; or
- you plan to use another standard.

This justification could include a reference to the Environmental Risk Assessment provided in section 7 of part C2 (general bespoke permit) of the application form.

The documents you have referenced in Table 3 should summarise the main measures you use to control the main issues identified in the H1 assessment or technical guidance. For each of the activities listed in Table 3, describe the type of operation and the options you have chosen for controlling emissions from your process.

3 Operating techniques, continued

Table 3 – Technical standards

Fill in a separate table for each activity at the installation.

Installation name	Trecatti WTF	
Description of the schedule 1 activity or directly associated activity	Relevant technical guidance note or Best available techniques as described in BAT conclusions under IED (see footnote below. You will need to refer to 'How to comply' for all permits)	Document reference (if appropriate)
	'How to comply'	
Trecatti Waste Treatment Facility	EA Guidance EPR 1.00 How to Comply	407.00034.00461/BATOT
	Sector Guidance note IPPC S5.06	407.00034.00461/BATOT

*Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control)

If appropriate, use block diagrams to help describe the operation and process. Provide the references for the description.

Document reference for the diagram or description

407.00034.00461/BATOT

3b General requirements

Fill in a separate Table 4 for each installation.

Table 4 – General requirements

Name of the installation	Trecatti Waste Treatment Facility
If the TGN or H1 assessment shows that emissions of substances not controlled by emission limits are an important issue, send us your plan for managing them	Document reference or references n/a
Where the TGN or H1 assessment shows that odours are an important issue, send us your odour management plan	Document reference or references n/a
If the TGN or H1 assessment shows that noise or vibration are important issues, send us your noise or vibration management plan (or both)	Document reference or references n/a

3c Types and amounts of raw materials

Fill in Table 5 for all schedule 1 activities. Fill in a separate table for each installation.

Table 5 – Types and amounts of raw materials

Name of the installation		Trecatti Waste Treatment Facility		
Capacity (See note 1 below)				
Schedule 1 activity	Description of raw material and composition	Maximum amount (tonnes) (See note 2 below)	Annual throughput (tonnes each year)	Description of the use of the raw material including any main hazards (include safety data sheets)
Section 5.3 A(1)(a)(vi)	See 407.00034.00461/			
Section 5.4 A(1)(b)(i)	BATOT			

Notes

1 By 'capacity', we mean the total storage capacity (tonnes) or total treatment capacity (tonnes each day).

2 By 'maximum amount', we mean the maximum amount of raw materials on the site at any one time.

3 Operating techniques, continued

Use a separate sheet if you have a long list of raw materials, and send it to us with your application form. Please also provide the reference for this extra sheet.

Document reference for the sheet

407.00034.00461/BATOT

3d Information for specific sectors

For some of the sectors, we need more information to be able to set appropriate conditions in the permit. This is as well as the information you may provide in sections 5, 6 and 7. For those activities listed below, you must answer the questions in the related document.

Table 6 – Questions for specific sectors

Sector	Appendix
Combustion	See the questions in appendix 1
Chemicals	See the questions in appendix 2
Intensive farming	See the questions in appendix 3
Clinical waste	See the questions in appendix 4
Hazardous and non-hazardous waste recovery and disposal	See the questions in appendix 5
Incinerating waste	See the questions in appendix 6
Landfill	See the questions in appendix 7

General information

4 Monitoring

4a Describe the measures you use for monitoring emissions by referring to each emission point in Table 2 above

You should also describe any environmental monitoring. Tell us:

- how often you use these measures;
- the methods you use; and
- the procedures you follow to assess the measures.

Document reference

n/a - no change resulting from the proposed variation

4b Point source emissions to air only

Provide an assessment of the sampling locations used to measure point source emissions to air. The assessment must use M1.

Document reference of the assessment

n/a - no change resulting from the proposed variation

5 Environmental impact assessment

5a Have your proposals been the subject of an environmental impact assessment under Council Directive 85/337/EEC of 27 June 1985 [Environmental Impact Assessment]?

No ☒

Yes ☐ Please provide a copy of the environmental statement and, if the procedure has been completed:

- a copy of the planning permission; and
- the committee report and decision on the EIA.

Document reference for the copy

6 Resource efficiency and climate change

If the site is a landfill, you only need to fill in this section if the application includes landfill gas engines.

6a Describe the basic measures for improving how energy efficient your activities are

Document reference for the description

407.00034.00461/BATOT

6b Provide a breakdown of any changes to the energy your activities use up and create

Document reference for the description

407.00034.00461/BATOT

6c Have you entered into, or will you enter into, a climate change levy agreement?

No ☒ Describe the specific measures you use for improving your energy efficiency.

Document reference for the description

6 Resource efficiency and climate change, continued

Yes ☐ Please give the date you entered (or the date you expect to enter) into the agreement. Please also provide documents that prove you are taking part in the agreement (DD/MM/YYYY)

Document reference of proof

6d Explain and justify the raw and other materials, other substances and water that you will use

Document reference of the justification

407.00034.00461/BATOT

6e Describe how you avoid producing waste in line with Council Directive 2008/98/EC on waste

If you produce waste, describe how you recover it. If it is technically and financially impossible to recover the waste, describe how you dispose of it while avoiding or reducing any effect it has on the environment.

Document reference of the description

407.00034.00461/BATOT

7 How to contact us

If you need help filling in this form, please contact the person who sent it to you or contact us as shown below.

General enquiries: 0300 065 3000 (Monday to Friday, 8am to 6pm)

Email: enquiries@naturalresourceswales.gov.uk / ymholiadau@cyfoethnaturiolcymru.gov.uk

Website: www.naturalresourceswales.gov.uk / www.cyfoethnaturiolcymru.gov.uk

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Please tell us if you need information in a different language or format (for example, in large print) so we can keep in touch with you more easily.

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How long did it take you to fill in this form?

We will use your feedback to improve our forms and guidance notes, and to tell the Government how regulations could be made simpler.

Would you like a reply to your feedback?

Yes please

☐

No thank you

☐

Plain English Campaign's Crystal Mark does not apply to appendices 1 to 7.**Appendix 1 – Specific questions for the combustion sector****1 Identify the type of fuel burned in your combustion units (including when your units are started up, shut down and run as normal). If your units are dual fuelled (that is, use two types of fuel), list both the fuels you use**

Fill in a separate table for each installation.

Installation reference			
Type of fuel	When run as normal	When started up	When shut down
Coal			
Gas oil			
Heavy fuel oil			
Natural gas			
WID waste			
Biomass (see notes 1 and 2 below)			
Biomass (see notes 1 and 2 below)			
Biomass (see notes 1 and 2 below)			
Biomass (see notes 1 and 2 below)			
Biomass (see notes 1 and 2 below)			
Other			

Notes

1 Not covered by Industrial Emissions Directive 2010/75/EU.

2 'Biomass' is referred to in www.opsi.gov.uk/si/si2002/20020914.htm.

Give extra information if it helps to explain the fuel you use.

Document reference

2 Give the composition range of any fuels you are currently allowed to burn in your combustion plant

Fill in a separate table for each installation.

Fuel use and analysis					
Installation reference					
Parameter	Unit	Fuel 1	Fuel 2	Fuel 3	Fuel 4
Maximum percentage of gross thermal input	%				
Moisture	%				
Ash	% wt/wt dry				
Sulphur	% wt/wt dry				
Chlorine	% wt/wt dry				
Arsenic	% wt/wt dry				
Cadmium	% wt/wt dry				
Carbon	% wt/wt dry				
Chromium	% wt/wt dry				
Copper	% wt/wt dry				
Hydrogen	% wt/wt dry				
Lead	% wt/wt dry				
Mercury	% wt/wt dry				
Nickel	% wt/wt dry				
Nitrogen	% wt/wt dry				
Oxygen	% wt/wt dry				
Vanadium	mg/kg dry				
Zinc	mg/kg dry				
Net calorific value	MJ/kg				

Appendix 1 – Specific questions for the combustion sector, continued**3 If NO_x factors are necessary for reporting purposes (that is, if you do not need to monitor emissions), please provide the factors associated with burning the relevant fuels**

Fill in a separate table for each installation.

Installation reference	
Fuel	NO _x factor (kg t ⁻¹)
Fuel 1	
Fuel 2	
Fuel 3	
Fuel 4	

Note: kg t⁻¹ means kilograms of nitrogen oxides released for each tonne of fuel burned.**4 Will your combustion plant be subject to Chapter III of the Industrial Emissions Directive 2010/75/EU? (see Government Guidance)**No ☐ Now fill in part FYes ☐**5 Is your plant**an existing plant (a plant licensed before 1 July 1987)? ☐a new plant (a plant licensed on or after 1 July 1987 but before 27 November 2002, or a plant for which an application was made before 27 November 2002 and which was put into operation before 27 November 2003)? ☐

or

a new-new plant (a plant for which an application was made on or after 27 November 2002)? ☐**6 If you run more than one type of plant or a number of the same type of plant on your installation, please list them in the table below**

Fill in a separate table for each installation.

Installation reference	
Type of plant	Number within installation
Existing	
New	
New-new	
Gas turbine (group A)	
Gas turbine (group B)	

7 If you run an existing plant, have you submitted a declaration for the 'limited life derogation' set out in Article 33 of Chapter III of the Industrial Emissions Directive?No ☐ Now go to section 9Yes ☐**8 Have you subsequently withdrawn your declaration?**No ☐Yes ☐**9 List the existing large combustion plants (LCPs) which have annual mass allowances under the National Emission Reduction Plan (NERP), and those with emission limit values (ELVs) under the LCPD**

Installation reference	
LCPs under NERP	LCPs with ELVs

Appendix 1 – Specific questions for the combustion sector, continued

10 Do you meet the monitoring requirements of Chapter III of the Industrial Emissions Directive?

Yes ☐

Document reference number

Appendix 2 – Specific questions for the chemical sector**1 Please provide a technical description of your activities**

The description should be enough to allow us to understand:

- the process;
- the main plant and equipment used for each process;
- all reactions, including significant side reactions (that is, the chemistry of the process);
- the material mass flows (including by products and side streams) and the temperatures and pressures in major vessels;
- the all emission control systems (both hardware and management systems), for situations which could involve releasing a significant amount of emissions – particularly the main reactions and how they are controlled;
- a comparison of the indicative BATs and benchmark emission levels standards in Technical Guidance Notes (TGNs) EPR 4.01, EPR 4.02 and EPR 4.03 and chemical sector BREFs.

Document reference

2 If you are applying for a multi-purpose plant, do you have a multi-product protocol in place to control the changes?

No ☐

Yes ☐ Provide a copy of your protocol to accompany this application

Document reference

3 Does Chapter V of the Industrial Emissions Directive (IED) apply to your activities?

No ☐

Yes ☐ Fill in the following

3a List the activities which are controlled under the IED

Installation reference	
Activities	

3b Describe how the list of activities in question 3a above meets the requirements of the IED

Document reference

Appendix 3 – Specific questions for the intensive farming sector

1 For each type of livestock, tell us the number of animal places you are applying for

Installation reference	
Type of livestock	Number of places

2 Is manure or slurry exported from the site?

No ☐

Yes ☐

3 Is manure or slurry spread on the site?

No ☐

Yes ☐

Appendix 4 – Specific questions for the clinical waste sector

If you are applying for an activity covered by the Waste Incineration Directive and wish to accept clinical waste you should fill in questions 1, 2 and 3 of this appendix.

Note: If your procedures are fully in line with the standards set out in EPR5.07 then you should tick the 'yes' box and provide the procedure reference. There is no need for you to supply a copy of the procedure.

1 Are pre-acceptance procedures in place that are fully in line with the appropriate measures set out in section 2.2 of EPR 5.07 and which are used to assess a waste enquiry before it is accepted at the installation?

No ☐ Provide justification for departure from EPR 5.07 and submit a copy of the procedures

Document reference

Yes ☐ Document reference

2 Are waste acceptance procedures in place that are fully in line with the appropriate measures set out in section 2.2 of EPR 5.07, and which are used to cover issues such as loads arriving and being inspected, sampling waste, rejecting waste, and keeping records to track waste?

No ☐ Provide justification for departure from EPR 5.07 and submit a copy of the procedures

Document reference

Yes ☐ Document reference

3 Are waste storage, handling and dispatch procedures, and infrastructure in place that are fully in line with the appropriate measures set out in section 3.2 of EPR 5.07?

No ☐ Provide justification for departure from EPR 5.07 and submit a copy of the procedures

Document reference

Yes ☐ Document reference

4 Are monitoring procedures in place that are fully in line with the appropriate measures set out in section 3.3 of EPR 5.07?

No ☐ Provide justification for departure from EPR 5.07 and submit a copy of the procedures

Document reference

Yes ☐ Document reference

5 Are you proposing to either

- accept an additional waste not included in Table 2.1 of section 2.1 of EPR 5.07, or
- apply a permitted activity to a waste other than that identified for that waste in Table 2.1?

No ☐

Yes ☐ Provide justification

Document reference

6 Please provide a summary description of the treatment activities undertaken on the installation. This should cover the general principles set out in section 2.1.4 of EPR 5.07

Document reference

7 Please provide layout plans detailing the location of each treatment plant and main plant items and process flow diagrams for the treatment plant

Document reference

Appendix 5 – Specific questions for the hazardous and non-hazardous waste recovery and disposal sector

Note: If your procedures are fully in line with the standards set out in SGN 5.06 then you should tick the ‘yes’ box and provide the procedure reference. There is no need for you to supply a copy of the procedure.

1 Are pre-acceptance procedures in place that are fully in line with the appropriate measures set out in section 2.1.1 of SGN 5.06, and which are used to assess a waste enquiry before it is accepted at the installation?

No ☐ Provide justification for departure from SGN 5.06 and submit a copy of the procedures

Document reference

Yes ☒ Document reference

407.00034.00461/BATOT

2 Are waste acceptance procedures in place that are fully in line with the appropriate measures set out in section 2.1.2 of SGN 5.06, and which are used to cover issues such as loads arriving and being inspected, sampling waste, rejecting waste, and keeping records to track waste?

No ☐ Provide justification for departure from SGN 5.06 and submit a copy of the procedures

Document reference

Yes ☒ Document reference

407.00034.00461/BATOT

3 Are waste storage procedures and infrastructure in place that are fully in line with the appropriate measures set out in section 2.1.3 of SGN 5.06?

No ☒ Provide justification for departure from SGN 5.06 and submit a copy of the procedures

Document reference

407.00034.00461/BATOT

Yes ☐ Document reference

4 Provide a layout plan giving details of where the installation is based, the infrastructure in place (including areas and structures for separately storing types of waste which may be dangerous to store together) and capacity of waste storage areas and structures

Document reference

Section 4.0 Drawings

5 Provide a summary of the treatment activities carried out on the installation. This should cover the general principles set out in section 2.1.4 of SGN 5.06 and the specific principles set out in sections 2.1.5 to 2.1.15 as appropriate of SGN 5.06

Document reference

407.00034.00461/BATOT

6 Provide layout plans giving details of where each treatment plant is based, the main items at each plant, and process flow diagrams for the treatment plant

Document reference or references

Section 4.0 Drawings

Appendix 6 – Specific questions for the waste incineration sector

If you are proposing to accept clinical waste please also fill in questions 1, 2 and 3 of appendix 4 above.

1a Do you run incineration plants as defined by Chapter IV of the Industrial Emissions Directive (IED)?

No ☐ You do not need to answer any other questions in this appendix

Yes ☐ WID applies

1b Are you subject to IED as an incinerator or co-incinerator?

As an incinerator ☐

As a co-incinerator ☐

2 Do any of the installations contain more than one incineration line?

No ☐ Now go to section 4

Yes ☐

3 How many incineration lines are there within each installation?

Fill in a separate table for each installation

Installation reference	
Number of incineration lines within the installation	
Reference identifiers for each line	

You must provide the information we ask for in questions 4, 5 and 6 below in separate documents. The information must at least include all the details set out in section 2 ('Key Issues') of TGN S5.01 (under the sub heading 'European legislation and your application for an EP Permit').

You must answer questions 7 to 13 on the form below.

4 Describe how the plant is designed, equipped and will be run to make sure it meets the requirements of IED, taking into account the categories of waste which will be incinerated

Document reference

5 Describe how the heat created during the incineration and co-incineration process is recovered as far as possible (for example, through combined heat and power, creating process steam or district heating)

Document reference

6 Describe how you will limit the amount and harmful effects of residues and describe how they will be recycled where this is appropriate

Document reference

For each line identified in question 3, answer questions 7 to 13 below

Question 3 identifier, if necessary

7 Do you want to take advantage of the Article 45 (1)(f) allowance (see below) if the particulates, CO or TOC continuous emission monitors (CEM) fail?

No ☐

Yes ☐ This allows 'abnormal operation' of the incineration plant under certain circumstances when the CEM for releases to air have failed. Annex VI, Part 3(2) sets maximum half hourly average release levels for particulates (150mg/m³), CO (normal ELV) and TOC (normal ELV) during abnormal operation.

Describe the other system you use to show you keep to the requirements of Article 13(4) (for example, using another CEM, providing a portable CEM to insert if the main CEM fails, and so on).

Appendix 6 – Specific questions for the waste incineration sector, continued

8 Do you want to replace continuous HF emission monitoring with periodic hydrogen fluoride (HF) emission monitoring by relying on continuous hydrogen chloride (HCl) monitoring as allowed by IED Annex VI, Part 6 (2.3)?

Under this you do not have to continuously monitor emissions for hydrogen fluoride if you control hydrogen chloride and keep it to a level below the HCl ELVs.

No ☐

Yes ☐ Please give reasons for doing this

9 Do you want to replace continuous water vapour monitoring with pre-analysis drying of exhaust gas samples, as allowed by IED Annex VI, Part 6 (2.4)?

Under this you do not have to continuously monitor the amount of water vapour in the air released if the sampled exhaust gas is dried before the emissions are analysed.

No ☐

Yes ☐ Please give your reasons for doing this

10 Do you want to replace continuous hydrogen chloride (HCl) emission monitoring with periodic HCl emission monitoring, as allowed by IED Annex VI, Part 6 (2.5), first paragraph?

Under this you do not have to continuously monitor emissions for hydrogen chloride if you can prove that the emissions from this pollutant will never be higher than the ELVs allowed.

No ☐

Yes ☐ Please give your reasons for doing this

Appendix 6 – Specific questions for the waste incineration sector, continued

11 Do you want to replace continuous HF emission monitoring with periodic HF emission monitoring, as allowed by IED Annex VI, Part 6 (2.5), first paragraph?

Under this you do not have to continuously monitor emissions for hydrogen fluoride if you can prove that the emissions from this pollutant will never be higher than the ELVs allowed.

No ☐

Yes ☐ Please give your reasons for doing this

12 Do you want to replace continuous SO₂ emission monitoring with periodic sulphur dioxide (SO₂) emission monitoring, as allowed by IED Annex VI, Part 6 (2.5), first paragraph?

Under this you do not have to continuously monitor emissions for sulphur dioxide if you can prove that the emissions from this pollutant will never be higher than the ELVs allowed.

No ☐

Yes ☐ Please give your reasons for doing this

13 If your plant uses fluidised bed technology, do you want to apply for a derogation of the CO WID ELV to a maximum of 100 mg/m³ as an hourly average, as allowed by IED Annex VI, Part 3?

No ☐

Does not apply ☐

Yes ☐ Please give your reasons for doing this

Appendix 7 – Specific questions for the landfill sector

1 Provide your Environmental Setting and Installation Design (ESID) report

Document reference

2 Provide your hydrogeological risk assessment (HRA) for the site

Document reference

3 Provide your stability risk assessment (SRA) for the site

Document reference

4 Provide your landfill gas risk assessment (LFGRA) for the site

Document reference

We have developed templates for these four reports which can be found within H1 – Landfill Annex.

5 Provide your proposed plan for closing the site and your procedures for looking after the site once it has closed

Document reference

Please read through this form and the guidance notes that came with it. All relevant guidance documents can be found on our website. Please write clearly in the answer spaces.

- 1 Working out charges
- 2 Opra
- 3 Payment
- 4 The Data Protection Act 1998
- 5 Confidentiality and national security
- 6 Declaration
- 7 Application checklist
- 8 How to contact us
- 9 Where to send your application

Table 1 – Working out charges

Type of application	Substantial Bespoke Environmental Permit Variation Application & Standard Rule Application			
	Summary of charges			
Tier 2 facilities (including Part A(2) and Part B; see guidance notes on part F1)	Charge identifier	Number of facilities	Charge for each facility (£)	Charges due (£)
Tier 3 facilities				
Total Opra charging score for installations	195.00	× charge multiplier	113.00	= 22,035.00
Total Opra charging score for waste operations		× charge multiplier		=
Total Opra charging score for mining waste facilities		× charge multiplier		=
Other charges	SR2012No8	1	1,948.00	1,948.00
Total charges due				23,983.00

2 Opra (does not apply to standard facilities, any other tier 2 permit applications (e.g. groundwater land spreading activities), or water-discharge or groundwater point source discharge activities)

If you are submitting a bespoke application, you must include a completed electronic copy in Excel of the current Opra spreadsheet.

For variations, full and partial surrenders you will need to submit a copy of your current Opra profile based on your existing profile, not any new profile following the variation or surrender.

For transfers you will need to submit a revised Opra profile to include your own operator performance. Note: this will not change the set transfer fee.

Tick this box to confirm that you have included the Opra spreadsheet

**3 Payment**

Tick below to show how you have paid.

Cheque



Postal order



Cash



Tick below to confirm you are enclosing cash with the application

Credit or debit card



Electronic transfer (for example, BACS)



Remittance number

Date paid (DD/MM/YYYY)

How to pay**Paying by cheque, postal order or cash**

Cheque details

Cheque made payable to

Natural Resources Wales

Cheque number

40166375 (£1948) and 115014 (£22035)

Amount

£

23,983.00

You should make cheques or postal orders payable to Natural Resources Wales and make sure they have 'A/c Payee' written across them if it is not already printed on.

Please write the name of your company and application reference number on the back of your cheque or postal order.

We will not accept cheques with a future date on them.

We do not recommend sending cash through the post. If you cannot avoid this, please use a recorded delivery postal service and enclose your application reference details. Please tick the box below to confirm you are enclosing cash.

I have enclosed cash with my application

**Paying by credit or debit card**

If you are paying by credit or debit card, either we can call you or you can fill in the separate form CC1 and enclose it with the application. We will destroy your card details once we have processed your payment. We can accept payments by Visa, MasterCard or Maestro card only.

Please call me to arrange payment by debit or debit card



I have enclosed form CC1 with my application

**Paying by electronic transfer BACS reference**

Applying for a permit in Wales?

If you choose to pay by electronic transfer and you are applying for a permit in the EA Wales region, you will need to use the following information to make your payment.

Company name: Natural Resources Wales

Company address: Income Dept., Cambria House, 29 Newport Road, Cardiff CF24 0TP

Bank: Citigroup Centre

Canada Square, London, E14 5LB

Sort code: 08-33-00

Account number: 12800578

Payment reference number: PSCAPPXXXXYYY

You need to create your own reference number. It should begin with PSCAPP (to reflect that the application is for a permitted activity) and it should include the first five letters of the company name (replacing the X's in the above reference number) and a unique numerical identifier (replacing the Y's in the above reference number). The reference number that you supply will appear on our bank statements.

3 Payment, continued

You should also email your payment details and a reference number to online@naturalresourceswales.gov.uk / arlein@cyfoethnaturiolcymru.gov.uk or fax it to 02920 466 404.

If you are making your payment from outside the United Kingdom, it must be in sterling. Our IBAN number is GB48 CITI0833 0012 8005 78 and our SWIFTBIC number is CITI GB2LXXX.

If you do not quote your reference number, there may be a delay in processing your payment and application.

Now read section 4 below.

4 The Data Protection Act 1998

We, the Natural Resources Body for Wales (hereafter “Natural Resources Wales”), will process the information you provide so that we can:

- deal with your application;
- make sure you keep to the conditions of the licence, permit or registration;
- process renewals; and
- keep the public registers up to date.

We may also process or release the information to:

- offer you documents or services relating to environmental matters;
- consult the public, public organisations and other organisations (for example, the Health and Safety Executive, local authorities, the emergency services, the Department for Environment, Food and Rural Affairs) on environmental issues;
- carry out research and development work on environmental issues;
- provide information from the public register to anyone who asks;
- prevent anyone from breaking environmental law, investigate cases where environmental law may have been broken, and take any action that is needed;
- assess whether customers are satisfied with our service, and to improve our service; and
- respond to requests for information under the Freedom of Information Act 2000 and the Environmental Information Regulations 2004 (if the Data Protection Act allows). We may pass the information on to our agents or representatives to do these things for us.

Now read section 5 below.

5 Confidentiality and national security

We will normally put all the information in your application on a public register of environmental information. However, we may not include certain information in the public register if this is in the interests of national security, or because the information is confidential.

You can ask for information to be made confidential by enclosing a letter with your application giving your reasons. If we agree with your request, we will tell you and not include the information in the public register. If we do not agree with your request, we will let you know how to appeal against our decision, or you can withdraw your application.

Only tick the box below if you wish to claim confidentiality for your application

Please treat the information in my application as confidential ☐

National security

You can tell the Welsh ministers that you believe including information on a public register would not be in the interests of national security. You must enclose a letter with your application telling us that you have told the Welsh ministers and you must still include the information in your application. We will not include the information in the public register unless the Welsh ministers decides that it should be included.

You can find guidance on national security in ‘Core Environmental Permitting Guidance’ published by Defra and available via the Environment Agency website <http://www.environment-agency.gov.uk>.

You cannot apply for national security via this application.

Now go to section 6

6 Declaration

If you knowingly or carelessly make a statement that is false or misleading to help you get an environmental permit (for yourself or anyone else), you may be committing an offence under the Environmental Permitting (England and Wales) Regulations 2013.

A relevant person should make the declaration (see guidance notes on part F1). An agent acting on behalf of an applicant is NOT a relevant person.

Each individual (or individual trustee) who is applying for their name to appear on the permit must complete this declaration. You will have to print a separate copy of this page for each additional individual to complete.

If you are transferring all or part of your permit, both you and the person receiving the permit must make the declaration.

6 Declaration, continued

Note: If you are unable to trace one or more of the current permit holders please see below under the transfers declaration.

I declare that the information in this application is true to the best of my knowledge and belief. I understand that this application may be refused or approval withdrawn if I give false or incomplete information.

If you deliberately make a statement that is false or misleading in order to get approval you may be prosecuted.

I confirm that my standard facility will fully meet the rules that I have applied for (this only applies if the application includes standard facilities)



Tick this box to confirm that you understand and agree with the declaration above, then fill in the details below



Tick this box to confirm that you have no issue with us using information from any ecological survey that you have supplied with your application (for further information please see the guidance notes on part F1)



Name

Title (Mr, Mrs, Miss and so on)

Mr

First name

Graham

Last name

Peacock

on behalf of (if relevant; for example, a company or organisation and so on)

Biffa Waste Services Ltd

Position (if relevant; for example, in a company or organisation and so on)

Environmental Regulation Manager

Today's date (DD/MM/YYYY)

30/07/2015

For transfers only – declaration for person receiving the permit

A relevant person should make the declaration (see guidance notes on part F1).

I declare that the information in this application to transfer an environmental permit to me is true to the best of my knowledge and belief. I understand that this application may be refused or approval withdrawn if I give false or incomplete information.

Note: If you cannot trace a person or persons holding the permit you may be able to transfer the permit without their declaration as above. Please contact us to discuss this and supply evidence in your application to confirm you are unable to trace one or all of the permit holders.

If you deliberately make a statement that is false or misleading in order to get approval you may be prosecuted.

Tick this box to confirm that you understand and agree with the declaration above



Name

Title (Mr, Mrs, Miss and so on)

First name

Last name

on behalf of (if relevant; for example, a company or organisation and so on)

Position (if relevant; for example, in a company or organisation and so on)

Today's date (DD/MM/YYYY)

Now go to section 7

7 Application checklist (you must fill in this section)

Tell us what you have sent with this application.

The correct application fee under our charging scheme

☒ Tick the box to say you have included the fee

List all the documents you have included. If necessary, continue on a separate sheet and tell us the reference you have given the document below.

Document reference

Question reference	Document title	Document reference
	See Contents Page	

8 How to contact us

If you need help filling in this form, please contact the person who sent it to you or contact us as shown below.

General enquiries: 0300 065 3000 (Monday to Friday, 8am to 6pm)

Email: enquiries@naturalresourceswales.gov.uk / ymholiadau@cyfoethnaturiolcymru.gov.uk

Website: www.naturalresourceswales.gov.uk / www.cyfoethnaturiolcymru.gov.uk

If you are happy with our service, please tell us. It helps us to identify good practice and encourages our staff. If you're not happy with our service, please tell us how we can improve it.

Please tell us if you need information in a different language or format (for example, in large print) so we can keep in touch with you more easily.

9 Where to send your application (for how many copies to send see the guidance note on part F1)

Please send your filled in application form to:

Permit Receipt Centre (Cardiff)
Natural Resources Wales
29 Newport Road
Cambria House
Cardiff
CF24 0TP

Canolfan Derbyn Tryddedau
Ty Cambria
29 Heol Casnewydd
Caerdydd
CF24 0TP

Do you want all information to be sent to you by email?

Please tick this box if you wish to have all communication about this application sent via email (we will use the details provided in Part A) ☐

Feedback

(You don't have to answer this part of the form, but it will help us improve our forms if you do.)

We want to make our forms easy to fill in and our guidance notes easy to understand. Please use the space below to give us any comments you may have about this form or the guidance notes that came with it.

How long did it take you to fill in this form?

We will use your feedback to improve our forms and guidance notes, and to tell the Government how regulations could be made simpler.

Would you like a reply to your feedback?

Yes please ☐

No thank you ☐



For Natural Resources Wales use only

Date received (DD/MM/YYYY)

Our reference number

Payment received?

No ☐

Yes ☐

Amount received

£



**ENVIRONMENTAL PERMITTING (ENGLAND AND
WALES) REGULATIONS, 2010**

“FIT AND PROPER PERSONS”

**POST CONVICTION PLAN IN SUPPORT OF
CONVICTION AT HOUGHTON LE SPRING
LANDFILL SITE ON 20TH FEBRUARY 2013**

**PERMIT REFERENCE BU8045IR
(EPR/PP3632LS)**

**Biffa Waste Services Limited
Hoods Close
Leicester
LE4 2BN
Tel: 0121 661 6726**

Registered Office: Coronation Road,
Cressex, High Wycombe,
Buckinghamshire, HP12 3TZ
Registered in England No. 946107

POST CONVICTION PLAN

Name of convicted person or business	Biffa Waste Services Ltd – no individual was convicted.
Address of convicted person or business	Registered Office: Coronation Road, Cressex, High Wycombe, Buckinghamshire, HP12 3TZ
Date	15 th March 2013
Date of birth of person or company registration number	Registered in England – No 946107 (Registered 16/01/69)
Plan completed by (signature)	
On behalf of (signature)	Biffa Waste Services Ltd

CONTENTS:

- 1.0 List of offences covered by this post conviction plan**
- 2.0 Authorisations to which this post conviction plan relates (if appropriate)**
- 3.0 List of all Persons and Relevant persons to which the conviction(s) relates**
- 4.0 Circumstances of the Offence and how and why it occurred**
- 5.0 Effects of Offences on the environment and/or people**
- 6.0 Ensuring compliance in the future**
- 7.0 Potential for repetition**
- 8.0 Details of all authorisations**

1.0 List of Offences Covered by this Plan

The conviction of Biffa Waste Services Limited on 20th February 2013 was in relation to the five offences summarised below, which occurred in or around the period 9th April 2010 and 5th May 2011.

Offence	When & where offence was committed	Identity of convicted party	Sentence	Details of any company to which convicted party is a relevant person
Regulations 12(1), 38(1)(a), and 39(1) of the Environmental Permitting (England and Wales) Regulations 2010, in relation to a breach of condition 3.1.1 of Permit BU80451R, on or before 9 th April 2010.	Houghton Le Spring landfill site The Quarry Quarry Row Houghton Le Spring County Durham DH4 4AU	Biffa Waste Services Limited – no individual was convicted.	Fine of £15,000, costs of £26,949.73 and victim surcharge of £15 were imposed.	Operator/ Permit holder at Houghton Le Spring landfill site.
Regulations 12(1), 38(1)(a), and 39(1) of the Environmental Permitting (England and Wales) Regulations 2010, in relation to a breach of condition 4.3.1 of Permit BU80451R, on or before 13 th September 2010.	Houghton Le Spring landfill site The Quarry Quarry Row Houghton Le Spring County Durham DH4 4AU	Biffa Waste Services Limited – no individual was convicted.	Fine of £22,500. Costs are included in those above.	Operator/ Permit holder at Houghton Le Spring landfill site.
Regulations 12(1), 38(1)(a), and 39(1) of the Environmental Permitting (England and Wales) Regulations 2010, in relation to a breach of condition 3.2.1 of Permit BU80451R, on or before 13 th September 2010.	Houghton Le Spring landfill site The Quarry Quarry Row Houghton Le Spring County Durham DH4 4AU	Biffa Waste Services Limited – no individual was convicted.	Fine of £22,500. Costs are included in those above.	Operator/ Permit holder at Houghton Le Spring landfill site.
Regulations 12(1), 38(1)(a), and 39(1) of the Environmental Permitting (England and Wales) Regulations 2010, in relation to a breach of condition 3.3.1 of Permit BU80451R, on or before 19 th October 2010.	Houghton Le Spring landfill site The Quarry Quarry Row Houghton Le Spring County Durham DH4 4AU	Biffa Waste Services Limited – no individual was convicted.	Fine of £22,500. Costs are included in those above.	Operator/ Permit holder at Houghton Le Spring landfill site.
Regulations 12(1), 38(1)(a), and 39(1) of the Environmental Permitting (England and Wales) Regulations 2010, in relation to a breach of condition 3.2.3 of Permit BU80451R, on or before 5 th May 2011.	Houghton Le Spring landfill site The Quarry Quarry Row Houghton Le Spring County Durham DH4 4AU	Biffa Waste Services Limited – no individual was convicted.	Fine of £22,500. Costs are included in those above.	Operator/ Permit holder at Houghton Le Spring landfill site.

The Company was convicted of five separate offences, although these are connected to two different types of incident relating to discharges from the site.

The first incident which resulted in one prosecution, related to a one off accidental discharge of leachate through overflow from a holding tank, as a result of human error. The consequences of the incident were minimal and remediated by Biffa at the time and measures taken to prevent a similar re-occurrence.

The second incident type, which resulted in four prosecutions, related to fugitive emissions of leachate via an unforeseen pathway, and which occurred over a period of time until the impact of this emission could be detected via routine monitoring and the pathway determined to allow preventative works. The net effect of this is that it not only resulted in conviction for failure to have taken appropriate measures to minimise the emission, but that it also resulted in convictions for a breach of trigger levels of ammoniacal nitrogen in groundwater, for a discharge of mecoprop which was at the time a list I substance, but also for a failure to have notified the Agency of the latter discharge.

Despite the failure to have notified the Agency of the detection of mecoprop, picked up via routine monitoring, Biffa had originally acted correctly to notify the Agency in accordance with the permit, when initial exceedences of ammoniacal nitrogen trigger levels were detected, which identified the same discharge that would also give rise to the subsequent detection of the more retarded substance mecoprop. In connection with this discharge, Biffa co-operated fully with the Agency and entered into a dialogue in relation to the monitoring of the discharge, investigation of the mechanism that had allowed the discharge, the carrying out of remedial measures to prevent further discharges, the investigation of the potential impact of the discharge, and the implementation of remedial measures to deal with substances that had been discharged from the site already.

2.0 Authorisations to which this post-conviction plan relates (if appropriate)

Authorisation number	Type of Authorisation
Environmental Permit reference BU8045IR (EPR/PP3632LS)	Former landfill PPC permit (Environmental Permit)

3.0 List of all Persons and Relevant Persons to which the conviction(s) relates

Persons Convicted	People or companies for who they are relevant persons (list)	Date of birth or Company number
Biffa Waste Services Limited	n/a	946107 (Registered in England – 16/01/1969)
No persons were convicted	n/a	n/a

Other Relevant Persons at time of Conviction (none convicted)	Position	Date of Birth
Ian Wakelin	Director - Chief Executive Officer	23/03/63
Keith Woodward	Company Secretary & Director	04/01/54

4.0 Circumstances of the Offence and how and why it occurred

Please provide details of the events which led to the offence. Include accountability and any mitigating circumstances that you feel are relevant. Continue on a separate sheet if necessary.

There were convictions for five separate offences, which related to matters arising from two activities that took place at the site. These related to five separate Permit conditions, namely:

Condition 3.1.1 concerning point source emissions not listed in schedule 4 of the Permit, comprising a spillage from a leachate holding tank;

Condition 3.2.1, concerning an emission into groundwater of a list I substance, comprising mecoprop which was at the time considered to be a list I substance, and is understood to have escaped over the site lining system;

Condition 3.2.3, concerning an exceedence of trigger levels for emissions into groundwater specified in schedule 4 of the Permit, comprising ammoniacal nitrogen, and is understood to have escaped over the site lining system;

Condition 3.3.1, concerning failure to have taken appropriate measures to prevent or minimise emissions, comprising the escape of leachate via a defect in the site haul road/engineering design and;

Condition 4.3.1, concerning failure to have notified the Agency of the breach of a limit in the Permit, comprising the discharge of mecoprop which was at the time considered to be a list I substance.

The last four above are all related to the same discharge. The circumstances of the above are outlined further below.

Discharges via the site haul road:

This represents the more significant of the events that took place, and resulted in four of the convictions at the site.

It was not realised at the time that the haul road would provide a pathway for leachate emissions from the site. The Company has established procedures to monitor groundwater quality, to compare the data against established trigger levels, to review trends and to report elevated readings and put in place action plans to further investigate and remediate. Accordingly it should be noted that when it was noted that the level of ammoniacal nitrogen in borehole L2 exceeded the Permit trigger level during April 2009, this was notified to the Agency at the time in accordance with the Permit requirements and the situation was kept under review in accordance with agreed action plans. This subsequently proved to be a one off exception in borehole L2.

However, the company became aware that there may be an issue with groundwater quality when laboratory results for borehole M1, sampled on 26th August 2009, were received back during September and showed the ammoniacal nitrogen concentrations, which now exceeded the relevant trigger level. Following receipt of this, Biffa made a schedule 6 submission to the Agency on 9th September 2009 and also increased monitoring at the same time. Biffa had been undertaking some works on site during August and had discovered a tear in the lining system which may have been due to excavations. This would have resulted in a seepage of leachate, estimated to be the order of 500 to 1000 litres, and was attributed to be the cause of the breach of the trigger level in borehole M1. Biffa undertook repairs to the lining system during August, using appropriate contractors and CQA as required by the Permit, and the liner tear and repairs were reported as part of the Schedule 6 notification relating to the ammoniacal nitrogen trigger level breach.

Biffa also commenced pumping on 9th October 2009 from the affected borehole M1, initially using Waterra pipework during working hours, to attempt to purge the borehole of contamination and also commissioned ESI on 22nd October 2009, a specialist groundwater consultancy, to investigate the contamination further. An emergency action plan was also agreed to supplement the existing approved accident management plan. A more comprehensive monitoring regime was also commenced at the site, above the Permit requirements, from 5th November 2009

Despite the above measures, an increase in ammoniacal nitrogen was measured in borehole M1, along with ammoniacal nitrogen and chloride increases in borehole F1, towards the end of 2009. The Waterra pump was replaced with a larger pump installed in borehole M1, and having secured consent to discharge to sewer, pumping to sewer commenced on 21st January 2010.

The above measures appeared to have resolved the issue and an initial reduction in ammoniacal nitrogen concentration was achieved during early 2010. The data being obtained was initially believed to be consistent with the view that a single release had occurred and that the cause of that release had been addressed. However, despite initial reductions in concentrations of ammoniacal nitrogen measured in borehole M1, the concentrations became static and remained elevated above trigger despite the pumping regime. Biffa remained in dialogue with the Agency concerning this and continued to review the data and discuss cause and effect.

By August, the monitoring data was still showing high ammoniacal nitrogen concentrations, along with elevated chloride concentrations. ESI, having undertaken further groundwater modelling work indicated that there was likely to be a second area of leakage and the site haul road was then postulated as a potential pathway for leachate escape from the site to groundwater. This mechanism had become possible as the roadway, which had initially been a raised descending pathway constructed in inert material, had been subject to changes of gradient as the site was filled, such that it was eventually an ascending pathway into the site with adjoining material filled up to the level of the roadway. The geometry of this, coupled with the perimeter engineering design configuration then in use at the site, permitted either the roadway or adjoining infill to provide a pathway for leachate out of the site over the top of the steep wall lining system engineering and to then be discharged to groundwater via the natural geology.

Having identified the above mechanism, Biffa, with the co-operation of the Agency, undertook investigation of the haul road between 19th and 22nd October 2010, comprising excavation of this where it entered cell 3A at the site, during which a leachate escape pathway was confirmed. Removal of the haul road at this location by 22nd October 2010 prevented any further discharge of leachate from the site.

In order to deal with the residual elevated concentrations within groundwater boreholes, Biffa proposed further measures which included the installation of an abstraction borehole to enable pumping at a greater rate, along with discharge to sewer, the securing of an abstraction licence to remove the groundwater and the commencement of additional groundwater monitoring. Biffa also commissioned ESI to undertake further work in conjunction with Biffa and the Agency, to investigate the sources of leachate that had escaped and to consider impact from this and appropriate corrective measures.

The abstraction borehole, M1A, was installed in February 2011, and pumping commenced from this. Monitoring of water levels throughout 2011 and 2012 has shown an increasing cone of depression (and hence influence) around M1A, thus showing that elevated concentrations of substances are being drawn to this borehole and removed from the groundwater environment. Ongoing monitoring has also shown that concentrations within monitoring boreholes are reducing. Three additional groundwater boreholes proposed to assess impact from the discharge are also scheduled to be installed as soon as landowner permission has been granted.

The main cause for the incident which gave rise to the groundwater discharges was a flaw in the haul road design layout relating to the way changes had been made to this as infilling at the site progressed. This had not been foreseen as a mechanism for leachate discharge to groundwater, and the escape was not the result of a negligent act on the part of the Biffa. Due to the earlier liner tear, which had been dealt with promptly, a further discharge point had not been envisaged, thereby delaying investigation and identification of this pathway. Ultimately, this pathway was identified and Biffa were prosecuted for having failed to take appropriate measures to prevent or minimise these emissions under condition 3.3.1 of the Permit. The consequence of these emissions is that Biffa also breached condition 3.2.3 of the Permit, for emissions of ammoniacal nitrogen in excess of Permit trigger levels, and further breached condition 3.2.1 for having discharged a list I substance into groundwater. The latter substance was identified in groundwater via sampling undertaken on 22nd July 2010, this substance being a substance that would undergo retardation of travel times in the external environment and which would thus be detected at a much later stage than substances such as ammoniacal nitrogen and chloride which are more mobile. Although Biffa had procedures in place for identifying non compliances with trigger levels, and had clearly adhered to these in submission of

schedule 6 notifications relating to ammoniacal nitrogen and chloride, for some reason the large amount of groundwater monitoring and major increase in analysis led to an oversight which led to a failure to notify the Agency via the same mechanisms of the detection of mecoprop, although this data was forwarded to the Agency via routine channels within 28 days of receipt from the laboratory. This has been attributed to a staff training issue at the time. Thus, although the data was reported to the Agency, Biffa were also prosecuted under condition 4.3.1 of the Permit for having failed to notify the Agency in the correct manner of the breach in a limit in the Permit namely the discharge of a listed substance.

The overflow from a leachate holding tank:

This represents the less significant of the events that took place, and resulted in a single conviction for a breach of condition 3.1.1 of the Permit, in that this represented a point source emission not listed in schedule 4 of the Permit. The discharge took place on 9th April 2010.

This offence was a single occurrence on a single day. This was the result of Biffa seeking to respond to the need to deal with elevated leachate levels on site.

Whereas Biffa normally handled leachate via a single fully bunded leachate holding tank, with the leachate being recirculated back into the waste, at the time, due to increased heads, Biffa had ceased recirculation and were removing leachate from the site via tanker. This had resulted in the need to bring into use a second holding tank as a temporary measure. As the tank had been procured as a purely interim measure as part of emergency works, a bunded tank had not been provided, and the additional tank was not alarmed or provided with auto switch off mechanisms to stop pumping when the tank was full. In order to mitigate the potential risk arising from the use of the second holding tank, Biffa had allocated a member of staff to be present at all times when the tank was being filled, with instruction to remain there, to monitor the pumping operation and to switch off the pumps before the tank became full and overflowed.

At the time of the offence, Biffa were pumping leachate into the holding tanks in order that it could be removed from site by tanker. The incident occurred, when despite Biffa having put in place clear instruction on the method of operation of the pumping system, the employee allocated responsibility for the operation inexplicably left his post, whilst allowing pumping to continue. The employee has been severely reprimanded for this disregard of his responsibility.

The Agency was immediately notified of the overflow upon discovery by management of the incident.

Following the incident, the tank was moved, and measures put in place to ensure a repeat could not occur.

5.0 Effects of the Offences on the Environment and/or People

Describe how the offences impacted on the environment and people, including impact on legitimate business, with an assessment of whether you consider that the impact was high, medium or low, giving reasons why you consider the impact to be high, medium or low.

In relation to the offences that occurred at the site above, the potential for any impact upon people or the environment, is through the discharge of substances into groundwater that should either not be discharged under the Permit at all in relation to list I substances, or at concentrations that are elevated above those contained in the Permit in relation to list II substances. These substances may impact upon surface water and its uses/receptors where groundwater provides a contribution to baseflow, or upon drinking water supplies where these are abstracted from groundwater for use, if these substances are present at concentrations in excess of prescribed concentrations.

The nearest receptor to the site is the Stoneygate pumping station which is used to provide drinking water. ESI undertook transport calculations for the releases to evaluate any potential impact upon the Stoneygate pumping station. These calculations have determined potential timescales for any plume of contaminants, which has been reduced by the pumping being undertaken by Biffa, to reach the pumping station, and also the likely maximum concentration of these contaminants should they reach the pumping station. ESI's calculations have shown that the substances released will not reach the pumping station at levels where any compromise of drinking water standards is likely, and that the quality of drinking water will remain safe.

6.0 Ensuring Compliance in the Future

Please describe the measures you have taken to prevent the offence happening again. Include your plans for audit and review.

A number of measures have been implemented to prevent a re-occurrence of the incidents that led to the offences under section 1, above. These are documented below:

The leachate discharge from the holding tank which resulted in conviction for a breach of condition 3.1.1 of the Permit was the result of the use of an unbunded tank and a complete disregard of procedures by an employee who was given responsibility for mitigating against the use of an unbunded tank. The employee was severely reprimanded and retrained following the incident. Notwithstanding this, the tank has been moved and replaced with a new installation comprising a banded and alarmed tank, and the potential for the same incident to happen again has been completely removed.

The leachate discharge via the haul road resulted in a conviction for a breach of condition 3.3.1 of the Permit, for not having prevented or minimised the release, and as a direct consequence of that release also breaches of condition 3.2.3 of the Permit, for emissions of ammoniacal nitrogen in excess of Permit trigger levels, and of condition 3.2.1 for having discharged a list I substance (mecoprop) into groundwater. These breaches were the direct result of the design of road crossing points that did not take into account the potential for leachate to migrate beneath the road, or for the need for a previously satisfactory design to be reviewed and amended as the adjoining waste mass was filled. The impact from the discharges was exacerbated by the geological surroundings at this particular site.

In order to ensure compliance, the road was removed and re-designed to prevent further discharges. To prevent further future non compliance at the Houghton Le Spring site, or indeed other sites, key learning points and actions have been distributed through the Company via Best Practice Groups, which include the companies Engineering Managers who oversee all design and construction work relating to landfill engineering.

The key action points that have been implemented with the Biffa group comprise but are not limited to the following:

- i) The number and type of roadways crossing into the lined area of any site should be severely restricted;
- ii) ☒ All crossing points should be properly designed to allow for leachate to drain or be pumped back into the waste mass;
- iii) All crossing points should be assessed on an ongoing basis and at least annually to confirm they are still fit for purpose;
- iv) Site management should ensure that all engineering edges (lining and capping) are clearly marked out on site to prevent damage to lining systems and waste overtipping;
- v) Leachate recirculation systems should only be used when properly designed and managed.

Ancillary to the above discharges and convictions, Biffa failed to report the discharge of mecoprop correctly under condition 4.3.1 of the Permit, although the data was reported correctly in accordance with other Permit requirements. The lack of compliance with condition 4.3.1 did not result in any increase in impact from the leachate discharge, which was already an ongoing event that was being subject to investigation and implementation of an agreed action plan. The oversight was found to be the result of an isolated staff training issue and has been rectified by additional staff training.

7.0 Potential for Repetition

Do you think it is likely that the offences will happen again? Tick one box.

☐

High (likely to happen again)

☐

Medium

☒

Low (unlikely to happen again)

Please tick one box.

Reasons:

A complete redesign of the site road crossing point has taken place, and learning points have been disseminated to landfill engineering and management staff within the Biffa Group. At the same time, temporary leachate holding tanks have been replaced with an improved specification. These measures will prevent a similar re-occurrence. Site staff have also been retrained in the appropriate reporting procedures.

The Agency has also acknowledged the extent of the improvements and has noted Houghton Le Spring landfill as being one of the most improved sites.

8.0 Details of all Authorisations

Please detail other relevant authorisation that are either issued to you, or are being applied for by you.

APPENDIX 1

Other Licences, Permits or Registrations Held



Approved Assessment Centre

This Certificate is awarded to

Biffa Waste Services Ltd

Approved Awards:

501/1890/0	WAMITAB Level 2 Certificate in Cleaning and Support Services (QCF) - CSSERV2	26/11/2010
600/0032/6	WAMITAB Level 1 Diploma for General Recycling Operative (QCF) - GRO1	08/07/2011
600/0058/2	WAMITAB Level 1 Diploma in Recycling Activities (Collection) (QCF) - GROC1	08/07/2011
600/0058/2	WAMITAB Level 1 Diploma in Recycling Activities (Reception & Processing) (QCF) - GRORP1	08/07/2011
600/0058/2	WAMITAB Level 1 Diploma in Recycling Activities (Waste Electrical and Electronic Equipment) (QCF) - GROWE1	08/07/2011
501/2182/0	WAMITAB Level 2 Diploma for Sustainable Recycling Activities (QCF) - SRA2	26/11/2010
501/2182/0	WAMITAB Level 2 Diploma for Sustainable Recycling Activities (Collection) (QCF) - SRAC2	26/11/2010
501/2182/0	WAMITAB Level 2 Diploma for Sustainable Recycling Activities (Processing) (QCF) - SRAP2	26/11/2010
501/2182/0	WAMITAB Level 2 Diploma for Sustainable Recycling Activities (Reception and Segregation) (QCF) - SRARS2	26/11/2010
501/2182/0	WAMITAB Level 2 Diploma for Sustainable Recycling Activities (Waste Electrical and Electronic Equipment) (QCF) - SRAWE2	26/11/2010
501/1475/X	WAMITAB Level 2 Certificate for Sustainable Waste Management Operative (Waste Collection Driver) (QCF) - SWMCD2	26/11/2010
501/1855/9	WAMITAB Level 2 Certificate for Sustainable Waste Management Operative (QCF) - SWMO2	26/11/2010
501/1446/3	WAMITAB Level 2 Diploma for Sustainable Waste Management Operative (Team Leader) (QCF) - SWMTL2	26/11/2010
501/1477/3	WAMITAB Level 2 Diploma for Sustainable Waste Management Operative (Weighbridge Operative) (QCF) - SWMWB2	26/11/2010

Issued: 11 June 2015

Certificate No. C19/036/25-1

Authorised

Ray Burberry
Qualifications Manager, WAMITAB



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Approved Awards:

501/1476/1	WAMITAB Level 2 Certificate for Sustainable Waste Management Operative (Waste Collection) (QCF) - SWMWC2	26/11/2010
501/1478/5	WAMITAB Level 2 Diploma for Sustainable Waste Management Operative (Waste Site Operative) (QCF) - SWMWO2	26/11/2010
501/1853/5	WAMITAB Level 3 Diploma for Waste Supervisor (QCF) - WSUP3	26/11/2010

Issued: 11 June 2015

Certificate No. C19/036/25-2

Authorised

Ray Burberry
Qualifications Manager, WAMITAB



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Approved Awards:

600/0334/0	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Biological Treatment - Non Hazardous Waste : Anaerobic Digestion (QCF) - 4MBTNHA	11/06/2015
600/0334/0	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Biological Treatment - Non Hazardous Waste : In Vessel Composting (QCF) - 4MBTNHI	27/06/2011
600/0334/0	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Biological Treatment - Non Hazardous Waste : Open Windrow Composting (QCF) - 4MBTNHO	27/06/2011
600/0335/2	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Civic Amenity Site (QCF) - 4MCAS	27/06/2011
600/0330/3	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Closed Landfill Site (QCF) - 4MCL	27/06/2011
600/0329/7	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Landfill - Hazardous Waste (QCF) - 4MLH	27/06/2011
600/0329/7	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Landfill - Hazardous Waste : Single Waste Stream (QCF) - 4MLHS	27/06/2011
600/0329/7	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Landfill - Inert Waste (QCF) - 4MLI	27/06/2011
600/0329/7	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Landfill - Inert Waste : Single Waste Stream (QCF) - 4MLIS	27/06/2011
600/0329/7	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Landfill - Non Hazardous Waste (QCF) - 4MLNH	27/06/2011
600/0329/7	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Landfill - Non Hazardous Waste : Single Waste Stream (QCF) - 4MLNHS	27/06/2011
600/0331/5	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Physical & Chemical Treatment - Hazardous Waste (QCF) - 4MPTH	27/06/2011
600/0331/5	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Physical & Chemical Treatment - Hazardous Waste : Remediation of Contaminated Land (QCF) - 4MPTHR	27/06/2011

Issued: 11 June 2015

Certificate No. C19/036/25-1

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Ray Burberry
Qualifications Manager, WAMITAB



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Biffa Waste Services Ltd

Approved Awards:

600/0331/5	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Physical & Chemical Treatment - Non Hazardous Waste (QCF) - 4MPTNH	27/06/2011
600/0331/5	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Physical & Chemical Treatment - Non Hazardous Waste : Remediation of Contaminated Land (QCF) - 4MPTNHR	27/06/2011
600/0333/9	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Treatment - Inert Waste (QCF) - 4MTMI	27/06/2011
600/0436/8	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Transfer - Hazardous Waste (QCF) - 4MTSH	27/06/2011
600/0436/8	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Transfer - Hazardous Clinical Waste (QCF) - 4MTSHC	27/06/2011
600/0436/8	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Transfer - Inert Waste (QCF) - 4MTSI	27/06/2011
600/0436/8	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Transfer - Non Hazardous Waste (QCF) - 4MTSNH	27/06/2011
600/0436/8	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Transfer - Non Hazardous Clinical Waste (QCF) - 4MTSNHC	27/06/2011
600/0332/7	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Thermal Treatment - Hazardous Waste (QCF) - 4MTTH	27/06/2011
600/0332/7	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Thermal Treatment - Hazardous Clinical Waste (QCF) - 4MTTHC	27/06/2011
600/0332/7	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Thermal Treatment - Non Hazardous Waste (QCF) - 4MTTNH	27/06/2011
600/0332/7	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Thermal Treatment - Non Hazardous Clinical Waste (QCF) - 4MTTNHC	27/06/2011
501/2146/7	WAMITAB Level 1 Certificate in Cleaning and Support Services (QCF) - CSSERV1	26/11/2010

Issued: 11 June 2015

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Ray Burberry
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Our Ref: RB/LEB/QCF Centre/10

27 June 2011

Mr David Tilling
Biffa Waste Services Ltd
Biffa Leicester Ltd
Hoods Close
Leicester
Leics
LE4 2BN

Dear David

WAMITAB QCF Centre Approval – Centre Number - C19/036

Thank you for your recent email listing the QCF qualifications for which your centre wished to receive approval.

I can now confirm that the following qualifications have been added to your Centre database record. Please find a QCF Centre certificate enclosed for these qualifications.

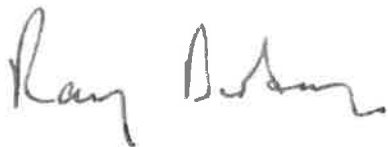
WAMITAB Level 4 Diploma in Waste Management Operations : Managing Biological Treatment - Non Hazardous Waste : In Vessel Composting (QCF) - 4MBTNHI
WAMITAB Level 4 Diploma in Waste Management Operations : Managing Biological Treatment - Non Hazardous Waste : Open Windrow Composting (QCF) - 4MBTNHO
WAMITAB Level 4 Diploma in Waste Management Operations : Managing Civic Amenity Site (QCF) - 4MCAS
WAMITAB Level 4 Diploma in Waste Management Operations : Managing Closed Landfill Site (QCF) - 4MCL
WAMITAB Level 4 Diploma in Waste Management Operations : Managing Landfill - Hazardous Waste (QCF) - 4MLH
WAMITAB Level 4 Diploma in Waste Management Operations : Managing Landfill - Hazardous Waste : Single Waste Stream (QCF) - 4MLHS
WAMITAB Level 4 Diploma in Waste Management Operations : Managing Landfill - Inert Waste (QCF) - 4MLI
WAMITAB Level 4 Diploma in Waste Management Operations : Managing Landfill - Inert Waste : Single Waste Stream (QCF) - 4MLIS
WAMITAB Level 4 Diploma in Waste Management Operations : Managing Landfill - Non Hazardous Waste (QCF) - 4MLNH
WAMITAB Level 4 Diploma in Waste Management Operations : Managing Landfill - Non Hazardous Waste : Single Waste Stream (QCF) - 4MLNHS



WAMITAB Level 4 Diploma in Waste Management Operations : Managing Physical & Chemical Treatment - Hazardous Waste (QCF) - 4MPTH
WAMITAB Level 4 Diploma in Waste Management Operations : Managing Physical & Chemical Treatment - Hazardous Waste : Remediation of Contaminated Land (QCF) - 4MPTHR
WAMITAB Level 4 Diploma in Waste Management Operations : Managing Physical & Chemical Treatment - Non Hazardous Waste (QCF) - 4MPTNH
WAMITAB Level 4 Diploma in Waste Management Operations : Managing Physical & Chemical Treatment - Non Hazardous Waste : Remediation of Contaminated Land (QCF) - 4MPTNHR
WAMITAB Level 4 Diploma in Waste Management Operations : Managing Treatment - Inert Waste (QCF) - 4MTMI
WAMITAB Level 4 Diploma in Waste Management Operations : Managing Transfer - Hazardous Waste (QCF) - 4MTSH
WAMITAB Level 4 Diploma in Waste Management Operations : Managing Transfer - Hazardous Clinical Waste (QCF) - 4MTSHC
WAMITAB Level 4 Diploma in Waste Management Operations : Managing Transfer - Inert Waste (QCF) - 4MTSI
WAMITAB Level 4 Diploma in Waste Management Operations : Managing Transfer - Non Hazardous Waste (QCF) - 4MTSNH
WAMITAB Level 4 Diploma in Waste Management Operations : Managing Transfer - Non Hazardous Clinical Waste (QCF) - 4MTSNHC
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WAMITAB Level 4 Diploma in Waste Management Operations : Managing Thermal Treatment - Hazardous Clinical Waste (QCF) - 4MTTHC
WAMITAB Level 4 Diploma in Waste Management Operations : Managing Thermal Treatment - Non Hazardous Waste (QCF) - 4MTTNH
WAMITAB Level 4 Diploma in Waste Management Operations : Managing Thermal Treatment - Non Hazardous Clinical Waste (QCF) - 4MTTNHC

Should you wish to discuss any aspect of QCF Centre operation with me, please feel free to call.

Yours sincerely



Ray Burberry
Qualifications Manager

Email: ray.burberry@wamitab.org.uk



WAMITAB

Waste Management Industry
Training and Advisory Board

Approved Assessment Centre

This Certificate is awarded to

Biffa Waste Services Ltd

Approved Awards:

600/0334/0	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Biological Treatment - Non Hazardous Waste : In Vessel Composting (QCF) - 4MBTNHI	27/06/2011
600/0334/0	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Biological Treatment - Non Hazardous Waste : Open Windrow Composting (QCF) - 4MBTNHO	27/06/2011
600/0335/2	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Civic Amenity Site (QCF) - 4MCAS	27/06/2011
600/0330/3	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Closed Landfill Site (QCF) - 4MCL	27/06/2011
600/0329/7	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Landfill - Hazardous Waste (QCF) - 4MLH	27/06/2011
600/0329/7	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Landfill - Hazardous Waste : Single Waste Stream (QCF) - 4MLHS	27/06/2011
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600/0329/7	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Landfill - Inert Waste : Single Waste Stream (QCF) - 4MLIS	27/06/2011
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600/0331/5	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Physical & Chemical Treatment - Hazardous Waste (QCF) - 4MPTH	27/06/2011
600/0331/5	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Physical & Chemical Treatment - Hazardous Waste : Remediation of Contaminated Land (QCF) - 4MPTHR	27/06/2011
600/0331/5	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Physical & Chemical Treatment - Non Hazardous Waste (QCF) - 4MPTNH	27/06/2011

Issued: 27 June 2011

Certificate No. C19/036/20

Authorised



Ray Burberry
Qualifications Manager, WAMITAB





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Waste Management Industry
Training and Advisory Board

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Biffa Waste Services Ltd

Approved Awards:

600/0331/5	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Physical & Chemical Treatment - Non Hazardous Waste : Remediation of Contaminated Land (QCF) - 4MPTNHR	27/06/2011
600/0333/9	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Treatment - Inert Waste (QCF) - 4MTMI	27/06/2011
600/0436/8	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Transfer - Hazardous Waste (QCF) - 4MTSH	27/06/2011
600/0436/8	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Transfer - Hazardous Clinical Waste (QCF) - 4MTSHC	27/06/2011
600/0436/8	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Transfer - Inert Waste (QCF) - 4MTSI	27/06/2011
600/0436/8	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Transfer - Non Hazardous Waste (QCF) - 4MTSNH	27/06/2011
600/0436/8	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Transfer - Non Hazardous Clinical Waste (QCF) - 4MTSNHC	27/06/2011
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600/0332/7	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Thermal Treatment - Hazardous Clinical Waste (QCF) - 4MTTHC	27/06/2011
600/0332/7	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Thermal Treatment - Non Hazardous Waste (QCF) - 4MTTNH	27/06/2011
600/0332/7	WAMITAB Level 4 Diploma in Waste Management Operations : Managing Thermal Treatment - Non Hazardous Clinical Waste (QCF) - 4MTTNHC	27/06/2011
501/2146/7	WAMITAB Level 1 Certificate in Cleaning and Support Services (QCF) - CSSERV1	26/11/2010
501/1890/0	WAMITAB Level 2 Certificate in Cleaning and Support Services (QCF) - CSSERV2	26/11/2010

Issued: 27 June 2011

Certificate No. C19/036/20

Authorised



Ray Burberry
Qualifications Manager, WAMITAB





WAMITAB

Waste Management Industry
Training and Advisory Board

Approved Assessment Centre

This Certificate is awarded to

Biffa Waste Services Ltd

Approved Awards:

501/2182/0	WAMITAB Level 2 Diploma for Sustainable Recycling Activities (QCF) - SRA2	26/11/2010
501/2182/0	WAMITAB Level 2 Diploma for Sustainable Recycling Activities (Collection) (QCF) - SRAC2	26/11/2010
501/2182/0	WAMITAB Level 2 Diploma for Sustainable Recycling Activities (Processing) (QCF) - SRAP2	26/11/2010
501/2182/0	WAMITAB Level 2 Diploma for Sustainable Recycling Activities (Reception and Segregation) (QCF) - SRARS2	26/11/2010
501/2182/0	WAMITAB Level 2 Diploma for Sustainable Recycling Activities (Waste Electrical and Electronic Equipment) (QCF) - SRAWEE2	26/11/2010
501/1475/X	WAMITAB Level 2 Certificate for Sustainable Waste Management Operative (Waste Collection Driver) (QCF) - SWMCD2	26/11/2010
501/1855/9	WAMITAB Level 2 Certificate for Sustainable Waste Management Operative (QCF) - SWMO2	26/11/2010
501/1446/3	WAMITAB Level 2 Diploma for Sustainable Waste Management Operative (Team Leader) (QCF) - SWMTL2	26/11/2010
501/1477/3	WAMITAB Level 2 Diploma for Sustainable Waste Management Operative (Weighbridge Operative) (QCF) - SWMWB2	26/11/2010
501/1476/1	WAMITAB Level 2 Certificate for Sustainable Waste Management Operative (Waste Collection) (QCF) - SWMWC2	26/11/2010
501/1478/5	WAMITAB Level 2 Diploma for Sustainable Waste Management Operative (Waste Site Operative) (QCF) - SWMWO2	26/11/2010
501/1853/5	WAMITAB Level 3 Diploma for Waste Supervisor (QCF) - WSUP3	26/11/2010

Issued: 27 June 2011

Certificate No. C19/036/20

Authorised



Ray Burberry
Qualifications Manager, WAMITAB



Trecatti Multipurpose Waste Treatment & Remediation Pad

Waste Treatment Facility - Waste Types

Waste Code	Description
01	WASTES RESULTING FROM EXPLORATION, MINING, QUARRYING AND PHYSICAL AND CHEMICAL TREATMENT OF MINERALS
01 04	Wastes from physical and chemical processing of non metalliferous minerals
01 04 07*	Wastes containing dangerous substances from physical and chemical processing of metalliferous minerals
01 04 08	Waste gravel and crushed rocks other than those mentioned in 01 04 07
01 04 09	Waste sand and clays
01 05	Drilling muds and other drilling wastes
01 05 04	freshwater drilling muds and wastes
01 05 05*	oil-containing drilling muds and wastes
01 05 06*	01 05 06 - drilling muds and other drilling wastes containing dangerous substances
13	WASTES AND WASTES OF LIQUID FUELS
13 05	Oil/water separator contents
13 05 01*	Solids from grit chambers and oil/water separators
13 05 02*	Sludges from oil/water separators
13 05 03*	Interceptor sludges
13 05 08*	Mixtures of waste from grit chambers and oil/water separators
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)
17 02	Wood, glass, plastic
17 02 01	Wood
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
17 05 05*	dredging spoil containing dangerous substances
17 05 06	dredging spoil other than those mentioned in 17 05 05
17 05 07*	track ballast containing dangerous substances
17 05 08	track ballast other than those mentioned in 17 05 07
19	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF SITE WASTE WATER TREATMENT PLANTS AND PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION / INDUSTRIAL WASTE
19 02	Wastes from specific physico/chemical treatments of industrial waste, (e.g. dechromatation, decyanidation, neutralisation)
19 02 05*	sludges from physico/chemical treatment containing dangerous substances Settled sludge, Sludge - contaminated, Sludge - settled
19 02 06	sludges from physico/chemical treatment other than those mentioned in 19 02 05*
19 03	Stabilised/solidified wastes
19 03 07	solidified wastes other than those mentioned in 19 03 06
19 05	Wastes from aerobic treatment of solid wastes
19 05 03	Off-specification compost
19 08	Wastes from waste water treatment plants not otherwise specified

19 08 01	screenings
19 08 02	waste from desanding
19 08 13*	Sludges containing dangerous substances from other treatment of industrial waste water
19 08 14	Sludges from other treatment of industrial waste water other than those mentioned in 19 08 13
19 10	Wastes from shredding of metal-containing waste
19 10 05*	Other fractions containing dangerous substances
19 10 06*	Other fractions other than those mentioned in 19 10 05
19 12	Wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 07	Wood other than that mentioned in 19 12 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
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01	Separately collected fractions (except 15 01)
20 01 38	Wood other than that mentioned in 20 01 37
20 02	Garden and park wastes (including cemetery waste)
20 02 01	Biodegradable waste
20 03	Other municipal wastes
20 03 03	Street cleaning residues

*wastes codes highlighted in yellow are the required additives for the soil remediation process.

Operational Risk Appraisal (Opra) for Installations under EPR



Organisation Name	Biffa Waste Services Ltd
-------------------	--------------------------

Case Number	YP3536ZG
-------------	----------

Version	NRW V1
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Opra Scheme NRW V1

Full instructions for the use of this spreadsheet are contained in the accompanying documentation.
It is recommended that the user fills in the spreadsheet following the order of worksheets listed below (click on the appropriate tab at the bottom of the screen).
Not all worksheets require input, for those that do, the fields that may require input have no background colour.
The sequence of worksheets is divided into two sections Sheets 1 to 11 are concerned with the input of data. Sheet 12 is the summary for the Opra Scores and Sheet 13 displays the charges.
If you cannot see the whole of this box or it is very small, please click 'View' and adjust 'Zoom' level.

1 Listed Activities

Please refer to the Opra Scheme for Installations for the look-up tables and guidance.
Use abbreviated descriptions, select the Schedule 1 references and bands from the pick lists provided.

2 Other Activities

Please enter Part A(2), Part B and aggregated activities onto this sheet.

3 Complexities

Summary of complexities and rules applied

4 Emissions to Air

5 Emissions to Water

6 Emissions to Land

7 Emissions to Sewer

8 Emissions to Waste

9 Emissions Summary

No input is required. Output screen only. Summary of emissions.

10 Location

11 Operational Management

12 Opra Summary

No input is required. Output screen only. The emissions are shown separately.

13 Calculation

No input is required. Charges with separate emissions totals. It is possible to clear the scores and recalculate the charges to include any amendments.

For EA Use

☐ Consolidated Permit

Listed Activities - Complexity Attribute

Organisation:	Biffa Waste Services Ltd
Case Number:	YP3536ZG

	Description of Activity	Schedule 1 Reference	Regulatory Complexity
1	Landfill of Non Hazardous Waste	5.2 Part A (1) a)	C
2	SNRHW Cell	5.2 Part A (1) a)	D
3	Storage and treatment of leachate	5.4 Part A (1) a) (i)	A
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			

Totals before any rules are applied	
A	1
B	0
C	1
D	1
E	0

If there is insufficient space please
attach a paper record

If Rule 4 applies - please complete Other Activities sheet

Aggregation and Schedule1 Part A(2) and Part B Activities

Organisation Name:	Biffa Waste Services Ltd	If there is insufficient space please attach a paper record
Case Number:	YP3536ZG	

Schedule 1 Part A(1) - Rule 4 Aggregation Details				
	Aggregation Group	Description	Schedule 1 Ref	Complexity
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

Rule 4	Not Applied
--------	-------------

List of Schedule 1 Part (A) 2 and Part B Activities included in the Installation		
	Enter description of Activity	Schedule 1 Reference
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

EPR- Installations Charging Scheme Complexity - Application of Rules

Company	Biffa Waste Services Ltd
Permit	YP3536ZG

	Description / Aggregation Group	Schedule 1 Ref	Complexity	Rule 3 Capping	Rule 5 not applied	Rule 6 not applied	Rule 7 Not Applied
1	SNRHW Cell	5.2 Part A (1) a)	D	D	D	D	D
2	Landfill of Non Hazardous Waste	5.2 Part A (1) a)	C	C	C	C	C
3	Storage and treatment of leachate	5.4 Part A (1) a) (i)	A	A	A	A	A
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

Summary of Rules Applied	
Rule 3	No
Rule 4	No
Rule 5	No
Rule 6	No
Rule 7	No

These totals will be carried forward and used to calculate the Opra Risk Summary and Calculation of Charges

Scores after Rules applied (Used for calculation of Charges)			
Complexity	First 6 Complexities	Remaining complexities	Total
A	1	0	1
B	0	0	0
C	1	0	1
D	1	0	1
E	0	0	0
Capped	0	0	0

Scores before rules applied (Used for summary of Risk)
1
0
1
1
0

Emissions Attribute - Releases to Air

Organisation Name:	Biffa Waste Services Ltd
Case Number:	YP3536ZG

Please check that the data is entered in the correct units.
The Emission Index will only show if the data entered exceeds the threshold.

Please tick box if this sheet is applicable ☐

Substance	Units	Emission Threshold	Maximum Quantity	Emission Index	Notes
Oxides of Sulphur	Tonnes Year	10		0	
Oxides of Nitrogen	Tonnes Year	10	21.5	2	
Carbon Monoxide	Tonnes Year	1000		0	
Beryllium	Kg year	1		0	
Cadmium	Kg year	1		0	
Lead	Kg year	1		0	
Mercury	Kg year	1		0	
Antimony	Kg year	10		0	
Arsenic	Kg year	10		0	
Chromium	Kg year	10		0	
Nickel	Kg year	10		0	
Selenium	Kg year	10		0	
Other Metals Specify					
	Kg year	100		0	
	Kg year	100		0	
	Kg year	100		0	
	Kg year	100		0	
	Kg year	100		0	
Organic Compounds					
Dioxins and Furans	mg TEQ year	0.1	1.13	11	
PCBs	mg TEF year	0.1		0	
PAHs as benzo(a)pyrene	Kg year	1	2.97	3	
Phosgene	Kg year	1		0	
Isocyanates	Kg year	1		0	
Di-ethyl sulphate	Kg year	1		0	
Di-methyl sulphate	Kg year	1		0	
Acrylonitrile	Kg year	10		0	
Aniline	Kg year	10		0	
Benzene	Kg year	10		0	
Benzyl Chloride	Kg year	10		0	
1-chloro-2,3-epoxypropane	Kg year	10		0	
Chloroform	Kg year	10		0	
Cyanamide	Kg year	10		0	
Ethylene oxide	Kg year	10		0	
Formaldehyde	Kg year	10		0	
Maleic anhydride	Kg year	10		0	
Nitrobenzene	Kg year	10		0	
Allyl alcohol	Kg year	10		0	
Acetaldehyde	Kg year	100		0	
Acetonitrile	Kg year	100		0	
Benzene-1,2,4-tricarboxylic acid, 1,2-anhydride	Kg year	100		0	
1,3-butadiene	Kg year	100		0	
Chloroethene	Kg year	100		0	
1,2-dichloroethane	Kg year	100		0	
Dimethylformamide	Kg year	100		0	
1,4-dioxane	Kg year	100		0	
2-ethoxyethanol	Kg year	100		0	
2-ethoxyethylecetate	Kg year	100		0	
Ethyl acrylate	Kg year	100		0	
Iodomethane	Kg year	100		0	
Methylamine	Kg year	100		0	
2-nitropropane	Kg year	100		0	
Phenol	Kg year	100		0	

31/07/2015

Propylene oxide	Kg year	100		0
HFC's	Kg year	100		0
HCFC's	Kg year	100	missions to Air	0
PFC's	Kg year	100		0
	Kg year			
Benzaldehyde	Kg year	500		0
Benzo(a)pyrene	Kg year	500		0
Butene	Kg year	500		0
Chloromethane	Kg year	500		0
1,4-dichlorobenzene	Kg year	500		0
Dichloromethane	Kg year	500		0
Ethyl toluene	Kg year	500		0
Ethylene	Kg year	500		0
i-butyraldehyde	Kg year	500		0
Methyl bromide	Kg year	500		0
Pentene	Kg year	500		0
Propene	Kg year	500		0
Styrene	Kg year	500		0
Tetrachloroethane	Kg year	500		0
Tetrachloroethene	Kg year	500		0
Toluene diamine	Kg year	500		0
1,1,1-trichloroethane	Kg year	500	2680.56	5
Trichloroethylene	Kg year	500		0
Trichlorotoluene	Kg year	500		0
Trimethylbenzene	Kg year	500		0
Xylene	Kg year	500		0
Other VOCs specify				
	Kg year	1000		0
	Kg year	1000		0
	Kg year	1000		0
	Kg year	1000		0
	Kg year	1000		0
Inorganics				
Fluorine	Kg year	10		0
Chlorine	Kg year	10		0
Bromine	Kg year	10		0
Iodine	Kg year	10		0
Hydrogen Fluoride	Kg year	10		0
Hydrogen Bromide	Kg year	10		0
Hydrogen Iodide	Kg year	10		0
Hydrogen Chloride	Kg year	1000	1377	1
Hydrogen Sulphide	Kg year	10		0
Ammonia	Kg year	100		0
Carbon Disulphide	Kg year	100		0
Particulates	Kg year	100	138	1
Other inorganic compounds specify				
Table A1 Substances	Kg year	0.1		0
Table A2 Substances	Kg year	1		0
Table A3 Substances	Kg year	10		0
Table A4 Substances	Kg year	100		0
Table A5 Substances	Kg year	1000		0
Commercial in Confidence				
If you need to use these entries please contact your local EA office				
				0
				0
				0
				0
			Total	25

Emissions Attribute - Releases to Water

Organisation Name:	Biffa Waste Services Ltd	Please check that the data is entered in the correct units.
Case Number:	YP3536ZG	The Emission Index will only show if the data entered exceeds the threshold.

Please tick box if this sheet is applicable



Substance	Units	Emission Threshold	Maximum Quantity	Emission Index	Notes
Aldrin	Kg year	0.001		0	
Azinphos-ethyl	Kg year	0.001		0	
DDT all isomers	Kg year	0.001		0	
Endosulfan	Kg year	0.001		0	
Endrin	Kg year	0.001		0	
Fenitrothion	Kg year	0.001		0	
Fenthion	Kg year	0.001		0	
Isodrin	Kg year	0.001		0	
Malathion	Kg year	0.001		0	
Parathion	Kg year	0.001		0	
Azinphos-methyl	Kg year	0.01		0	
Chlorfenvinphos	Kg year	0.01		0	
Diazinon	Kg year	0.01		0	
Dieldrin	Kg year	0.01		0	
Hexachlorobenzene	Kg year	0.01		0	
Hexachlorocyclohexanes	Kg year	0.01		0	
Hexachlorobutadiene	Kg year	0.01		0	
Mevinphos	Kg year	0.01		0	
Omethoate	Kg year	0.01		0	
Parathion methyl	Kg year	0.01		0	
Permethrin	Kg year	0.01		0	
Polychlorinated biphenyls	Kg year	0.01		0	
Triazophos	Kg year	0.01		0	
Tributyltin compounds	Kg year	0.01		0	
Trifluralin	Kg year	0.01		0	
Triphenyltin compounds	Kg year	0.01		0	
Atrazin	Kg year	0.1		0	
Pentachlorophenol and its compound	Kg year	0.1		0	
Simazine	Kg year	0.1		0	
Trichlorobenzene all isomers	Kg year	0.1		0	
	Kg year				
Benzene	Kg year	1		0	
Bentazone	Kg year	1		0	
Biphenyl	Kg year	1		0	
Carbon Tetrachloride	Kg year	1		0	
Chloroform	Kg year	1		0	
Chloronitrotoluenes	Kg year	1		0	
4-Chloro-3-Methylphenol	Kg year	1		0	
2-Chlorophenol	Kg year	1		0	
2,4 D non-ester	Kg year	1		0	
2,4 D ester	Kg year	1		0	
Demeton	Kg year	1		0	
1,2-Dichloroethane	Kg year	1		0	
Dimethoate	Kg year	1		0	
Linuron	Kg year	1		0	
Mecoprop	Kg year	1		0	
Napthalene	Kg year	1		0	
Tetrachloroethylene	Kg year	1		0	
1,1,1-Trichloroethane	Kg year	1		0	
1,1,2-Trichloroethane	Kg year	1		0	
Cadmium	Kg year	1		0	
Mercury	Kg year	1		0	
Nonylphenol Ethoxylate	Kg year	20		0	
Nonylphenols	Kg year	20		0	
Octylphenols	Kg year	20		0	
Toluene	Kg year	20		0	
1,2-Dichloroethylene	Kg year	20		0	
Xylenes	Kg year	20		0	
Arsenic	Kg year	20		0	
Chromium	Kg year	20		0	

Copper	Kg year	20		0	
Lead	Kg year	20		0	
Nickel	Kg year	20	sions to wa	0	
Zinc	Kg year	20		0	
All consented substances not listed above specify					
Table W1 Substances	Kg year	0.01		0	
Table W2 Substances	Kg year	0.1		0	
Table W3 Substances	Kg year	1		0	
Table W4 Substances	Kg year	20		0	
Table W5 Substances	Kg year	100		0	
	Kg year			0	
	Kg year			0	
	Kg year			0	
Commercial in Confidence					
If you need to use these entries please contact your local EA office					
				0	
				0	
				0	
				0	
			Total	0	

Emissions Attribute Releases to Land

Organisation Name: Fa Waste Services Ltd
Case Number: YP3536ZG

Please check that the data is entered in the correct units.
 The Emission Index will only show if the data entered exceeds the threshold.

Please tick box if this
 sheet is applicable ☐

Substance/Landfill Type	Units	Emission Threshold	Maximum Quantity	Emission Index	Notes
Inert waste	Tonnes year	1000		0	
Non hazardous waste (non biodegradable)	Tonnes year	350		0	
Hazardous waste	Tonnes year	100	50000	500	Asbestos
Non hazardous waste (biodegradable)	Tonnes year	100	625000	6250	
			Total	6750	

Emissions Attribute - Off-site Disposals to Sewer

Organisation Name:	Biffa Waste Services Ltd	Please check that the data is entered in the correct units.
Case number:	YP3536ZG	The Emission Index will only show if the data entered exceeds the threshold.

Please tick box if this sheet is applicable ☐

Substance	Units	Emission Threshold	Maximum Quantity	Emission Index	Notes
Aldrin	Kg year	0.001		0	
Azinphos-ethyl	Kg year	0.001		0	
DDT all isomers	Kg year	0.001		0	
Endosulfan	Kg year	0.001		0	
Endrin	Kg year	0.001		0	
Fenitrothion	Kg year	0.001		0	
Fenthion	Kg year	0.001		0	
Isodrin	Kg year	0.001		0	
Malathion	Kg year	0.001		0	
Parathion	Kg year	0.001		0	
Azinphos-methyl	Kg year	0.01		0	
chlorfenvinphos	Kg year	0.01		0	
Diazinon	Kg year	0.01		0	
Dieldrin	Kg year	0.01		0	
Hexachlorobenzene	Kg year	0.01		0	
Hexachlorocyclohexanes	Kg year	0.01		0	
Hexachlorobutadiene	Kg year	0.01		0	
Mevinphos	Kg year	0.01		0	
Omethoate	Kg year	0.01		0	
Parathion methyl	Kg year	0.01		0	
Permethrin	Kg year	0.01		0	
Polychlorinated biphenyls	Kg year	0.01		0	
Triazophos	Kg year	0.01		0	
Tributyltin compounds	Kg year	0.01		0	
Trifluralin	Kg year	0.01		0	
Triphenyltin compounds	Kg year	0.01		0	
Atrazin	Kg year	0.1		0	
Pentachlorophenol and its compound	Kg year	0.1		0	
Simazine	Kg year	0.1		0	
Trichlorobenzene all isomers	Kg year	0.1		0	
Benzene	Kg year	1		0	
Bentazone	Kg year	1		0	
Biphenyl	Kg year	1		0	
Carbon Tetrachloride	Kg year	1		0	
Chloroform	Kg year	1		0	
Chloronitrotoluenes	Kg year	1		0	
4-Chloro-3-Methylphenol	Kg year	1		0	
2-Chlorophenol	Kg year	1		0	
2,4 D non-ester	Kg year	1		0	
2,4 D ester	Kg year	1		0	
Demeton	Kg year	1		0	
1,2-Dichloroethane	Kg year	1		0	
Dimethoate	Kg year	1		0	
Linuron	Kg year	1		0	
Mecoprop	Kg year	1		0	
Napthalene	Kg year	1		0	
Tetrachloroethylene	Kg year	1		0	
1,1,1-Trichloroethane	Kg year	1		0	
1,1,2-Trichloroethane	Kg year	1		0	
Cadmium	Kg year	1		0	
Mercury	Kg year	1		0	
Nonylphenol Ethoxylate	Kg year	20		0	
Nonylphenols	Kg year	20		0	
Octylphenols	Kg year	20		0	
Toluene	Kg year	20		0	
Trichloroethylene	Kg year	20		0	
Xylenes	Kg year	20		0	
Arsenic	Kg year	20		0	
Chromium	Kg year	20		0	
Copper	Kg year	20		0	
Lead	Kg year	20		0	
Nickel	Kg year	20		0	
Zinc	Kg year	20		0	
All consented substances not listed above specify					
Chemical Oxygen Demand	Kg year	10000	31536	3	
Suspended Solids	Kg year	10000		0	
Table S1 Substances	Kg year	0.01		0	
Table S2 Substances	Kg year	0.1		0	
Table S3 Substances	Kg year	1		0	
Table S4 Substances	Kg year	20		0	
Table S5 Substances	Kg year	100		0	
Commercial in Confidence					
If you need to use these entries please contact your local EA office					
				0	
				0	
				0	
				0	
		Total		3	
		Weighting Factor			(Weighting factor = 0.33)
		Weighted Total		1	

Emissions Attribute - Off-site Disposals of Waste

Organisation Name: fa Waste Services Ltd

Case Number: YP3536ZG

Please check that the data is entered in the correct units.

The Emission Index will only show if the data entered exceeds the threshold.

Substance	Units	Emission Threshold	Maximum Quantity	Emission Index	Notes
Inert waste	Tonnes year	1000		0	
Non hazardous waste (non biodegradable)	Tonnes year	350		0	
Hazardous waste	Tonnes year	100		0	
Non hazardous waste (biodegradable)	Tonnes year	100		0	
		Total		0	(Weighting factor = 0.33)
		Weighting Factor			
		Weighted Total		0	

Emissions Attribute - Off-site Recovery, Recycling, Re-use of Waste

Company fa Waste Services Ltd

Permit YP3536ZG

Please check that the data is entered in the correct units.

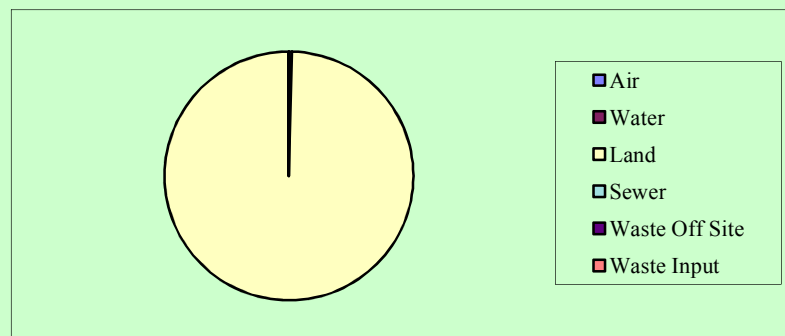
The Emission Index will only show if the data entered exceeds the threshold.

Substance	Units	Emission Threshold	Maximum Quantity	Emission Index	Notes
Inert waste	Tonnes year	1000		0	
Non hazardous waste (non biodegradable)	Tonnes year	350		0	
Hazardous waste	Tonnes year	100		0	
Non hazardous waste (biodegradable)	Tonnes year	100		0	
		Total		0	(Weighting factor = 0.1)
		Weighting Factor			
		Weighted Total		0	
Off-Site Total				0	

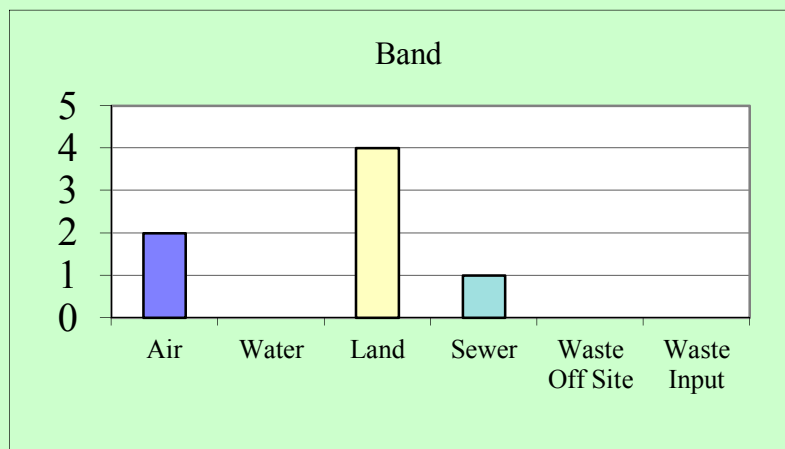
Emissions Attribute Summary Sheet

Organisation:	Biffa Waste Services Ltd
Case Number:	YP3536ZG

Pathway	Overall Emission Index
Air	25
Water	0
Land	6750
Sewer	1
Waste Off Site	0
Waste Input	0



Pathway	Band	
Air	2	B
Water	0	-
Land	4	D
Sewer	1	A
Waste Off Site	0	-
Waste Input	0	-

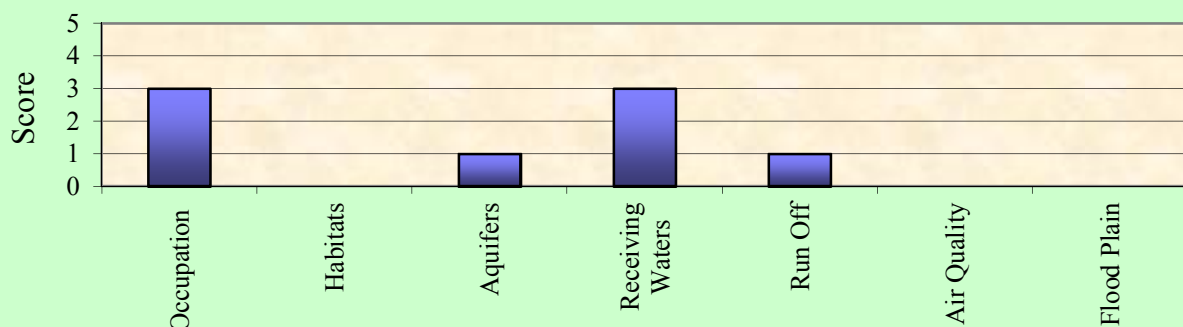


Location Attribute

Organisation Name:	Biffa Waste Services Ltd
Case Number:	YP3536ZG

Parameter	Yes/No	Available	Score
Human Occupation/Presence: a) if within 50m of the boundary or: b) if greater than 50m but less than 250m of boundary or: c) if greater than 250m but less than 1km of boundary	No Yes No	5 3 1	3
Statutory sites designated under Habitats Directive or CROW Act 2000: a) if "relevant" under Habitats Directive or b) if CROW Act 2000 assessment required	No No	3 2	0
a) if on an aquifer and within a Groundwater Protection Zone or b) if on an aquifer and not within a Groundwater Protection Zone	No Yes	2 1	1
Sensitivity of receiving waters (information available from Agency's "What's in your backyard" webpages), if: a) grade 5 b) river category grade 4 or 3 c) river category grade 2 or 1 or estuarine	No No Yes	1 2 3	3
a) If there is direct runoff from the site without interceptors or other active control measures or b) If as above but there are interceptors or active control measures	No Yes	2 1	1
a) If within an Air Quality Management Zone (AQMZ) and emit pollutant that has been declared for that AQMZ or b) If within 2km of an Air Quality Management Zone (AQMZ) and emit pollutant that has been declared for that AQMZ or c) as a) except do not emit pollutants that have be declared for the AQMZ	No No No	3 2 1	0
If within a flood plain	No	2	0
Maximum Score = 20	Total		8
Band A = 0 - 4, B = 5 - 8, C = 9 - 12, D = 13 - 17 and E = 18 - 20	Band		B

Location Attribute Profile



Operator Performance

		Yes/No	Points available	Points scored	Post or group responsible for each requirement	Document reference (*) or date by which systems will be in place (*see para 4.4.2)
--	--	--------	------------------	---------------	--	--

Operations and Maintenance section - 20%

Effective operational and prev maintenance systems shall be employed on all aspects of the process where any failure could impact on the environment.

1	Are there documented operating procedures for operations that may have an adverse impact on the environment?	Yes	2.0	2.0		
2	Is there a defined procedure for identifying, reviewing and prioritising items of plant for which a preventative maintenance regime is appropriate?	Yes	2.0	2.0		
3	Are there documented procedures for monitoring emissions or impacts?	Yes	2.0	2.0		
4	Is there a preventative maintenance programme for those items of plant whose failure could lead to impact on the environment?	Yes	1.0	1.0		
5	Does the preventative maintenance programme include regular checks and formal inspections of 'static' items such as tanks, pipework, retaining walls, bunds and ducts?	Yes	1.0	1.0		
6	Do the operations and maintenance systems include auditing environmental performance?	Yes	2.0	2.0		
7	Are the reports, results and recommendations arising from audits made available to senior management on a regular basis?	Yes	2.0	2.0		
8	In the last two years, has there been any notifiable incident or release for which lack of maintenance was a contributory cause ?	No	-2.0	0.0		
9	In the last two years, has there been any notifiable incident or release for which the root cause could not be identified?	No	-3.0	0.0		
Operations and Maintenance Total			12.0	12.0	100.0%	2.0

Competence and Training - 20%

The Operator shall ensure that all relevant management and operational staff (including contractors and those responsible for purchasing equipment and materials) receive adequate training with regard to their responsibilities under the Permit.

Particular attention should be given to the following:

- ☐ **Minimisation of all potential environmental effects from operation under normal, abnormal, start up and shut down circumstances;**
- ☐ **Prevention of accidental emissions and action to be taken when accidental emissions occur; and**
- ☐ **The need to report deviation from the permit.**

1	Has a training needs assessment been carried out which: ☐ Identifies all posts for which specific environmental awareness training is required; and ☐ Identifies the scope and level to which such training is to be given?	Yes	3.0	3.0		
2	Are training systems in place for all relevant staff that cover the following factors: ☐ the regulatory requirements associated with the Permit as they affect their work activities and responsibilities; ☐ likely potential environmental impacts which may be caused by plant under their control. This should cover both normal and abnormal circumstances; ☐ reporting procedures to inform supervisors or managers of deviations from permit conditions; ☐ procedures to be used by supervisors or managers and for the reporting of deviations from permit conditions to the Agency; and	Yes	2.0	2.0		
		Yes	2.0	2.0		
		Yes	1.0	1.0		
		Yes	2.0	2.0		31/07/2015

Operator Performance

		Yes/No	Points available	Points scored	Post or group responsible for each requirement	Document reference (*) or date by which systems will be in place (*see para 4.4.2)
	☐ prevention of accidental emissions and action to be taken when accidental emissions occur?	Yes	2.0	2.0		
3	Are the skills and competencies necessary for key posts documented and are records of training needs and training received maintained?	Yes	1.0	1.0		
4	Do the key posts include contractors, those responsible for liaising with contractors and those purchasing equipment and materials?	Yes	1.0	1.0		
5	Do you assess the potential environmental risks posed by the work of contractors and provide instructions to contractors about protecting the environment while working on site?	Yes	1.0	1.0		
6	In the last 2 years, have there been any notifiable incidents or releases, which it has been identified that lack of training was a contributory cause ?	No	-2.0	0.0		
7	Are there industry standards for training in this sector (e.g. WAMITAB) and if so do you apply them? (If no industry standards please leave blank)	Yes	-2.0	0.0		
8	Are individual and organisational training needs reviewed on a regular (e.g. annual) basis?	Yes	2.0	2.0		
Competence Training Total			17.0	17.0		

Emergency planning - 20%

The Operator shall maintain an accident management plan which identifies potential events or failures which might lead to an environmental impact. The plan shall identify: ☐ the likelihood of, and the actions to be taken to minimise, these potential occurrences; ☐ the environmental consequences and an action plan to deal with such occurrences; ☐ The Operator shall have a written procedure for handling, investigating, communicating and reporting of incidents and actual or potential non-compliance with permit conditions including taking action to mitigate any impacts caused and for initiating and completing corrective action. ☐ In the case of abnormal emissions the operator shall; ☐ investigate and undertake remedial action immediately; ☐ promptly record the events and actions taken; and ☐ ensure the Regulator is made aware, as soon as practicable.						
1	Is there an accident plan that complies with guidance covering the following aspects of foreseeable scenarios: likelihood, consequences, actions to prevent, action to take in the event it occurs?	Yes	4.0	4.0		
2	Has the plan identified areas where improvement is needed?	No	1.0	0.0		
3	Where improvement has been identified, does the plan include an implementation programme with acceptable timescales to the Agency? If not, 2 points will be deducted.		-2.0	0.0		
4	Are there written procedures for handling, investigating, communicating and reporting actual or potential non compliance with operating procedures or emission limits?	Yes	1.0	1.0		
5	Are there written procedures for handling, investigating, communicating and reporting environmental complaints?	Yes	1.0	1.0		
6	Are there written procedures for investigating incidents, (and near-misses) including identifying suitable corrective action and following up implementation of that action?	Yes	2.0	2.0		
7	In the last 2 years, have there been any notifiable incidents or releases for which it has been identified that lack of emergency planning was a contributory cause ?	No	-2.0	0.0		31/07/2015

Operator Performance

		Yes/No	Points available	Points scored	Post or group responsible for each requirement	Document reference (*) or date by which systems will be in place (*see para 4.4.2)
8	Are there audit records of investigations into non compliance, complaints and incidents? Does the audit cover follow up actions? Do the audit reports go to senior managers?	Yes	3.0	3.0		
Emergency planning Total			12.0	11.0		

Organisation - 40%

The following aspects of site management procedures and controls may not be in the permit conditions but are likely to have an impact on the Agency resources required to apply the Env Permitting Regulations.

1	Do you operate an externally audited environment management system, if so answer one of the following questions. N.B Please enter your Certificate Number, Name of certification body and their UKAS Registration Number in the space for document reference.					
1.1	Is your Environmental Management System EMAS registered? If yes select Y and go to question 4.	No	20	0		
1.2	Is your Environmental Management System certified to ISO 14001? If yes enter Y and go to questions 3 and 4.	Yes	15	15		
1.3	Is your system an Environmental Management System subject to external audit through a third party audit programme with a published methodology (excludes in-house company audit programme). If yes enter and go to questions 3 and 4.	No	12	0		
Sub Total			Max 20	15.00		
2	If you do not operate an externally audited environmental management system then assess your system against the criteria below:					
2.1	Has your company adopted an environmental policy and programme which :					
	☐ includes a commitment to continual improvement and prevention of pollution?		1.0	0.0		
	☐ includes a commitment to comply with relevant legislation, and with other requirements that the organisation subscribes to?		1.0	0.0		
	☐ identifies, sets, monitors and reviews environmental objectives, independently of the permit?		1.0	0.0		
2.2	Are there procedures that incorporate environmental issues into the following areas (as supported by demonstrable evidence e.g. written procedures):					
	☐ the control of process change on the installation;		1.0	0.0		
	☐ design and review of new facilities (including provision for their decommissioning), engineering and other capital projects;		1.0	0.0		
	☐ capital approval;		1.0	0.0		
	☐ purchasing policy;		1.0	0.0		
2.3	Are there audits, at least annually, to check that all activities are being carried out in conformity with the above requirements?		1.0	0.0		
2.4	Are they independent? (name the auditing body)		2.0	0.0		
2.5	Are there reports annually on environmental performance, objectives and targets, future planned improvements and or facilitate (participate in) local community liaison meetings?		1.0	0.0		
3	Does your company produce a public environmental statement? You may score in this box for ISO 14001 and industry systems but not for EMAS as this is a requiremen for EMAS.	Yes	1.0	1.0		

Operator Performance

		Yes/No	Points available	Points scored	Post or group responsible for each requirement	Document reference (*) or date by which systems will be in place (*see para 4.4.2)
4	Within the past 5 years have you failed to meet an improvement condition either set by the Agency in a Permit or Variation by the due date, without prior agreement? (minus 2 for each failure). ADD NUMBER OF FAILURES NOT Y OR N	0	-2.0	0.0		
Organisational Totals			20.0	16.00		

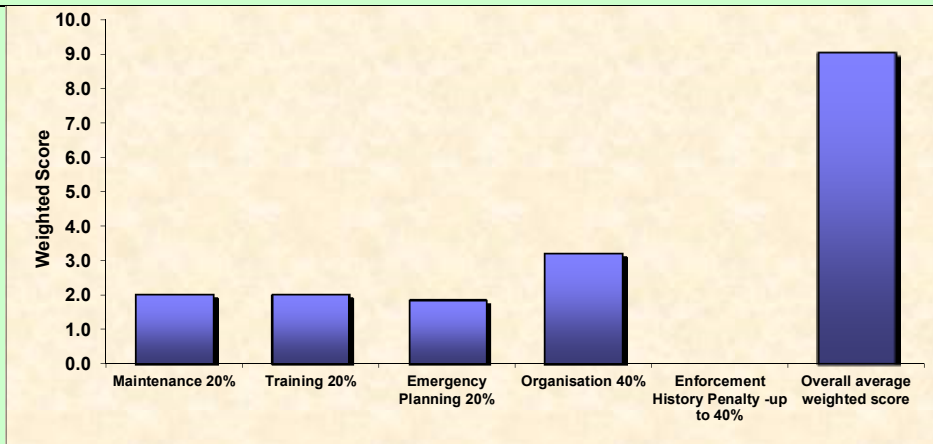
Enforcement History (0 to -40% weighting)

				Notice etc	Date Issued	Date Spent
1	Enforcement , Improvement, Works, Compliance or Restoration Notices issued in the past year by the Environment Agency under any legislation, by the Health and Safety Executive relevant to the COMAH Regulations or by local authorities under Part I of the Environmental Protection Act 1990 or relevant notice or Abatement Notices issued by local authorities or magistrates courts under Part III of the Environmental Protection Act 1990	0	None 0 1st - 5 2nd -10 3rd or more -40			
2	Formal cautions, Enforcement Undertakings or Fixed Monetary Penalties issued by the Environment Agency in respect of offences under any legislation in the last 3 years.	0	None 0 1st - 5 2nd -10 3rd or more -40			
3	Prohibition, Stop, Suspension or Revocation Notices issued by the Environment Agency under any legislation, by the Health and Safety Executive relevant to the COMAH Regulations or by local authorities under Part I of the Environmental Protection Act 1990 in the last 3 years	0	None 0 1st - 10 2nd or more -40			
4	Convictions on prosecutions brought by the Environment Agency under any legislation, by the Health and Safety Executive relevant to the COMAH Regulations or by local authorities (in respect of offences under Parts I or III of the Environmental Protection Act 1990) in last 5 years (10 years where imprisonment was imposed). Or any Variable Monetary Penalty. [NB each individual offence counts separately].	0	None 0 1st - 15 2nd or more -40			

Enforcement History Total				Score	
	Entered	Spent	Extant		
1 Enforcement etc Notices	0	0	0		
2 Formal Cautions etc	0	0	0		
3 Prohibition etc Notices	0	0	0		
4 Convictions on Prosecutions etc	0	0	0	0	
Enforcement History Total (min -40)				0	

Operator Performance

		Yes/No	Points available	Points scored	Post or group responsible for each requirement	Document reference (*) or date by which systems will be in place (*see para 4.4.2)
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Band E= less than 2
D= 2 to 3.99, C= 4 to 5.99, B= 6 to 7.99 , A= 8 to 11

BAND=

A

Company : Biffa Waste Services Ltd

Permit: YP3536ZG

Data calculations generating the above graph

Summary	Max	Score from above	Normalised to scale out of 10	Weighting	Weighted score
Maintenance 20%	12.00	12.00	10.00	20.00	2.0
Training 20%	17.00	17.00	10.00	20.00	2.0
Emergency Planning 20%	12.00	11.00	9.17	20.00	1.8
Organisation 40%	20.00	16.00	8.00	40.00	3.2
Enforcement History Penalty -up to 40%	-40.00	0.00	0.00	40.00	0.0
Overall average weighted score					9.0

Opra Banded Profile

Organisation Name:	Biffa Waste Services Ltd
Case Number:	YP3536ZG

Attribute		Profile before any rules or capping applied		Opra Banded Profile used for charging	
		Number	Band	Number	Band
Complexity		1	A	1	A
		0	B	0	B
		1	C	1	C
		1	D	1	D
		0	E	0	E
Emissions	Air		B		B
	Water		-		-
	Land		D		D
	Sewer		A		A
	Waste Off Site		-		-
	Waste Input		-		-
Location			B		B
Operator Performance			A		A

Organisation Name:	Biffa Waste Services Ltd	Case Number:	YP3536ZG
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EPR Installations Application Charge Calculation

(excludes Compliance Rating)

Scoring Summary - Financial



Attribute	Band		Score	Total Score
Complexity	A	1	2	2
	B	0	15	0
	C	1	45	45
	D	1	82	82
	E	0	110	0
Emissions to Air	B			10
Emissions to Water	-			0
Emissions to Land	D			35
Emissions to Sewer	A			1
Emissions to Off-site Waste	-			0
Emissions - Waste Input	-			0
Location	B			10
Operator Performance	A			10
Total Opra charging score				195.00

Indicative Fees & Charges

Application Fee	£	40,170.00
Subsistence Charge*	£	19,500.00
Substantial Variation	£	22,035.00
Standard Variation	£	11,115.00
Partial Surrender	£	19,110.00
Full Surrender	£	24,765.00
Closure	£	-

Part A(2) and Part B Activities

Please ensure that you have completed these entries in the Listed Activities sheet. The charge shown will not include any charges associated with Local Authority Part A (2) or Part B activities that form part of the installation.
Refer to Installations Charging Scheme for further details.

Opra Charge Multipliers

Application	206
Subsistence	100
Substantial Variation	113
Standard Variation	57
Partial Surrender	98
Full Surrender	127
Closure (Landfill only)	

* Does not take into account Compliance Rating

Compliance Rating

Breach Category*	Events	Score per event	Total
1	0	60	0
2	0	31	0
3	0	4	0
4	0	0.1	0
		Compliance Index	0

Compliance Rating Band

A

Compliance Rating Multiplier

95%

* Under Compliance Classification Scheme (CCS)

Opra Score

Without Compliance Rating **195**

Including Compliance Rating **185.25**

Subsistence Fee: £ **18,525.00**

Non Technical Summary

Trecatti Landfill Site

Multipurpose Waste Treatment and Remediation Pad

Environmental Permit Variation and Standard Rule Application

Non Technical Summary

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DRAWINGS

Drawing 001	Site Location Plan
Drawing 002	Proposed Site Layout and Boundary
Drawing 003	Proposed Site Drainage
Drawing 004	Sources, Pathways and Receptors
Drawing 005	Proposed Containment Bunding and Surfacing

1.0 INTRODUCTION

Biffa Waste Services Limited (Biffa) has retained SLR Consulting Limited (SLR) to prepare an application to:-

1. vary Environmental Permit reference EPR/RP3733PC for Trecatti Landfill site, Merthyr, Wales under The Environmental Permitting (England and Wales) Regulations 2010 (as amended) Waste Treatment and Remediation Facility; and
2. vary the above Permit to add the Standard Rules Permit SR2012 No 8 to allow for the operation of a Composting Facility on the Multipurpose Pad.

In addition to this Non-Technical Summary, the following documentation is also submitted in support of the application to vary the Environmental Permit:

- Application Forms (Parts A, C1, C2, C3 and F1) and supporting documentation;
- Installation OPRA Spreadsheet;
- Waste Treatment Facility Best available Technique and Operating Techniques Document; and
- Waste Treatment Facility H1 Environmental Risk Assessment (Annex A).

The information contained within this Non-Technical Summary is informed by the Environment Agency's explanatory notes on the Application Form Part C2, which dictates that the Non-Technical Summary should explain clearly what is being applied for, give a summary of the regulated facilities and of the relevant key technical standards and control measures relating to the site.

2.0 OVERVIEW OF DEVELOPMENT

2.1 Site Location & Environmental Site Setting

Trecatti landfill site is located to the immediate north-east of Merthyr Tydfil and approximately 3km west of Rhymney at National Grid Reference SO082077. It is located within an area of historic open-cast coal and ironstone working and lies to the north-west of the Gelligaer and Merthyr Common. The site is immediately surrounded by common land that includes vegetated colliery spoil tips and is used for rough grazing. The nearest residential area is Dowlais Top which lies approximately 200 metres to the north-west of the landfill. Access to the site is from the unclassified Fochriw Road to the east. The main watercourses present in the vicinity are the River Taff and Rhymney River, which flow in a general southerly direction 3.5km west and 2.1km east of the site respectively. A number of tributary drains and streams drain the land immediately surrounding Trecatti Landfill.

The permitted installation includes all areas of the existing and future landfill and site infrastructure in addition to the listed leachate treatment plant and non listed directly associated landfill gas utilisation activity. The following non-listed directly associated activities are also included as part of the permitted installation: discharge of treated leachate to sewer; discharge of surface water drainage to a controlled watercourse; storage of fuel and raw materials, production and storage of waste oils and gas flaring.

Merthyr Tydfil Borough Council commenced landfilling at Trecatti in 1986 and operated the site up until 1992 when the management transferred to Biffa Waste Services Limited. The site was licensed at that time to receive domestic, commercial and industrial wastes including difficult and special wastes. Engineered containment principles were introduced at Trecatti from 1993 in Phase 1 within the north western corner. Subsequent landfilling took place within Phase 2, which then formed the basal containment for Phases 2A, 3A, and 4A. Phase 2A also forms the basal containment for all the remaining Phases to be developed.

Trecatti Landfill has been constructed above the regional groundwater table of the Coal Measures strata and therefore no permanent groundwater management system is required. However, temporary under-liner drainage systems have been installed beneath the Phases developed to date due to the presence of perched groundwater. Leachate accumulating within the site is abstracted and treated at the on-site treatment plant. Landfill gas is collected and pumped to an on-site gas management plant which is capable of producing up to 4MW electricity. Surplus gas is flared off.

The site location is illustrated on Drawing 001 dated July 2015, Site Location Plan.

2.2 Current Permit

The site is currently regulated under Environmental Permit Reference: EPR/RP3733PC, issued 9th March 2005 (and subject to a number of variations, the most recent being variation V008, issued on 27th February 2015) and permits the disposal of up to 625,000t per annum of non hazardous waste and 50,000t per annum of stable and non reactive (asbestos) wastes.

3.0 DESCRIPTION OF PROPOSED ACTIVITIES

This Environmental Permit variation application seeks to add a Multipurpose Waste Treatment and Remediation Pad (MWTRP) to the permitted activities undertaken at the site. The location of the pad in relation to the permitted landfill is shown on Drawing 1, dated July 2015 Environmental Permit Boundary.

The MWTRP layout is detailed in Drawing 002 and will allow the following two distinct waste activities to take place:

1. Waste Treatment Facility (WTF) - treatment and bioremediation of hazardous and non hazardous waste including soils and sludges ; and
2. Green Waste Composting Facility.

The WTF would have a capacity to treat up to 30,000 tonnes (t) of contaminated (classified by Natural Resources Wales (NRW) as “hazardous” waste) soils a year, whilst the composting facility would treat typically 30,000t and up to 75,000 of source segregated green wastes per year in accordance with a standard rules set.

The proposed MWTRP would comprise a single impermeable surfaced pad. The pad will have overall maximum dimensions of around 125m by 82m and orientated in a south east to north west fashion. The northern most part of the pad would be used for the composting of green waste and would be 45m by 70m in footprint (3,250m²). Adjoining this would be an area used for the bioremediation of contaminated soils or sludges; this area would be 80m in length and between 56m and 82m in width (having a footprint of around 6,000m²). The two areas would be separated by low level bund. Drawing 005 shows typical conceptual construction and bunding details. These details maybe subject to change upon final design. NRW would be consulted with any such plans prior to construction.

At the southern part of the application site would be the site infrastructure, comprising office/welfare accommodation, car parking, two process water storage tanks (within a bunded enclosure), biofilter, air/water separators with attendant process equipment (blowers, pumps etc, housed within a metal container) and a substation. An area to the west of the pad would be used for processing (shredding/screening) the green waste and compost. Along the western edge of the pad would be an access road (approximately 8.5m in width) which would link with an existing access road within the landfill. Finally, within the proposed facility would be two surface water drainage lagoons: one would be located within the southern part and the other within the north eastern part.

Biffa already operate four similar WTF facilities located at its Skelton Grange (Leeds), Meece (Staffordshire), Westmill (Hertfordshire) and Cottonmount (Northern Ireland) landfill sites. The WTF at Biffa's Risley Landfill site was the first of the bioremediation facilities to be operated by Biffa but has now closed along with the landfill site.

3.1 WTF: Bioremediation Process

Full details of the treatment and bioremediation process are provided within the Best Available Techniques and Operating Techniques (BATOT) document, a summary is given below:

Part of the WTF process comprises the biological treatment of contaminated soils or sludges to produce suitable materials for use in restoration/reclamation works (either on site or for

projects in the South Wales region) and also as a daily cover on the landfill site. This would be undertaken using technology provided by Biffa's technology partner, Celtic EnGlobe. The materials to be treated by the WTF process would be too contaminated to allow for their reuse without being cleaned and would otherwise require to be directly landfilled at suitable, specialist landfill sites elsewhere in Wales, or indeed England. Whilst it is possible that some of the treated soil could be utilised within the boundary of the landfill site for restoration works the majority would be exported to the local market. The WTF would therefore contribute towards producing material to ensure that the landfill site and other reclamation projects are restored to the highest standards.

Figure 3-1 Aerial view of the WTF at Biffa's Risley Landfill Site



The material to be treated by biological means comprises soils or sludges contaminated with organic compounds (such as hydrocarbons), which are considered as waste and which, in some cases dependent on the level of contamination, may be considered as "Hazardous Waste" as defined by the Hazardous Waste (England and Wales) Regulations 2005. The WTF would only accept wastes which have been assessed to ensure that they are amenable to treatment in terms of both their chemical and physical compositions. Most incoming wastes would be classified as hazardous wastes; however, a small proportion of incoming wastes would be similar but at levels slightly below the hazardous waste thresholds and hence would be classed as non-hazardous waste. Biological treatment simply accelerates a natural phenomenon, accomplishing in a few months what would require nature decades to achieve. The process utilises Celtic EnGlobe's proprietary technology and operates through means of moisture control, addition of suitable materials to the soil, use of biopiles and forced air extraction to encourage micro-organism growth and breakdown of hydrocarbons

into by-products such as carbon dioxide and water vapour. The end product is an uncontaminated material that is suitable for use in restoration of the landfill.

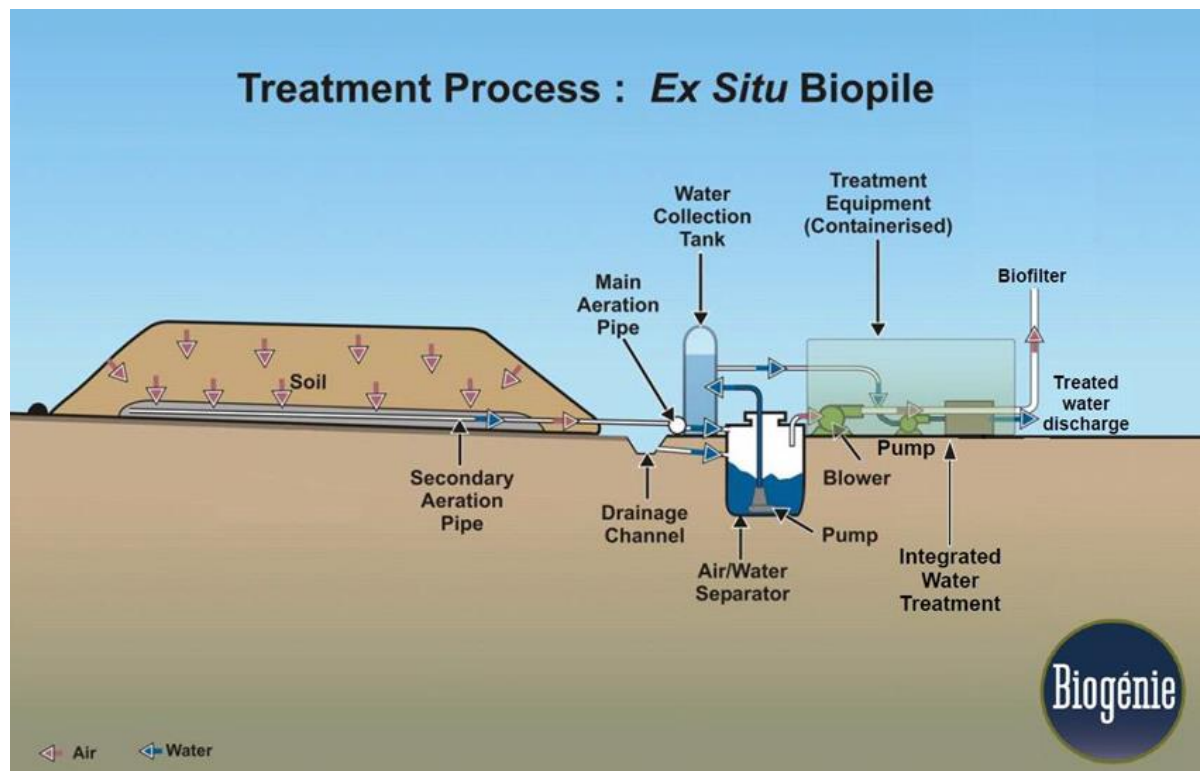
In summary, the operation of the WTF will comprise the following key elements which are described in more detail in the BATOT document;

1. Waste reception;
2. Biological treatment of soil or sludges at the biopiles using forced air extraction and or mechanical turning;
3. Process water tanks (serve biopiles);
4. Air extraction system (serve biopiles);
5. Air water separators (serve biopiles);
6. Humidifying chamber (serve biopiles);
7. Biofilter (serve biopiles); and
8. Ancillary infrastructure

The development proposal would not prejudice the approved restoration scheme for the landfill site and the MWTRP would be removed to allow restoration of the site in line with the approved restoration scheme. In this respect, the proposals are temporary in nature, being linked to the life of the landfill operations.

Figure 3-1 above illustrates the general arrangement of a WTF, being an aerial photograph of the applicants' WTF at Risley Landfill site, Warrington (now closed).

Figure 3-2
Bioremediation process



The biopile treatment process will use biological remediation over a period of time to reduce contaminating components within the soils to concentrations where the soil can be reused.

Soils will typically be treated over an 8-16 week period, with the material being turned infrequently, typically once every 8 weeks. The bioremediation plant will operate continuously. The facility will be limited to accepting wastes that can be treated to a point where they can be used as restoration soil on the landfill cap or, if required, as daily intermediate cover.

The biopile process includes the control of all gaseous and aqueous emissions. The control of emissions is described in the supporting application documentation. Biopile is a North American term to describe the treatment of soil in a stockpile. A schematic of the bioremediation process is shown below.

3.2 Green Waste Composting Process Description

In addition to accepting contaminated wastes for bioremediation, the MWTRP may also accept source segregated green wastes. This waste would typically be from municipal sources collected by local authorities, either through kerbside collections or from Household Waste Recycling Centres. This waste stream would not be classed as hazardous. This aspect of the proposed development is speculative as it is dependent on the applicant securing suitable contracts for the management of green waste collected by the local authorities.

It is proposed that Standard Rules Permit SR2012 No8 be applied for within the remit of this Permit variation to allow Green Waste Composting Operations to be carried out on site as per the pre-application discussions held with NRW in April 2015. The site will accept, in accordance with the SRP, more than 75 tonnes per day of green waste composting, and less than 75,000tpa. It is anticipated that the site may accept approximately 30,000tpa in the initial stages.

An open air composting facility would be developed adjacent to the area used for the bioremediation of soils, for the treatment and processing of source segregated green waste.

The composting operations would be undertaken on an impermeable surfaced pad measuring approximately 45m by 70m (3,250m²). The composting area of the pad would be surrounded by a low level bund which would effectively create a sealed system to prevent the escape of material and leachate.

It is proposed that the composting facility would be able to accept and process approximately 30,000 tonnes of green waste per annum. The resultant compost would be taken for sale off site and also used as a restoration material in the restoration of the landfill as and when needed.

The process of producing compost from green waste at the site would be divided into two stages, screening and shredding and composting.

Stage 1 – Shredding & Initial Screening

Vehicles transporting the collected green waste would deposit the waste in the reception area on the western side of the composting pad. The deposited material would 'bulked up' until sufficient waste has been accumulated for shredding to take place. Green waste generation is a seasonal activity and so increases in volume during the summer months may occur. The 'bulked up' waste would be placed into a mobile shredder with a loading shovel and shredded. The shredding of the green waste helps to balance the carbon and nitrogen in the material to be composted, which is essential for effective composting. Woody material

would be hand fed into a 4 inch chipper. This would allow the opportunity for a degree of sorting and the removal of unwanted materials such as plastics etc. The chipped material would be mixed with the segregated and shredded green waste in preparation for composting and stored in a stockpile on the composting pad.

Stage 2 – Composting & Final Screening

The shredded green waste would be transported from the stockpiles to the composting area by a front end loading shovel or dump truck and composted in conventional open windrows up to 3m in height and 4m in width. The use of conventional windrows is considered to be appropriate because the material to be composted is solely green waste.

The composting process takes between 10 to 16 weeks dependent upon the required quality of the final compost. In order to control the composting process, the material in the windrows would be turned weekly in the first three weeks and two-weekly thereafter, in order to maintain temperature, moisture content and oxygen availability. This would be carried out using the loading shovel or a dedicated windrow turner. This maintenance of aerobic conditions would ensure that no 'foul' odours such as those associated with anaerobic conditions are prevalent. In order to ensure efficient composting, moisture content will be maintained above 50%. During periods of dry weather, it would be necessary to re-wet the green waste immediately after shredding in order for the composting process to operate efficiently.

To prevent pollution of surface or groundwater, the drainage from the proposed composting pad would be collected and directed to lagoon 2. The water would then be re-circulated into the windrows to maintain moisture content.

During the composting process the majority of the green waste would be degraded, although larger, woody items would not degrade so quickly. This provides an opportunity to remove such items and inorganic contaminants from the compost by further screening. This screening would be carried out periodically using a mobile screen. The oversize material extracted from this screening process would either be re-introduced into new windrows or, if too contaminated to re-use, be disposed of within the landfill. The resultant compost would then be stockpiled ready for sale.

3.2.1 Composting Permitted Activities

The waste management operations to be carried out associated with the Green Waste Composting Operations at the site as specified in Annex I and Annex II of the Waste Framework Directive 2008 are:

- **R3:** Recycling/reclamation of organic substances which are not used as solvents; and
- **R13:** Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced).

3.2.2 Permitted Types and Quantities of Waste for Composting

It is proposed that the site will accept and process greater than 75 tonnes per day of waste, as detailed in Table 3.1 below;

Table 3-1
Green Waste Composting Waste Codes for Acceptance as per the Standard Rules Permit

EWG CODE	DESCRIPTION
02	WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING
02 01	wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing
02 01 03	plant-tissue waste
02 01 06	animal faeces, urine and manure (including spoiled straw) only
02 01 07	wastes from forestry (biodegradable only)
02 01 99	wastes not otherwise specified (spent mushroom compost and fully biodegradable bedding only)
02 03	wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation
02 03 04	materials unsuitable for consumption or processing (biodegradable only)
02 07	wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)
02 07 01	wastes from washing, cleaning and mechanical reduction of raw materials (biodegradable only)
02 07 02	wastes from spirits distillation (biodegradable only)
02 07 04	material unsuitable for consumption or processing (biodegradable only)
02 07 99	wastes not otherwise specified (malt husks, malt sprouts, yeast and yeast-like residues only)
03	WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PANELS AND FURNITURE, PULP, PAPER AND CARDBOARD
03 01	wastes from wood processing and the production of panels and furniture
03 01 01	waste bark and cork
03 01 05	Sawdust, shavings, cuttings, wood and particle board other than those in 03 01 04 only
03 03	wastes from pulp, paper and cardboard production and processing
03 03 01	waste bark and wood
03 03 10	fibre rejects only
04	WASTES FROM THE LEATHER, FUR AND TEXTILE INDUSTRIES
04 02	waste from the textile industry
04 02 10	organic matter from natural products (un-dyed and untreated only)
15	WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED
15 01	packaging (including separately collected municipal packaging waste)
15 01 01	paper and cardboard packaging (excluding veneers, plastic coatings or laminates)
15 01 03	wooden packaging
15 01 05	composite packaging (only biodegradable organic packaging)
15 01 09	textile packaging (made entirely from biodegradable fibres only)

17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)
17 02	wood, glass and plastic
17 02 01	wood
17 05	soils (excluding excavated soils from contaminated sites), stones and dredging spoil
17 05 06	dredging spoil other than those mentioned in 17 07 05 (from inland waters only)
19	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION/INDUSTRIAL USE
19 02	wastes from physic/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)
19 02 03	premixed wastes composed only of non-hazardous wastes (waste types listed within these standard rules only)
19 05	wastes from the aerobic treatment of solid wastes
19 05 03	off-specification compost (from a composting process that accepts waste input types listed in these standard rules only)
19 08	waste from waste water treatment plants
19 08 05	sludges from treatment of urban waste water
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 01	paper and cardboard (excluding veneers or plastic coatings).
19 12 07	wood other than that mentioned in 19 12 06
19 12 12	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11 (and only including wastes types listed in these standard rules)
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01	separately collected fractions (except 15 01)
20 01 01	paper and cardboard (excluding veneers, plastic coatings or laminates)
20 01 38	wood other than that mentioned in 20 01 37
20 01 39	plastics (compostable plastics only)
20 02	garden and park wastes (including cemetery waste)
20 02 01	biodegradable waste (plant matter only)
20 03	other municipal wastes
20 03 02	waste from markets (biodegradable only)

3.2.3 Green Waste Composting Emissions and Monitoring

The site will be operated in accordance with the Environmental Permit such that there will be no point source emissions to air, surface water, groundwater or land.

Surface Water and Groundwater

The Green Waste Composting Facility will be designed to prevent or minimise fugitive emissions to surface water and groundwater. The composting processing area and pad will

be designed with a fall to a lagoon (Lagoon 2 as detailed in Drawing 003). All liquor arising from the composting process will run off to Lagoon 2 prior to being contained and tested before either being discharged to the existing leachate treatment system, surface water system or tankered away from the site. The retention lagoon has been designed to accommodate surface water runoff from a three day duration 20% Annual Exceedance Probability (AEP) rainfall event, which would allow for surface water runoff to be collected while the application is unattended. The layout and drainage infrastructure are illustrated on Drawings 002 and 003 respectively.

The green waste composting and WTF operations will be kept physically separate by means of low level bunding and will have distinct engineered drainage systems.

Clean surface water will run-off to Lagoon 1, located to the south of the proposed MWTRP.

Site surfacing will be maintained as required to ensure surfacing is fit for purpose. All operational areas, quarantine and fuel storage areas will be inspected to ensure the integrity and fitness for purpose of their construction is maintained at all times.

Odour

Operations at the site will be undertaken in accordance with procedures which will ensure that any issues associated with odours will be identified, and appropriate remedial and corrective action will be implemented as soon as practicable, including the removal of any particularly odorous waste where necessary.

Daily olfactory inspection will be carried out by site staff during the course of their normal working activities.

Dust

The Composting Facility will be located within the larger Trecatti Landfill site and as such has the benefit of existing dust minimisation measures. In order to minimise the emissions of dust from the facility, the following measures will be implemented:

- speed limits will be implemented for vehicles using the site;
- site access and haul roads and operational areas will be maintained and repaired to minimise emissions of dust due to uneven and poor surfacing;
- all roads and operational areas will be swept where necessary to reduce dust emissions;
- all vehicles delivering waste to the site shall be sheeted to minimise emissions of dust;
- discharge heights from any loading operation will be kept as low as possible;
- dust suppression systems will be implemented at the site where necessary. This may include the use of water bowsers;
- daily, visual inspection at all areas of the site and site boundary will be carried out by site personnel;
- in the event that significant visual dust is observed at the boundaries of the operational areas, action will be taken to suppress the dust;
- a record of the inspection findings and remedial action taken will be made in the site diary; and
- the Site Manager will be responsible for implementing the dust management, monitoring and action plan.

Noise

Waste acceptance, processing and physical treatment (e.g. turning of windrows) will only be carried out during operational hours. All equipment will be maintained and operated in accordance with manufacturer's guidance and will be maintained in good working order.

The site will be operated so as to minimise noise emissions from the site. Measures that will be taken at the site include:

- avoidance of dropping materials from height;
- all plant will be switched off when not in use;
- the imposition of a speed limit for vehicles delivering waste to the site. This will reduce noise associated with high engine speeds;
- all site personnel will be trained in the need to minimise site noise, and will be responsible for monitoring and reporting excessive noise when carrying out their everyday roles;
- all plant and equipment in use at the site will be regularly maintained to minimise noise resulting from inefficient operation of pumps, generators and engines;
- in the event that reversing alarms are found to give rise to complaints, alternative alarms or technology will be investigated;
- the regular maintenance of roads to prevent the development of potholes will significantly reduce noise generated, particularly by empty vehicles exiting the site;
- consideration will be given to the fitting of noise suppression kits on items of plant and equipment; and
- all plant will be maintained in accordance with manufacturer's recommendations to minimise noise emissions.

Any complaint that is received will be logged in the site diary. The Site Manager will investigate the complaint and will take action to identify the source of the noise and implement remedial measures where appropriate.

Pests

Due to the strict operational procedures employed at the site and the nature of the waste type, pests are not envisaged as being a nuisance. However, should pests become a nuisance at the site or the surrounding environment (and attributed to operations at the site) a pest control contractor will be brought in immediately to alleviate the problem. Pest control measures already exist at the site in relation to the landfill installation activities.

Litter

Due to the nature of the wastes to be accepted on-site, it is not anticipated that litter will pose a serious risk. However, the boundary of the site and its environs will be regularly checked and any windblown litter collected and disposed of appropriately.

It will be the responsibility of the site staff to constantly monitor the site for any signs of escaping materials either from within the site or from vehicles delivering or removing materials to and from the site. Litter control measures already exist at the site in relation to the landfill installation activities.

Inspections will be carried out on a daily basis and a record maintained within the site diary.

Mud and Debris

Access to the facility is gained via internal haul road from the landfill site entrance off Fochriw Road. Measures are already in place at the site to prevent and minimise mud and debris from becoming deposited onto public highways. Vehicles entering the site carrying waste destined for the composting will benefit from and be subject to the same measures.

The pad area will consist of impermeable surfacing which will be maintained free of potholes to prevent the pooling of surface water. Green wastes (whether awaiting treatment on the processing area, undergoing treatment or storage after treatment) will not overhang the 'pad', and so vehicles (other than mobile plant used in the operations) should not come into contact with significant quantities of waste which may then leave the pad on vehicles.

Should mud on road be attributable to operations at the site Biffa will take remedial action (road sweeping, washing of vehicles on site) as necessary in accordance with the procedures set out in their Environmental Management System and the conditions of the Environmental Permit.

4.0 ENVIRONMENTAL PERMITTING

4.1 Standard Rule Permit Application

Biffa wish to vary the existing Permit to add a Standard Rule Environmental Permit SR2012 No8: Composting in Open Systems (Part A Installation – capacity more than 75 tonnes per day) to allow for Green Waste Composting operations on site. As such, it is proposed SR2012 No8 and all the associated conditions be transposed into the Environmental Permit.

The facility will be a listed under the following section:

- Section 5.4 Part A(1)(b)(i) Recovery of non-hazardous waste with a capacity exceeding 75 tonnes per day - biological treatment.

Drawings 001, 002 and 003 show the proposed site location, site layout and drainage infrastructure respectively.

Standard Rule Environmental Permit SR2012 No8 carries a fixed application fee of £1,948 as detailed in the appropriate Environmental Permitting Charging Scheme & Guidance April 2015 from Natural Resources Wales.

4.2 Environmental Permit Variation Application

The WTF will serve the existing landfill Installation and will be a directly associated activity (DAA) to the permitted Installation.

The waste management operations to be carried out associated with the WTF at the site as specified in Annex I and Annex II of the Waste Framework Directive 2008 are:

- R5 Recycling/reclamation of other inorganic compounds;
- R13: Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced);
- D8 Biological treatment of non-hazardous waste; and
- D15 Storage pending any of the operations numbered D1 to D14 (excluding temporary storage pending collection on the site where it is produced).

The facility will be a listed DAA under the following section:

- S5.3 A(1)(a)(vi): Recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving Recycling/reclamation of inorganic materials other than metals and metal compounds (R5)
- S5.3 A(1)(a)(iii): Recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving blending or mixing prior to submission to bioremediation. (R5)
- S5.4 A(1)(b)(i): Recovery of non-hazardous waste soils with a capacity exceeding 75 tonnes per day involving biological treatment. (R5)
- S5.6 A(1)(a): Temporary storage of hazardous waste with a total capacity exceeding 50 tonnes. (R13, D15)

The WTF will accept up to 30,000 tonnes of the European Waste Catalogue (EWC) Codes listed in Appendix C3_1 of this application.

Table 2-1 details the Permit conditions which will need amending to accommodate the WTF proposals.

Table 4-1
Proposed Variations to Permit Conditions EPR/RP3733PC

Permit Condition / Table	Issue	Proposed Change						
Schedule 1 Table S1.1	Specified activities	Addition of the listed DAA's to reflect the recovery activities carried out at the WTF as described in this variation application. Addition of SR2012 No8 Listed Activity.						
Schedule 7	Site Plan	The drawing should be updated with Drawing 001 to reflect the inclusion of the Pad.						
Schedule 1 Table S1.4	Annual waste input limits	Table S1.4 should be updated to include the following: <table><tr><th colspan="2">Table S1.4 Annual Waste Input Limits</th></tr><tr><th>Category</th><th>Limit Tonnes</th></tr><tr><td>Hazardous soils for WTF</td><td>30,000 tonnes per year</td></tr></table>	Table S1.4 Annual Waste Input Limits		Category	Limit Tonnes	Hazardous soils for WTF	30,000 tonnes per year
Table S1.4 Annual Waste Input Limits								
Category	Limit Tonnes							
Hazardous soils for WTF	30,000 tonnes per year							
Section 2.3 Table S1.2	Operating techniques	The operating techniques shall be updated to include the operation of the WTF as illustrated on Drawings 001 – 005.						
Schedule 2	Waste Types	The permitted waste types shall be updated to include the EWC codes for acceptance at the WTF as detailed in Appendix C3_1 of this variation application.						
Table S1.4	Waste Input Limits	Addition of 30,000 tonnes of hazardous waste for the WTF.						

5.0 SUBSTANTIAL CHANGE ASSESSMENT

To determine the type of permit variation required, the following guidance was consulted:

- Environment Agency Environmental Permitting Regulatory Guidance Series, No.EPR8, Changes in Operation; and
- Environmental Permitting Charging Scheme Guidance

The proposed variation will constitute a substantial change as specified in The Environmental Permitting (England and Wales) Regulations 2010 as amended; Schedule 5, Part 1, Paragraph 5, 'Public Participation Scope', sub paragraph (5)(a);

"substantial change' means a change in operation of an installation which in the regulator's opinion may have significant negative effects on human beings or the environment and includes—

"in relation to a Part A installation, a change in operation which in itself meets the thresholds, if any, set out in Part 2 of Schedule ."

6.0 SUMMARY OF RISK ASSESSMENTS

The proposed WTF operations will operate in accordance with Biffa's Environmental Management System (EMS). Fugitive emissions of noise, odour, dust and particulates will be managed in line with the EMS, the Environmental Permit and Biffa's on-site procedures.

In accordance with the Environment Agency's guidance, this section of the NTS gives a summary of the key technical standards and control measures which arise from the risk assessment for the operations undertaken at the WTF.

Table6.1: Waste Treatment Facility: Potential Environmental Risk

Risk from the following	Potential Environmental Risk
Contaminated surface water runoff	Pollution of surface water, land and groundwater.
Odour	Generation of odour causing nuisance and loss of amenity.
Mud on Road	Mud leaving the site and impacting on local road network.
Noise and Vibration	Noise and vibration causing nuisance and loss of amenity.
Dust	Release of particulate matter causing harm to human health and nuisance to local population.
Arson and Vandalism	Vandalism causing release of polluting materials to air, water and land.
Accidental Fire	Accidental fire causing release of polluting materials to air, water and land.
Accidental spillage of potentially polluting liquids	Spillage of polluting liquids or contaminated rainwater runoff reaching surface or ground water.

Biffa recognise these potential risks and will therefore have in place mitigation measures to minimise the risk as far as practicably possible. A summary of the mitigation measures are detailed in the H1 assessment (407.00034.000461/H1_Annex A) which assesses these risks and justifies appropriate measures to control them where necessary.

In summary, procedures employed at the site will ensure the following:

- the site road and waste soils acceptance areas will be hard surfaced and will be kept free of mud and debris;
- vehicles will be inspected and cleaned as necessary on leaving the site, in order to prevent from mud being tracked onto the highway;
- the site access road will be maintained and kept in a good state of repair, a speed limit will be imposed;
- a road sweeper will be hired if necessary to sweep the main access road and other hard surfaced areas of the site;
- vehicles and plant will be appropriately maintained so as to ensure that the operation of the site will not give rise to unacceptable noise or vibration levels which may cause a nuisance at neighbouring properties or land uses;

- operational areas, including roads will be dampened down during prolonged periods of dry weather in order to mitigate against dust and particulates which may otherwise escape from the site boundary;
- no waste shall be burned on the site;
- the site will be gated and will be locked at all times when the site is unmanned to prevent unauthorised access. In addition, security fencing will be in place around the site perimeter;
- any tanks or containers used for the storage of any liquid fuel oil or other potentially polluting liquids at the WTF shall at all times be labelled as to the contents, and bunded to 110% of the capacity of the liquid stored;
- spill kits will be kept at the site;
- the run off of clean surface water and potentially contaminated water will be managed via separate systems; and
- surface water which has come into contact with waste will be treated as potentially contaminated water.

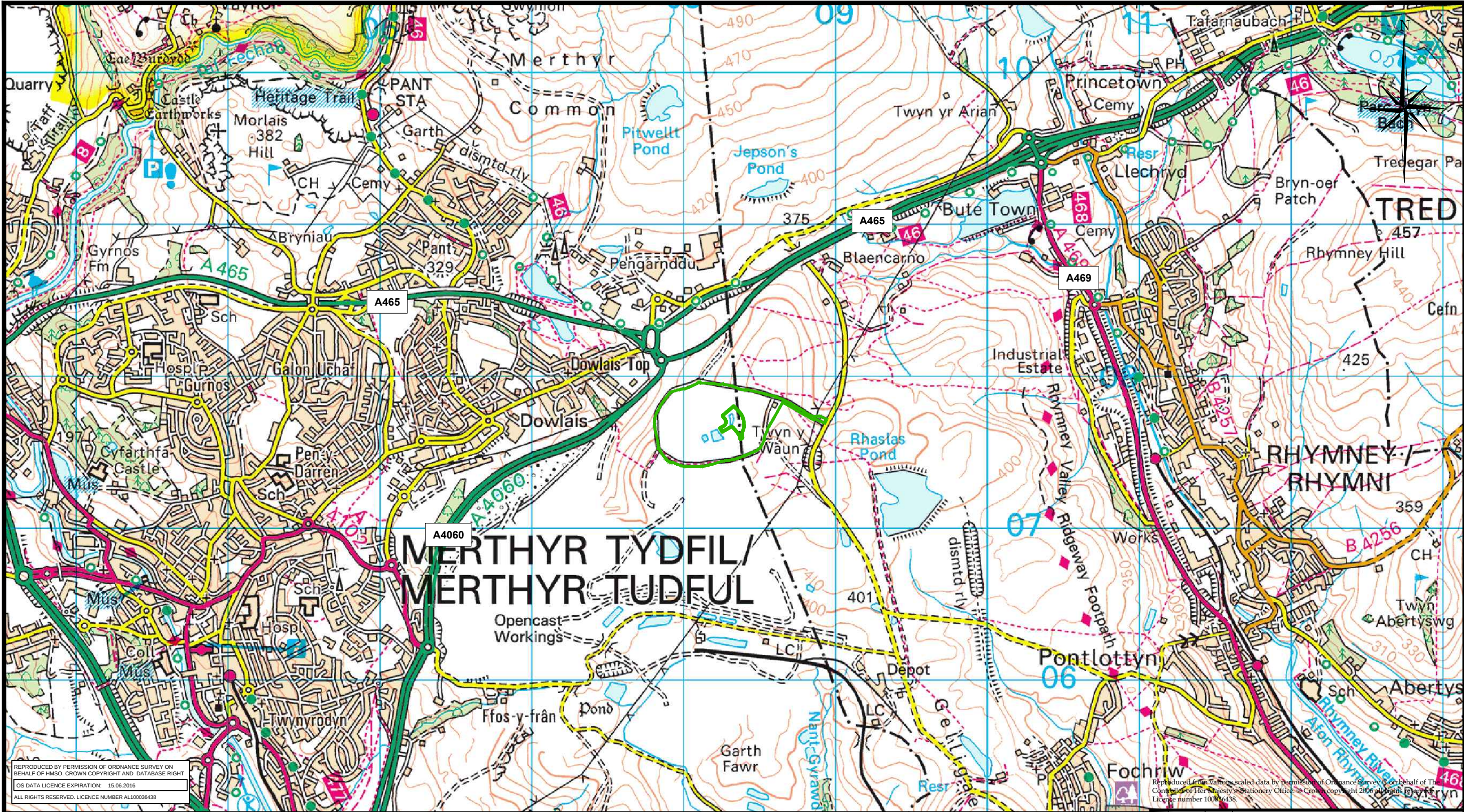
The H1 environmental risk assessment concludes that with the implementation of the risk management measures described therein, potential hazards from the proposed permit variation are unlikely to be significant to the environment.

The key technical standards and control measures which arise from the H1 Assessment are detailed in the Best Available Techniques and Operating Techniques document (407.00034.00461/BATOT). Site specific operational and management measures relating to the bioremediation process will be detailed in the Trecatti Multipurpose Waste Treatment and Remediation Pad Operations Manual.

7.0 CLOSURE

This report has been prepared by SLR Consulting Limited with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the client.

This report is for the exclusive use of Biffa Waste Services Limited; no warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR. SLR disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of the work.

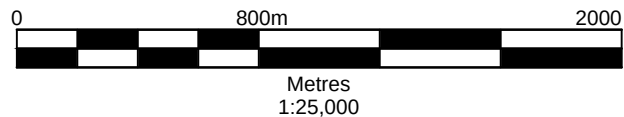


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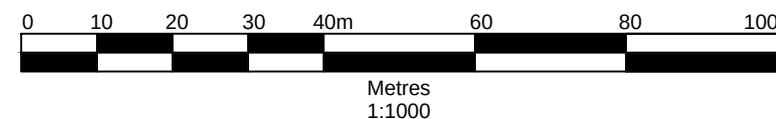
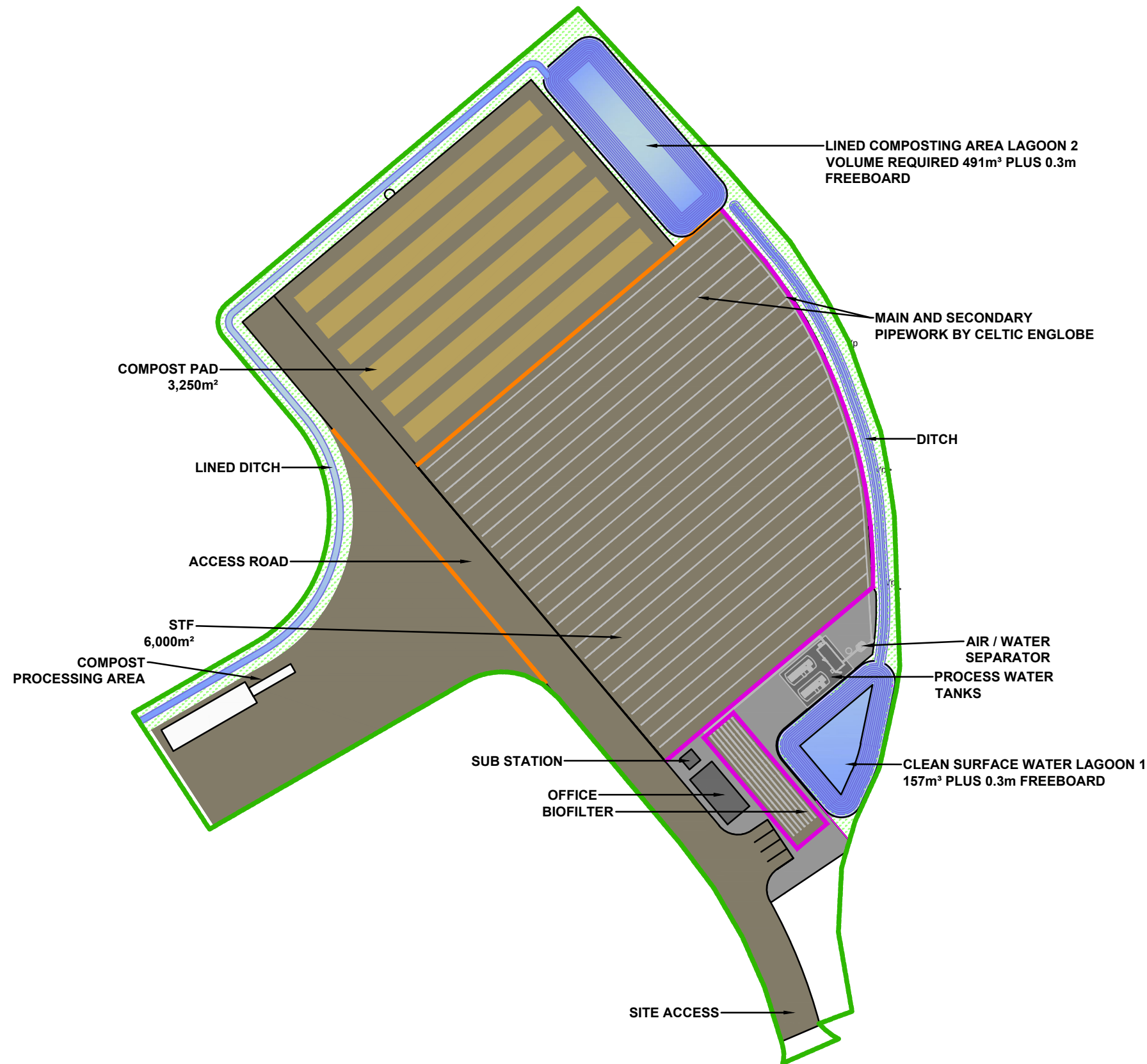
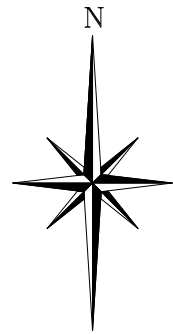
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LEGEND

- LANDFILL PERMIT BOUNDARY
- PROPOSED TRECATTI MULTIPURPOSE WASTE TREATMENT AND REMEDIATION PAD BOUNDARY



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PROJECT ENVIRONMENTAL PERMIT VARIATION APPLICATION			
LOCATION TRECATTI LANDFILL SITE SITE			
DRAWING TITLE SITE LOCATION PLAN			
DRAWING No. 001		COMPUTER REF. TBC	
DRAWN 403DB	DATE JULY 2015	SCALE(S) 1:25,000@A3	



NOTES

LEGEND

- PROPOSED TRECATTI MULTIPURPOSE WASTE TREATMENT AND REMEDIATION PAD BOUNDARY
- IMPERMEABLE SURFACING
- SURFACING - GRAVEL
- DITCH
- SURFACE WATER LAGOON
- SINGLE KERB DETAIL
- LOW LEVEL BUND

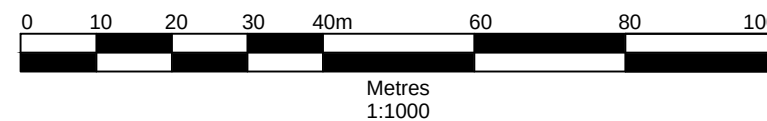
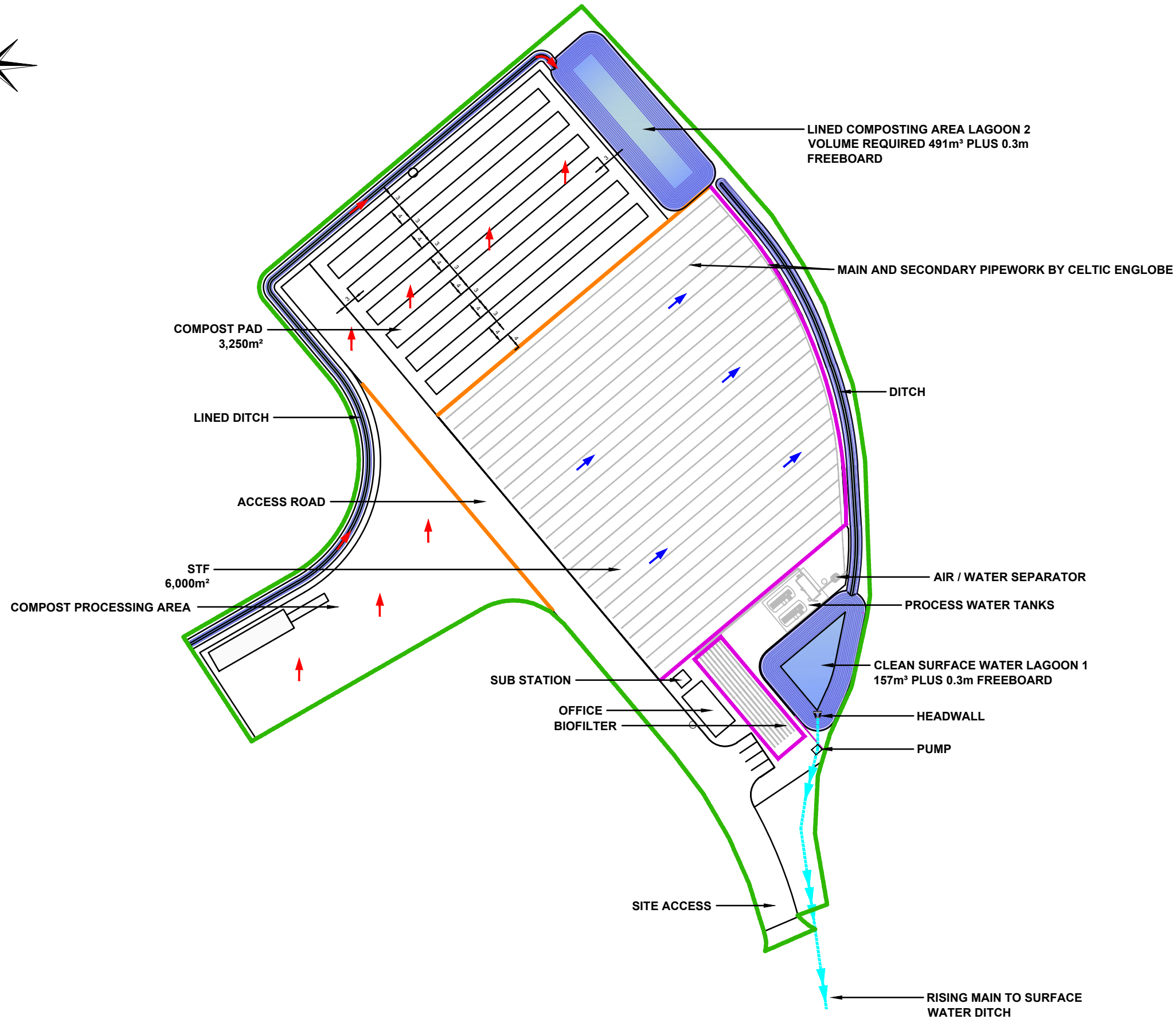
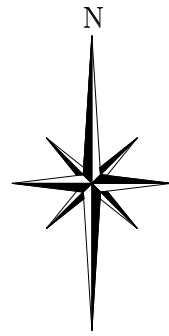
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PROJECT	ENVIRONMENTAL PERMIT VARIATION APPLICATION		
LOCATION	TRECATTI LANDFILL SITE		
DRAWING TITLE	PROPOSED SITE LAYOUT AND BOUNDARY		
DRAWING No.	002	COMPUTER REF.	
DRAWN	TKS	DATE	JULY 2015
SCALE(S)	1:1000 @ A3		



NOTES

LEGEND

PROPOSED TRECATTI MULTIPURPOSE WASTE TREATMENT AND REMEDIATION PAD BOUNDARY

DITCH

SURFACE WATER LAGOON

FALL DIRECTION - COMPOSTING

FALL DIRECTION - STF

RISING MAIN

PUMP

HEADWALL

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PROJECT

ENVIRONMENTAL PERMIT VARIATION APPLICATION

LOCATION

TRECATTI LANDFILL SITE

DRAWING TITLE

PROPOSED SITE DRAINAGE

DRAWING No.

003

COMPUTER REF.

TBC

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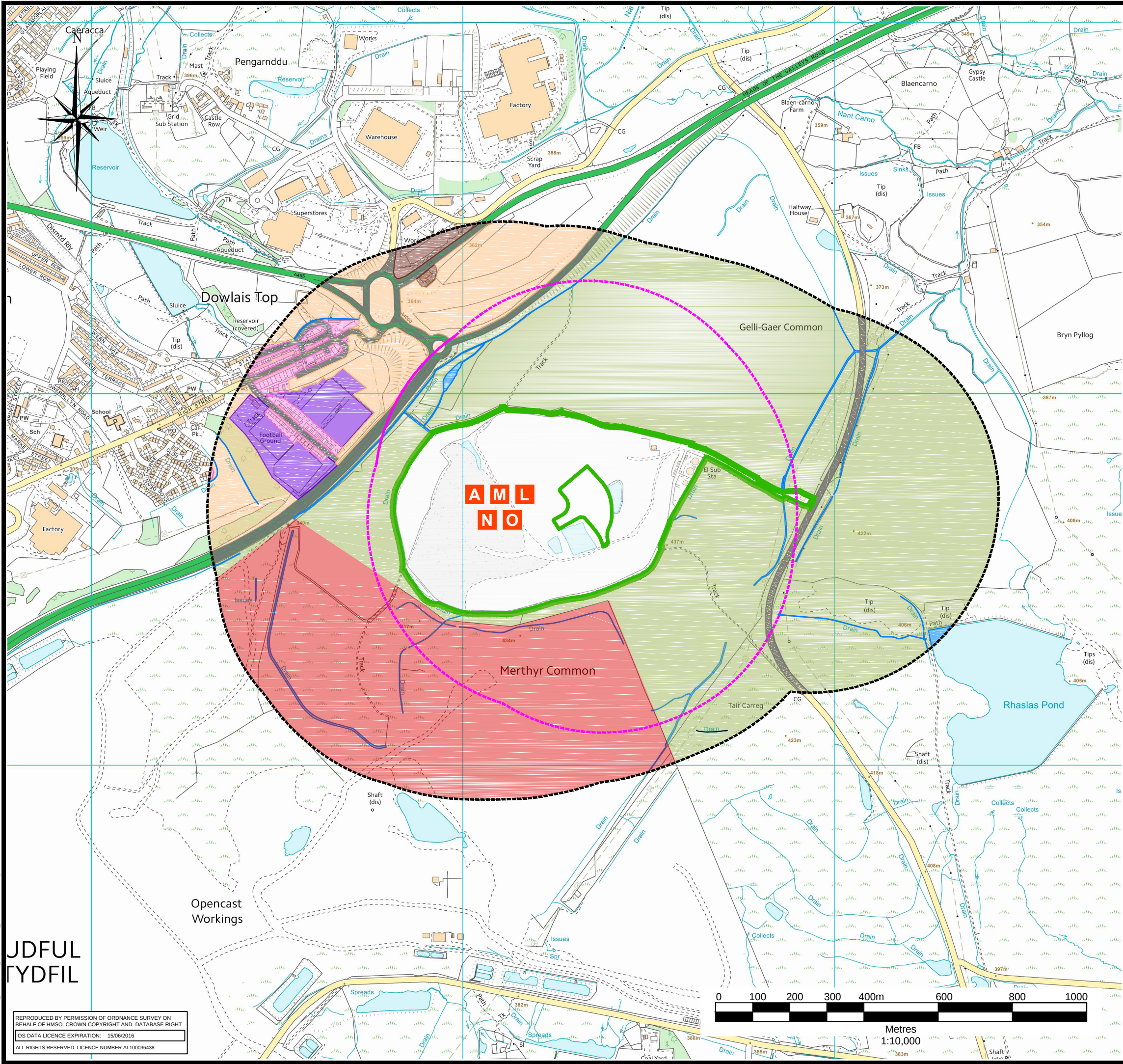
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LEGEND

- LANDFILL PERMIT BOUNDARY
- PROPOSED TRECATTI MULTIPURPOSE WASTE TREATMENT AND REMEDIATION PAD BOUNDARY
- 500m OFFSET FROM LANDFILL PERMIT BOUNDARY
- 500m OFFSET FROM PROPOSED TRECATTI MULTIPURPOSE PAD BOUNDARY
- ROADS
- COMMON LAND
- SURFACE WATER BODIES
- RESIDENTIAL
- OPENGROUND / WOODLAND / AGRICULTURAL
- RECREATIONAL
- COMMERCIAL / INDUSTRIAL
- AREA OF OPEN CAST MINE WORKING

SOURCES

- A AIRBORNE EMISSIONS
- M MUD ON ROAD
- L LITTER
- N NOISE
- O ODOUR

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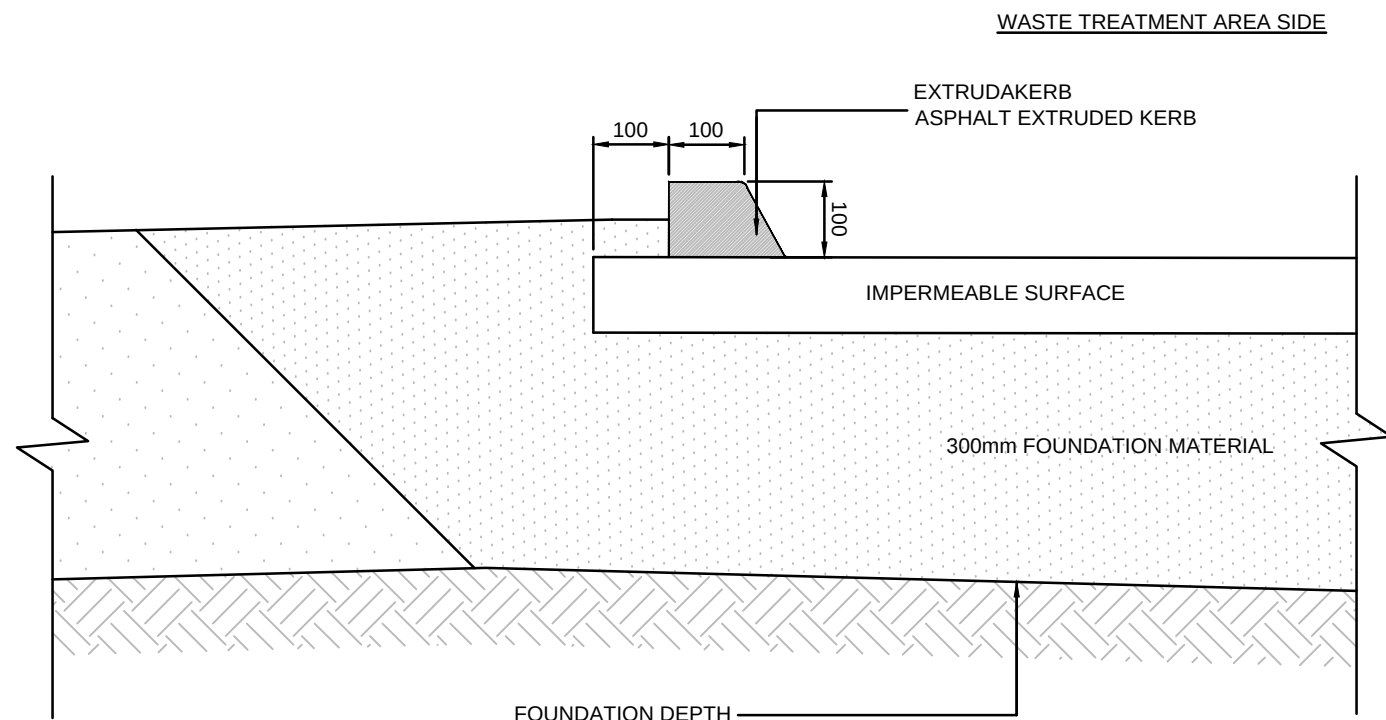
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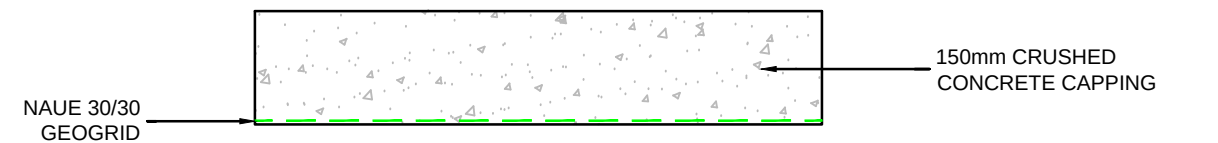
PROJECT ENVIRONMENTAL PERMIT VARIATION APPLICATION			
LOCATION TRECATTI LANDFILL SITE			
DRAWING TITLE SOURCES, PATHWAYS AND RECEPTORS			
DRAWING No. 004		COMPUTER REF. TBC	
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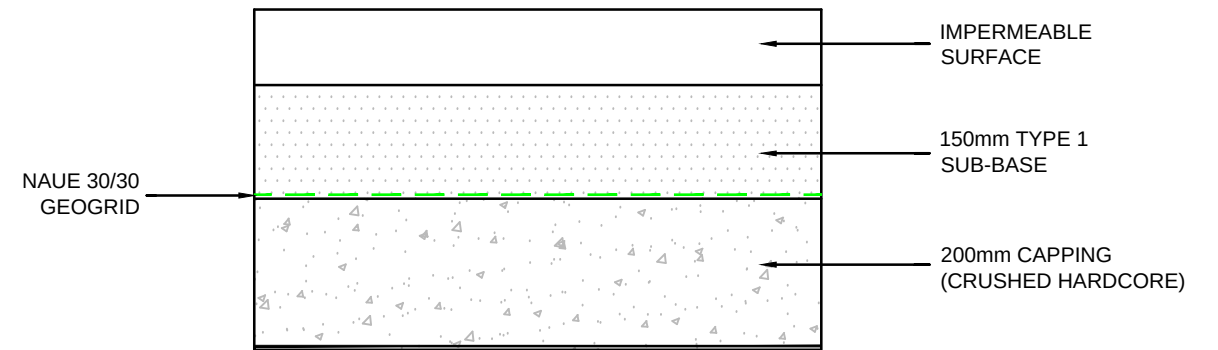
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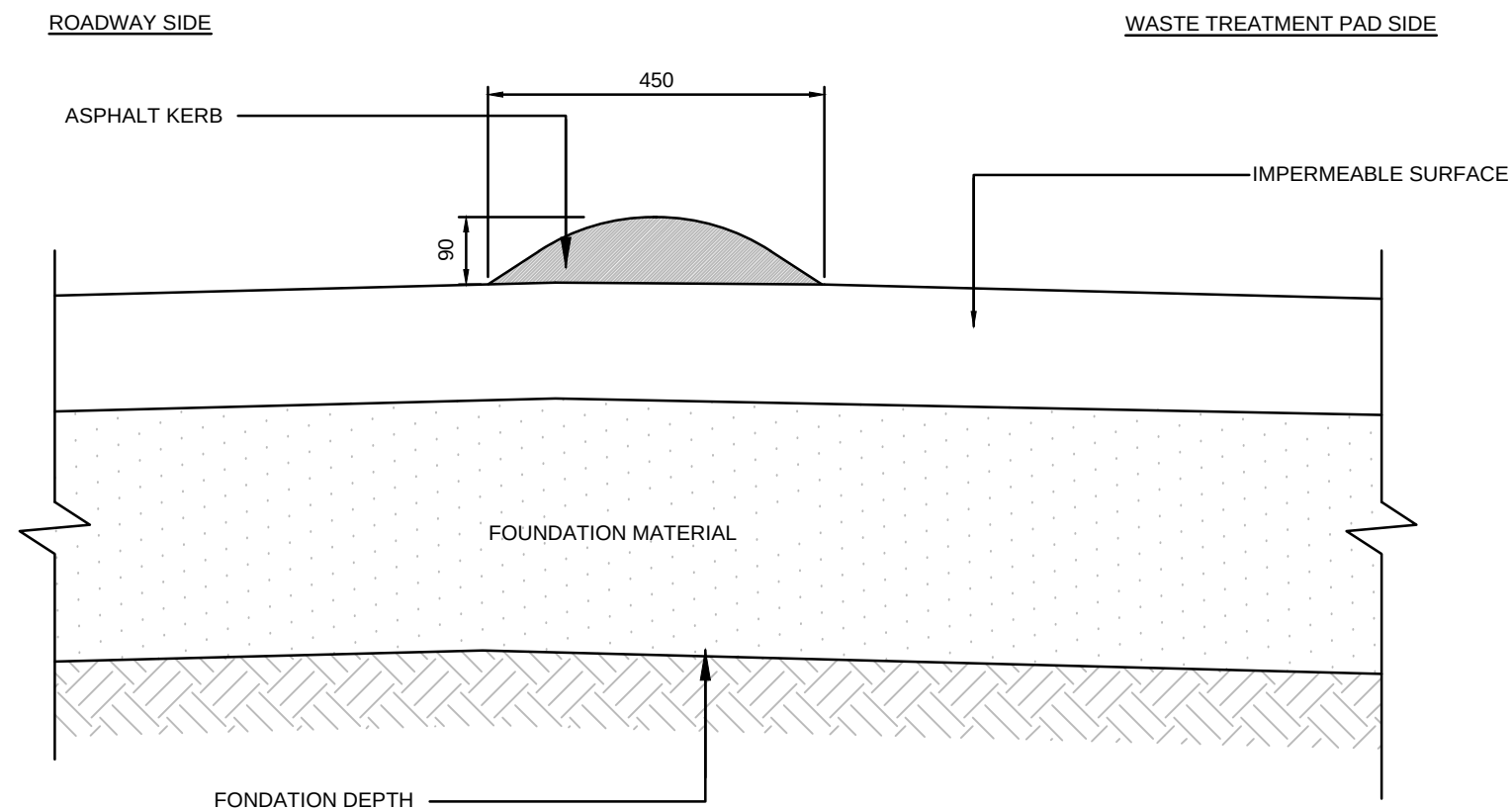
SINGLE KERB DETAIL - TREATMENT AREA
SCALE 1:10



UNSURFACED GRAVEL CONSTRUCTION
SCALE 1:10



TREATMENT PAD AND BIOFILTER
SCALE 1:10



TARMAC KERB DETAIL
SCALE 1:10

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PROJECT		ENVIRONMENTAL PERMIT VARIATION APPLICATION	
LOCATION		TRECATTI LANDFILL SITE	
DRAWING TITLE		CONCEPTUAL CONTAINMENT BUND AND SURFACING DETAILS	
DRAWING No.		005	COMPUTER REF. TBC
DRAWN	TKS	DATE	JULY 2015
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Best Available Techniques & Operating Techniques

Trecatti Landfill Site

Multipurpose Waste Treatment and Remediation Pad
Best Available Techniques and Operating Techniques (BATOT)

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Appendix BATOT2	Management Structure
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Drawing 003	Proposed Site Drainage
Drawing 004	Sources, Pathways and Receptors
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1.0 INTRODUCTION

Biffa Waste Services Limited (Biffa) has retained SLR Consulting Limited (SLR) to prepare an application to vary Environmental Permit reference EPR/RP3733PC for their Trecatti Landfill site, Merthyr, Wales under The Environmental Permitting (England and Wales) Regulations 2010 (as amended). This application seeks to vary the existing permit to add a Multipurpose Waste Treatment and Remediation Pad to the permitted landfill Installation.

This report describes the operating techniques that will be implemented at the pad and describes the best available techniques (BAT) that will be employed at the bioremediation facility (a Schedule 1 listed activity). This report describes the measures that will be implemented as a result of the proposed variation to operate the Multipurpose Waste Treatment and Remediation Pad only; the operation of the remainder of the Trecatti Landfill Site will continue as permitted.

A summary of the proposals and Environmental Permit conditions which require variation can be found in the Non-Technical Summary document (reference 407.0034.00461/NTS dated July 2015) which also supports this variation application.

1.1 Report Structure

This report has been drafted to satisfy the requirements of Environment Agency Guidance, 'How to comply with your environmental permit,' version 6 dated June 2013 and is divided into the following sections;

- Section 1 Introduction;
- Section 2 Management;
- Section 3 Operations;
- Section 4 Emissions and Monitoring; and
- Section 5 Closure.

Information has been prepared with due regard to demonstrating Best Available Techniques (BAT) described in Environment Agency Sector Guidance Note IPPC S5.06, 'Guidance for the Recovery and Disposal of Hazardous and Non Hazardous Waste', Environment Agency, Issue 4, December 2004. Guidance S5.06 determines BAT for specified Listed Activities only. However, the proposed listed green waste composting operations fall within the remit of Standard Rules Permit SR2012 No8 and are therefore considered to not require further assessment here. Details regarding the multipurpose use of the pad are covered in Section 1.2 below.

Assessment of the potential impact of potential emissions to air, land and water is discussed in the H1 Environmental Risk Assessment (Annex A, reference 407.00034.00461/H1).

1.2 Summary of Proposed Development

This Permit variation application seeks to add a Multipurpose Waste Treatment and Remediation Pad (MWTRP) to the permitted activities undertaken at the site. The location of the pad in relation to the permitted landfill is shown on Drawing 001, dated July 2015 Environmental Permit Boundary.

The MWTRP layout is detailed in Drawing 002 and will allow the following two distinct waste activities to take place:

1. Waste Treatment Facility (WTF) - treatment and bioremediation of hazardous and non hazardous soils and sludges; and
2. Green Waste Composting Facility.

The WTF would have a capacity to treat up to 30,000 tonnes (t) of contaminated (classified by Natural Resources Wales (NRW) as “*hazardous*” waste) soils a year, whilst the composting facility would treat typically 30,000t and up to 75,000 of source segregated green wastes per year in accordance with a standard rules set.

The proposed MWTRP would comprise a single impermeable surfaced pad. The pad will have overall maximum dimensions of around 125m by 82m and orientated in a south east to north west fashion. The northern most part of the pad would be used for the composting of green waste and would be 45m by 70m in footprint (3,250m²). Adjoining this would be an area used for the bioremediation of contaminated soils and sludges; this area would be 80m in length and between 56m and 82m in width (having a footprint of around 6,000m²). The two areas would be separated by low level bund.

The larger part of the pad would be used for the treatment of contaminated soils imported to the landfill site. Biffa already operate four similar WTF facilities located at its Skelton Grange (Leeds), Meece (Staffordshire), Redhill Landfill Site (Surrey), Westmill (Hertfordshire) and Cottonmount (Northern Ireland) landfill sites. The WTF at Biffa's Risley Landfill site was the first of the bioremediation facilities to be operated by Biffa but has now closed along with the landfill site.

Part of the WTF process comprises the biological treatment of contaminated soils or sludges to produce suitable materials for use in restoration/reclamation works (either on site or for projects in the South Wales region) and also as a daily cover on the landfill site. This would be undertaken using technology provided by Biffa's technology partner, Celtic EnGlobe. The soil materials to be treated by the WTF process would be too contaminated to allow for their reuse without being cleaned and would otherwise require to be directly landfilled at suitable, specialist landfill sites elsewhere in Wales, or indeed England. Whilst it is possible that some of the treated soil could be utilised within the boundary of the landfill site for restoration works the majority would be exported to the local market. The WTF would therefore contribute towards producing material to ensure that the landfill site and other reclamation projects are restored to the highest standards.

The material to be treated by biological means comprises soils or sludges contaminated with organic compounds (such as hydrocarbons), which are considered as waste and which, in some cases dependent on the level of contamination, may be considered as “*Hazardous Waste*” as defined by the Hazardous Waste (England and Wales) Regulations 2005. The WTF would only accept wastes which have been assessed to ensure that they are amenable to treatment in terms of both their chemical and physical compositions. Most incoming wastes would be classified as hazardous wastes; however, a small proportion of incoming wastes would be similar but at levels slightly below the hazardous waste thresholds hence would be classed as non-hazardous waste. Biological treatment simply accelerates a natural phenomenon, accomplishing in a few months what would require nature decades to achieve. The process utilises Celtic EnGlobe's proprietary technologies and operates through means of moisture control and addition of suitable materials to the soil in biopiles. Forced air extraction and or mechanical turning are used to encourage micro-organism growth and breakdown of hydrocarbons into by products such as carbon dioxide and water vapour. The end product is an uncontaminated material that is suitable for use in restoration of the landfill.

In addition to accepting contaminated soils and sludges, the MWTRP may also accept source segregated green wastes. This waste would typically be from municipal sources collected by local authorities, either through kerbside collections or from Household Waste Recycling Centres. This waste stream would not be classed as hazardous. This aspect of the proposed development is speculative as it is dependent on the applicant securing suitable contracts for the management of green waste collected by the local authorities.

The development proposal would not prejudice the approved restoration scheme for the landfill site and the MWTRP would be removed to allow restoration of the application site in line with the approved restoration scheme. In this respect, the proposals are temporary in nature, being linked to the life of the landfill operations.

At the southern part of the application site would be the site infrastructure, comprising office/welfare accommodation, car parking, two process water storage tanks (within a bunded enclosure), biofilter, air/water separators with attendant process equipment (blowers, pumps etc, housed within a metal container) and a substation. An area to the west of the pad would be used for processing (shredding/screening) the green waste and compost. Along the western edge of the pad would be an access road (approximately 8.5m in width) which would link with an existing access road within the landfill. Finally, within the application site would be two surface water drainage lagoons: one would be located within the southern part and the other within the north eastern part.

WTF – Bioremediation Process

The biopile treatment process will use biological remediation over a period of time to reduce contaminating components within the soils or sludges to concentrations where the material can be reused. Only wastes which have been assessed to ensure that they are capable of treatment in terms of both their chemical and physical compositions will be accepted at the facility. Most incoming wastes will be classified as hazardous wastes, however, a proportion of incoming wastes will be similar wastes but at levels slightly below the hazardous waste thresholds. The proposed bioremediation process will utilise Celtic EnGlobe's biopile technologies used on other Biffa sites and widely for brownfield remediation and will operate through means of use of biopiles for moisture control and addition of suitable materials to the soil. Forced air extraction and or mechanical turning are used to encourage micro-organism growth and breakdown of hydrocarbons into by products such as carbon dioxide and water vapour. Soils will typically be treated over an 8-16 week period, with the material being turned infrequently, typically once every 8 weeks. The bioremediation plant will operate continuously. The facility will be limited to accepting wastes that can be treated to a point where they can be used as restoration soil on the landfill cap or, if required, as daily intermediate cover.

The biopile process includes the control of all gaseous and aqueous emissions. The control of emissions is described in this document. Biopile is a North American term to describe the treatment of soil in a stockpile. A schematic of the forced air extraction bioremediation process is shown below in Figure 1.1 and an example of mechanical turning is shown in Figure 1.2

Figure 1-1
Bioremediation Process – Forced Air Extraction

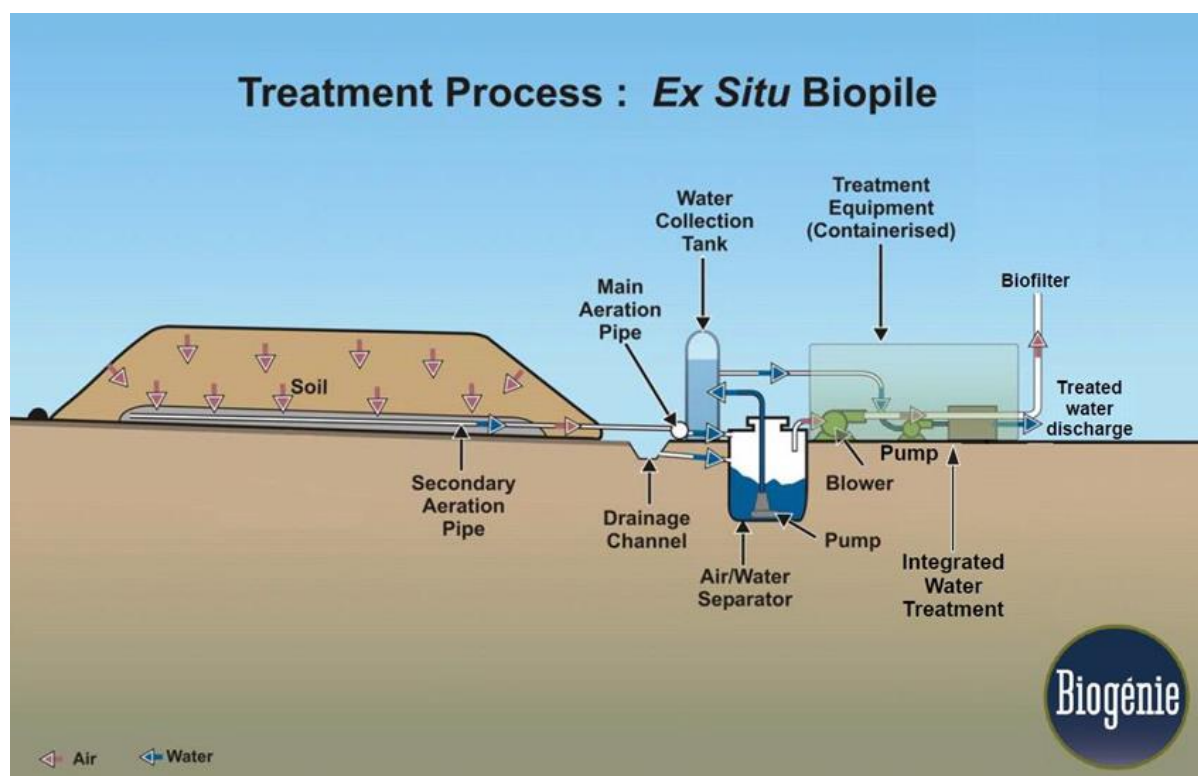


Figure 1-2
Bioremediation Process – Mechanical Turning



The key stages in the process are listed below:-

- waste reception;
- allocation of waste to the applicable treatment pad;
- bioremediation (hazardous and non-hazardous soils);
- emission abatement: employ BAT as required to prevent, minimise and treat releases to air and water;
- emission management: separate collection and management of clean surface water and process water and management of fugitive emissions; and
- transfer to the landfill: movement of soils from the WTF to the landfill site for use in restoration and daily cover as appropriate.

2.0 GENERAL MANAGEMENT

2.1 Environmental Management System

The WTF will be operated by Biffa with Celtic EnGlobe's employees employed to undertake specialist waste treatment operations. Biffa has a documented environmental policy and environmental management system (EMS) to assist in the achievement of environmental goals. The EMS is compatible with the requirements of ISO14001 and is documented and administered through Biffa's ISO 9002 Quality Management Systems.

Trecatti Landfill Site is accredited to ISO14001 (certificate number E601/32) and will be updated to include the operations at the WTF prior to operation.

In addition to the EMS, the WTF will be operated in accordance with the WTF Operations Manual (OM), which will be kept at the site at all times.

The management systems at the WTF will ensure that:

- the risks that the activities pose to the environment are identified;
- the measures that are required to minimise the risks are identified;
- the activities are managed in accordance with the management system;
- performance against the management system is audited at regular intervals; and
- the Environmental Permit is complied with.

The EMS and WTF Operational Manual will be reviewed at least once every 4 years or in response to significant changes to the activities, accidents or in the event of non-compliance. The EMS and WTF Operational Manual will be supplemented by this document which outlines the proposed operating techniques at the WTF.

2.1.1 Management Structure and Environmental Responsibilities

The posts with environmental responsibilities (hierarchy) will be as follows:-

- Biffa Environmental Management Group & Environmental Team;
- Site Manager; and
- all Staff.

Biffa have appointed a company director and committee with the responsibility for Environmental Policy and strategy at all the company's works sites.

The Environmental Advisory Committee and support staff are responsible for the development of the company's EMS and providing direction to the Environmental Management Group and Environmental team. The committee prepares and manages environmental policy, identifies significant aspects and develops and implements environmental programmes to minimise potential significant aspects.

The Site Manager, in consultation with the Environmental Management Group and the Environmental Team, is responsible for environmental management, compliance with regulation and day to day implementation of company policy at that installation. Duties include liaison and reporting to the Environmental Advisory Committee as appropriate. On a daily basis the Site Manager will be responsible for ensuring that:-

- operations personnel are trained and familiar with procedures and requirements;
- operations comply with regulation and permit conditions including monitoring;
- activities conform with company policy and other agreements to which the installation subscribes;
- procedures, logs, and records are followed and maintained as required; and
- aspects for potential improvement are identified and reported to the Environmental Advisory Committee.

Senior Operatives and Site Operatives will be responsible for the following;

- being aware of potential environmental consequences of activities and operations;
- being familiar with site procedures and work instructions;
- working in compliance with procedures;
- reporting unsafe conditions and potential or actual releases arising from unsafe or insecure operating conditions; and
- clean up and reporting of spillages and / or releases.

2.2 Operations

The WTF will be designed, operated and maintained in such a way so as to minimise the potential environmental risks and impact on the environment of the normal running of the facility.

Biffa will review environmental performance in line with procedures detailed in the EMS and the WTF Operational Manual as appropriate, and as set out by the conditions of the Environmental Permit to ensure that any necessary actions are taken to ensure the effective control of operations, use of approved suppliers and contract services, maintenance of operational equipment and calibration of monitoring equipment.

2.2.1 EMS & Operations Procedures

Specific systems, operations and Biffa procedures will be developed for the WTF and will be detailed in the WTF Operational Manual as outlined above. In addition, key relevant procedures from Biffa's EMS will be employed. Relevant procedures are detailed below in Table 2.1.

Table 2-1
Relevant Environmental & Operations Manual Procedures

Ref No	Procedure
Group Standards	
GS01	Integrated management system
GS02	Communication and training
GS03	Customer and development
GS04	Business continuity and emergency planning
GS05	SHE assessments
GS06	Suppliers and contractors
GS07	Working away from Biffa sites
GS08	Working on Biffa sites
GS09	PPE and work wear
GS10	Products, chemicals and hazardous substances
GS11	Manual handling and ergonomics
GS12	Occupational health

Ref No	Procedure
GS13	Motor vehicles
GS14	Plant and equipment
GS15	Driving and road safety
GS16	Incident reporting and investigation
General – Environment	
EQP101	Internal and External Communication of Environmental Objectives, Targets and Policies
EQP102	Preparation and Review of the Environmental Effects Register and the Register of Legislation
EQP103	Assessment of Environmental Performance of Suppliers
EQP104	Emergency / Incident Preparedness
Landfill	
DGNL/01	Landfill Design and Project Management Guidance
DGNL/02	Environmental Management Guidance
DGNL/04	Pre-acceptance and Waste Reception Guidance
DGNL/06	Guidance for Induction
DGNL/07	Landfill Traffic Guidance
DGNL/08	Personal Safety Guidance
DGNL/09	Management of Procurement of Plant and Equipment
DGNL/10	Management of Hazardous Substances Guidance
QP06	Landfill CAPEX Project Management
QP08, ‘	Management Review
QP38	Environmental Monitoring Techniques
QP60	Project Management
QP61	Administration and Record Keeping
QP62	Environmental Control Procedure
QP63	Waste Enquiry, Acceptance and Control
QP64	Waste Reception
QP65	Operations and Tipping Face
QP66	Resource & Treatment Complaints
QP73	Emergency Incident Preparedness
QP76	Odour Monitoring Management
QP80	Landfill Induction and Contractor Control
QP83	Wheeled Plant – Brake Test Procedure
QP86	Site Security For permitted & Non Permitted Sites
SSI/913/07	Waste Acceptance Procedure Soil Repair Centre (STF)
WTF Operations Manual	
WTF OM	Biofilter and Washer Operations
WTF OM	Operation of Water Recirculation
WTF OM	Plant Process Containment Systems
WTF OM	Potentially Polluting Leaks and Spillages from Treatment Plant and Process
WTF OM	Waste Acceptance, Control, Treatment and Dispatch Process, Plant and Equipment and Procedures
WTF OM	Waste Sampling and Testing
WTF OM	Waste Types with Special Requirements
WTF OM	Asbestos bearing wastes
WTF OM	Oil bearing wastes
WTF OM	Monitoring and Reporting for Gases and Vapours
WTF OM	Control of Dust Fibres and Particulates
WTF OM	Storage and Management of Materials

Owing to the specific relevance of the site specific instruction reference SSI/913/07, ‘Waste Acceptance Procedure WTF, it is included here as Appendix BATOT1.

2.2.2 Managing Documentation and Records

An appropriate filing system will be in place to ensure that all records relating to environmental monitoring, maintenance, reviews and audits are maintained and updated.

All records will be held within the site office and are being made available electronically via Biffa's intranet.

2.3 Maintenance

Biffa acknowledges that poor maintenance can be the cause of environmental incidents. As the potential of failure of plant (e.g. air – water separators) or infrastructure (e.g. hard-standing, bunds etc.) at the site could lead to fugitive emissions to the environment, Biffa will carry out a programme of Planned Preventative Maintenance (PPM). All items of plant and equipment will be regularly inspected and maintained in accordance with the manufacturer's specifications and Biffa's programme of plant maintenance.

Preventive maintenance will be controlled in line with Biffa Procedure DGNL/09 'Management of procurement of plant and equipment' which requires environmental incidents and near misses to be reported and an appropriate action plan developed and implemented. These are reviewed at the quarterly environmental meeting.

In addition, all vehicles used on site as part of the operations will be kept in good working order, will be refuelled in accordance with site operational procedures to prevent any fuel spillage, and will be driven only by suitably qualified members of staff.

2.4 Incidences and Non Conformances

Procedures will set out how any abnormal operation including malfunction, breakdown or failure of plant, equipment or techniques will be dealt with to ensure that normal operation of the WTF is regained promptly.

As a minimum the procedures will set out how Biffa will;

- detect abnormal operation and investigate the causes;
- assess the information and decide on the appropriate course of action;
- retain normal operation in the short term;
- prevent against the reoccurrence of the problem in the long term; and
- set out an official complaints procedure for the general public.

As detailed further in Biffa's EMS, these procedures will ensure that non-conformances are reported, investigated and rectified.

Biffa's EMS provides a means for the management system and the environmental performance of the facility to be evaluated. This will be accomplished through regular internal audits and accredited external auditors and will include, where appropriate, the identification of areas where improvements are required. The regular review of the EMS and its procedures will form an essential role in ensuring that the systems and procedure remain appropriate to the site activities and legal requirements (including compliance with the Environmental Permit) throughout the life time of the WTF.

Key indicators of environmental performance are identified by the EMS. These are reviewed at least annually and more frequently where appropriate to ensure that all changes in

operation are included within the EMS. This will be covered by Biffa procedure QP08, 'Management Review'. Review of incidents, issues, complaints, measurement, objectives and targets, policy and areas for improvement.

A log book will be kept containing a record of olfactory and visual assessments made at the facility; should any non-compliances be found these will be followed up and formally reported and signed off.

To assist in the reporting of incidences, Biffa will display and maintain a notice at or near the site entrance with the following information clearly visible;

- site name;
- permit number;
- name, address and telephone number of the operator
- emergency contact telephone number for the operator;
- a statement that the site is permitted by Natural Resources Wales; and
- Natural Resources Wales national number and incident hotline number.

2.4.1 Communication and Reporting of Incidents

Environmental issues will be raised each day during routine process meetings between the Site Manager and site staff. Actions taken in response to environmental issues and complaints are controlled by Biffa procedure:-

- Procedure EQP101: Internal and External Communication of Environmental Objectives, Targets and Policies; and
- DGNL/08: Personal Safety Guidance.

Procedure QP66 Resource and Treatment Complaints; All public and regulatory complaints are noted, recorded and remediated or resolved as soon as possible. This procedure will be updated to include the WTF.

2.4.2 Corrective Action to Analyse Faults and Prevent Recurrence

The Site Manager will deal with complaints and incidents of non-conformance including:-

- system failure discovered at internal audit;
- incidents, accidents, and emergencies; and
- other operational system failure.

In compliance with Procedure QP66 complaints will be reported to and investigated by the Site Manager and remedial measures implemented as required. Changes to prevent future complaints will be proposed and implemented where appropriate.

Written records of non-conformances, complaints and other incidents will be maintained in a log book recording the date, time and nature of the event, together with the results of investigations and remedial action taken.

2.4.3 Auditing

A programme of site audits is the responsibility of the environmental support staff and controlled by general Biffa procedure:-

- Inspections and compliance assessment

An annual programme of audits will be prepared with scheduled dates, pre-audit notification, checklists and questionnaires. Non-conformances will be reported and forwarded to the quarterly review meeting.

2.5 Sufficient Persons who are Suitably Competent

The WTF will be managed by a sufficient number of staff competent to operate the site. Staff will have clearly defined roles and responsibilities. A written record detailing the key skills of each member of key staffs and the training courses (type and date) will be kept up to date.

Training will be controlled within the installation EMS and covered by Biffa procedures:-

- Procedure DGNL/06 Guidance for induction.
- QP80 Landfill induction and contractor control

Periodic review of all staff will take place - typically on an annual basis. This will include a review of training needs. As required, training will be provided to staff either through internal training programmes or by qualified external organisations.

Biffa will induct all contractors to the site to ensure that they are fully aware of the site rules, operational procedures and health and safety procedures at the site.

The management structure for the WTF is shown in Appendix BATOT2 of this document.

2.6 Site Security

In order to prevent unauthorised access to the site, site security measures will be in place. The site will benefit from the existing security measures in place at Trecatti landfill. The landfill site access will be gated and locked outside of operational hours.

2.7 Permit Surrender

At the time that the permit is surrendered the Operator must demonstrate that the site will be returned to a satisfactory state. The operation of the WTF will be carefully managed to meet the conditions of the Environmental Permit.

2.8 Records that demonstrate the Management System

Biffa will ensure that all documents are issued, revised and maintained in a consistent fashion and adequately record all details necessary to satisfy the conditions of the Environmental Permit variation once issued. The procedure for managing documentation and records is set out in Biffa's EMS, and as detailed more thoroughly in the sections above.

2.8.1 Reviewing and Reporting Environmental Performance

Senior site management will annually review environmental performance and ensure action is taken to ensure policy commitments are met and that policy remains relevant.

Environmental issues are incorporated into all relevant aspects of the installation's business activities. An annual management review of the effectiveness of the management system against objectives and targets and planned improvements will be carried out.

A summary of company environmental performance is available to the public, as part of the Biffa Environment Report, via Biffa's web site.

As part of the operating permit environmental data are reported annually to the Environment Agency.

2.9 Displaying the Permit

Biffa will ensure that all staff and contractors working at the WTF have ready and easy access to a copy of the Environmental Permit and WTF Operational Manual governing operations at the site.

2.10 Accident Management Plan

The requirement for an Accident Management Plan will be incorporated into the EMS as described above. Accidents and incidents will be controlled by Biffa operational procedure:-

- Procedure EQP104 Emergency/Incident Preparedness

Staff will have the responsibility to report all conditions that could result in a potential environmental accident. Key staff will meet several times per year to review potential environmental incidents and the possible requirements for mitigation or control. Environmental support staff will be in frequent contact with the Site Manager to discuss potential concerns and visit the site.

Staff involved with the handling and transfer of potentially harmful materials will be trained in the safe handling of such materials.

Natural Resources Wales will be advised of incidents likely to result in a breach of permit conditions or to have a significant impact on the environment including accidental releases due to spillage or abnormal operating conditions.

2.10.1 Potential for Incidents and Accidents

Within the site EMS programme, Biffa will review potential accidents, incidents and their consequences as required by the Accident Management Plan. The approach will use the three components suggested in Sector Guidance Note IPPC S5.06 documentation for the:-

- identification of the hazards posed by the installation/activity;
- assessment of the risks (hazard x probability) of accidents and their possible consequences; and
- implementation of measures to reduce the risks of accidents, and contingency plans for accidents that occur

2.10.2 Assessing Risk and Identifying Techniques to Reduce the Risks

The H1 environmental risk assessment (Annex A, reference 407.00034.00461 /H1) indicates that environmental risk not likely to be significant from the proposed facility.

Biffa recognises the importance of the prevention of accidents that may have environmental consequences, and that it is important to limit those consequences. Biffa has developed a system to identify, assess and minimise the environmental risks and hazards of accidents and their consequences as part of their EMS.

An Accident Management Plan will be implemented and maintained at the site to ensure the site and site staff are fully prepared for such incidents. The Accident Management Plan will be reviewed at least every four years or as soon as practicable after an incident with changes made accordingly to minimise the risk of occurrence.

Activities affecting the health and safety (H&S) of operatives, contractors and visitors will be separately managed in compliance with H&S regulation and Biffa's company H&S Policy.

2.10.3 Hazard Identification

The following potential hazards have been identified with regard to the proposed variation application (development of the WTF). This section details the most appropriate risk control techniques which may be implemented to minimise the potential risks posed to the environment.

The following potential hazards have been identified:-

- receipt, storage, handling and transfer of potentially harmful substances including fuel oils and contaminated soils at the WTF;
 - increased risk of harm from releases;
- process equipment failure;
 - failure of fans, pumps biofilter with resulting non-compliance with Environmental Permit conditions;
 - potential odour, dust and noise;
- loss of containment;
 - blocked or overfilled drains or receipts tanks with subsequent release to ground;
 - transport of soil contaminants through climatic conditions – winds, flood, etc;
 - loss of integrity of storage tanks.
- site security and vandalism;
 - damage to equipment;
- inappropriate waste handling;
 - mixing of incompatible substances;
 - non-compliance with Duty of Care and relevant waste regulations.

Identified pathways include:-

- airborne transfer of particulate, odour and noise to local residents;
- over land flow of contaminated solids and liquids following an uncontrolled loss; and
- lateral and vertical migration in soils also arising from the above.

Table 2-2 details the main environmental risks and the associated risk reduction responses.

**Table 2-2
Main Environmental Risks and Risk Reduction Responses**

Potential Main Risks	Risk Reduction Response
Receipt, Storage and Handling of potentially harmful materials	Pre-acceptance and acceptance procedures will help to prevent receipt of non-permitted waste. Inventories of

Potential Main Risks	Risk Reduction Response
	other materials will be maintained in compliance with pollution prevention procedures. Materials storage areas will be identified and protection measures in place where appropriate.
Process & equipment failure	Equipment failure would slow down biodegradation and release rate. Maintenance programmes and rapid technical response will be in place for maintenance and repair.
Loss of containment	Potentially polluting substances will be stored in suitably sized and designed storage vessels e.g. diesel will be stored in appropriately bunded or double skinned tanks. Procedures for loading and control will be in place. Review of storage vessels and bunds will take place regularly within site's EMS programme. Drains will be regularly inspected and cleared of blockage if required; by e.g. jetting or mechanical means. Flood risk completed as part of the planning application. Biopiles may be covered to prevent wind loss if operational needs require.
Site security and vandalism	Site access will be controlled. Out of hours security will be provided if required.
Waste handling	The WTF will be governed by procedures to include inspection of waste prior to disposal, staff training, etc as detailed in Appendix BATOT1.

2.10.4 Risks Specifically Identified in the H1 Assessment

Mitigation measures for the bioremediation activity

In addition to the above, the H1 environmental risk assessment identifies the following potential hazards. Each potential hazard is discussed in turn below and mitigation measures to prevent the hazard from occurring are outlined.

- odour from contaminated waste soils or sludges;
- engine noise and vibration from vehicles arriving at and leaving the site;
- noise from fixed plant e.g. Biofilter;
- mud on road and dust generated from vehicle movements;
- release of pollutants (PM10, NOx, etc) from traffic;
- release of dust and bio-aerosols from placement and turning of soil biopiles;
- release of VOCs from contaminated soils;
- potentially contaminated run off from the WTF;
- containment failure (i.e. bunds, drainage interceptors) and tanks;
- accidental fire and subsequent release of polluting materials to air, land or water;
- vandalism causing loss of containment, fire or unauthorised access; and
- flooding and subsequent release of polluting materials to air, land or water

If an accident causes damage to the environment, or risks doing so, the staff will:

- where appropriate carry out immediate remedial measures as outlined in the H1 environmental risk assessment and summarised briefly below;
- carry out any other action necessary to minimise the environmental consequences;
- find out why the accident happened and prevent reoccurrence; and
- inform Natural Resources Wales.

Odour Emissions: Mitigation Measures

- extraction ventilation at the biofilter will treat degradation products and prevent emissions of odour;
- the biofilter is a proven method of removing VOCs with a low odour threshold. It is considered that the suction extraction and odour abatement (biofilter) meet the requirements of BAT;
- mechanically turned biopiles will have biocovers to prevent emissions of odour;
- waste will be characterised prior to acceptance to confirm accepted materials can be treated. Strict waste acceptance procedures will be in place, no waste will be accepted unless it has been pre-booked with details of the source, physical and chemical compositions and hazard characteristics;
- waste acceptance procedures will be conducted by competent trained personnel. During the pre-acceptance procedure potentially odorous soils will be identified. These will not be accepted without there being arrangements in place for the soils to be received and managed in a manner which would minimise the potential for odour emissions;
- subject to testing process water will be stored in a tank and may be tankered off site to a suitably licensed facility; and
- control of odour will be governed under the WTF Operations Manual and Biffa Procedure DGNL/02 Environmental Management – Odour Management.

Noise Emissions: Mitigation Measures

- site operations and vehicle movements will be restricted to hours specified within the planning permission for the site;
- the site access road will be maintained and kept in a good state of repair and a speed limit will be imposed;
- plant will be operated in a proper manner with respect to minimising noise emissions, for example, minimisation of drop heights, no unnecessary revving of engines, etc;
- site plant will be maintained according to the Manufacturer's instructions and fitted with silencing equipment where appropriate;
- plant will be subject to regular maintenance and repaired as soon as possible after identifying a fault; and
- machines that are intermittently used will be shut down in the intervening periods between working or throttled back to a minimum.

Air Pollutant and Dust Emissions: Mitigation Measures

- vehicles will be subject to a programme of Planned Preventative Maintenance and maintained in accordance with the manufacturers recommendations;
- waste soils or sludges will be brought to site in enclosed or sheeted vehicles to prevent the escape of dust during transit;
- to minimise the emissions of dust arising from installation roads, speed limits will be imposed for all vehicles;
- the main access road will be swept with a mechanical road sweeper as and when conditions dictate;
- during dry conditions, a water bowser will be used to spray the installation, prior to and during vehicle movements;
- during particularly dry or unfavourable conditions mud and dust collecting on hard surfaces including access roads and stockyards will be removed by scraping and sweeping;

- no plant or machinery involved in the WTF process shall leave the landfill Installation without having used the site wheel wash;
- potential sources of particulates will be maintained in moist condition or covered to minimise potential for wind whipping or dust release;
- dust is unlikely to appear during the turning of the soils as dust in an indication that the moisture content of the soil is too low. Should any dust be identified, water will be added to the biopile to prevent its proliferation. If necessary water will be added to the biopile by either automatic or manually deployed irrigation pipes; and
- biopiles will be covered and or be provided with extraction ventilation when operational or meteorological conditions require. Soils will typically be well weathered.

Contaminated Run Off: Mitigation Measures

- treatment will take place on one engineered pad;
- clean water will be collected via perimeter drains and directed to the clean surface water lagoon (lagoon 1). Following storage, the water will be directed from the surface water lagoon to join the existing permitted Trecatti Landfill Site surface water management scheme;
- process water generated by the soil treatment process at the biopile(s) will be removed via the internal air and water extraction pipes and routed to the process water tanks prior to discharge to a suitably licensed facility. Subject to quality testing, the water may be released to the existing leachate treatment system or surface water system. The collection network for the biopile(s) is illustrated on Drawings 002 and 003;
- a bund will surround the biopile(s) pad and within it will be included the WTF infrastructure e.g. roadways, fuel storage, process water tank, site office and parking area, biofilter and equipment unit. Water run-off from within this bund will all be managed as potentially contaminated water and routed to the process water tank. The water will be stored at the process water tank prior to discharge to a suitably licensed facility. Subject to quality testing, the water may be released to the existing Trecatti Landfill leachate management system or surface water management system;
- if required, the biopile(s) are covered with a biocover, rainfall running off the biocover will be managed as clean surface run-off and directed to the surface water ditch to the east of the biopile(s); the biocover will be secured within the surface water ditch. Clean surface water from the ditch will be routed to the surface water lagoon via a pipe. Water will be discharged from the surface water management lagoon to the existing Landfill surface water management system;
- a cut-off valve will be provided at the surface water management lagoon and should any contamination become evident, the water will be prevented from entering the existing surface water management system and controlled waters. All storage tanks will be banded to a 110% of the tank volume or 125% of the total tank volume within the bund, whichever is greater and located on hardstanding pavement; and
- spill kits will be kept on site.

Containment Issues – Spills and Leaks: Mitigation Measures

In the event of the spillage of polluting materials, immediate action will be taken to contain the spillage. The spillage will be reported to the Site Manager, who will assess the situation and decide upon the most appropriate course of action. If the spillage cannot be contained, specialist help will be obtained.

The action taken will depend upon the size of the spillage, the location of the spillage in relation to sensitive receptors and the nature of the spilled material.

Action taken may include some or all of the following:

- if possible the leak will be stopped;
- if it safe to do so, the cause of the spill or leak will be isolated, and/or removed;
- if the spillage is small, spill granules may be used immediately to prevent the spill spreading. The area will be cleared and all contaminated material sent to an appropriately permitted site for disposal;
- if the spill is larger, inert materials such as sand may be used to make a containment bund and specialist help may be sought to assist in clean up;
- if any spillage enters a flowing watercourse, Natural Resources Wales will be contacted immediately, and appropriate action will be taken to contain the spill by using for example oil absorbent booms; and
- if a vehicle is found to be leaking, it should be moved to a position where the spillage can be contained such as a hard surfaced area, if it is safe to do so.

Accidental Fire: Mitigation Measures

- there will be no burning of waste on site;
- fire extinguishers will be kept on site; and
- in the unlikely event of fire, the Biffa fire action plan will be followed.

The following courses of action are to be taken if a fire is discovered on site:

- the person discovering the fire will raise the alarm and evacuate/isolate the area;
- the Site Manager will be contacted immediately;
- if the fire can be controlled without endangering personnel, appropriate fire extinguishers or other fire-fighting equipment will be used;
- if the fire cannot be safely tackled using fire extinguishers held on site, the emergency services will be notified;
- no further vehicles, other than those of emergency services and personnel or other agencies dealing with the incident, will be allowed to enter the site; and
- the Site Manager will check for all visitors, contractors and staff to ensure everyone is accounted for.

Vandalism: Mitigation Measures

- the Trecatti facility's site gates will remain closed and locked when the site is unmanned;
- the site perimeter will be secure; and
- no machinery will be left unsecured.

Flooding: Mitigation Measures

- the elevation of the WTF is such that it is unlikely to be affected by flooding from surrounding areas
- containment measures will be in place along with appropriate drainage measures;
- if the site is in imminent danger of flooding or a flood alert has been issued, all electrical supplies in the affected area will be isolated;
- if possible, all potentially polluting material will removed from the at risk area;
- all plant will be removed from the area at risk;
- personnel will not attempt to enter a flooded area until a risk assessment has been undertaken or the flood has subsided; and

- personnel will follow instructions issued by supervisors, managers or other competent persons.

Biffa's EMS incorporates a system for recording all incidents, complaints and near misses at the facility and any results following investigation. The system is designed to prevent the re occurrence of any incident through implementation of improved systems.

2.10.5 Control of Major Accident Hazards (COMAH) Regulations

It is not anticipated that the operations will require the storage of any material specified in the Control of Major Accident Hazards (COMAH) Regulations in significant quantities. It is not considered that the COMAH Regulations are applicable to the proposed operations.

3.0 OPERATIONS

3.1 Permitted Activities

The activities which will take place at the WTF to cover the hazardous recycling activities, as defined in Annex II B of The Waste Framework Directive are as follows:

- R3** Recycling / reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes);
- R5** Recycling / reclamation of other inorganic materials; and
- R13** Storage of waste pending any of the operations numbered R 1 to R 12.

3.2 Waste Acceptance and Operations

The operation of the WTF will comprise the following key elements;

1. Waste reception;
2. Biological treatment of soil or sludges at the biopiles using forced air extraction and or mechanical turning;
3. Process water tanks (serve biopiles);
4. Air extraction system (serve biopiles);
5. Air water separators (serve biopiles);
6. Humidifying chamber (serve biopiles);
7. Biofilter (serve biopiles); and
8. Ancillary infrastructure

The following sections describe the key elements.

3.2.1 Waste Reception for Bio-treatment

The WTF will recycle contaminated soil, including soils designated as hazardous waste and a small proportion of non-hazardous waste which is required as an additive to the soil bioremediation process.

The facility will be limited to accepting wastes that can be treated to a point where they can be used as restoration soil on the landfill cap or if required as daily intermediate cover. Contaminants for biological treatment are organic and would predominantly comprise of the following, but are not limited to:

- range of petroleum hydrocarbons (petrol, heating fuel, diesel, used oils, crude oil etc.);
- polycyclic Aromatic Hydrocarbons (PAHs);
- creosote;
- phenols; and
- chlorinated Solvents and other Volatile Organic Compounds (VOCs)

Waste will be characterised prior to acceptance to confirm accepted materials can be treated. Pre-acceptance checks will be conducted for all wastes to be treated at the site. Biffa will pass all soil contaminant information from sales enquiries to the site staff at the biopile process where it will be assessed for treatability for the contaminants of concern. A list of terms and conditions will be returned to Biffa's site office, placing restrictions on the waste that can be accepted, these would generally cover the following:

- maximum soil contaminant concentrations for reuse of material in the restoration area or disposal within the landfill;
- limitations on physical and chemical characteristics (size of debris, pH, moisture content etc.); and
- statement that wastes containing tars, free oils and muddy materials (wastes with too high a moisture content) will be rejected; and
- any wastes outside of the analysis results provided may be rejected.

Biffa will then set up an internal authorisation number, which permits Biffa to accept an order from a client for the disposal of soil at the WTF.

As loads are accepted for deposit through an initial visual inspection, follow-up analysis may be conducted to allow a minimum sampling frequency/volume to satisfy internal guidance, such as in the WTF Operational Manual.

No waste will be accepted unless it has been pre-booked with the following information:

- date of proposed arrival on site;
- producers details; SIC (Standard Industry Codes) are a requirement of WAP (Environmental Permitting Regulations, 2010);
- source;
- physical and chemical composition (an appropriate analysis);
- hazard characteristics;
- handling requirements; and
- chain of custody notes will accompany loads (for hazardous/non-hazardous waste).

Acceptance of materials will be governed by Biffa procedures and the WTF Operational Manual (refer to Table 2-1 above).

Waste acceptance procedures will be conducted by competent trained personnel. Acceptance of waste will be decided on the basis of laboratory analyses that evidence the nature of waste and confirm that it is within treatable ranges.

All vehicles delivering soil will be weighed when entering the site and the soils transferred to the biopiles at the WTF for treatment.

3.2.2 Biopile Treatment Area (The Pad)

The main item of infrastructure at the WTF is the treatment pad which will comprise of an impermeable surfaced pad, graded to a fall. The surfacing and drainage details are illustrated on Drawing 003, dated July 2015. It should be noted at the time of submitting this permit application that the design and specification should be regarded as being a preliminary concept and have not been finalised. The details provided within the permit application may be subject to change the details of which would be discussed and agreed with Natural Resources Wales as part of the determination process.

The biopiles will have a drainage network which will capture water from the biopiles into a purpose built collection system composed of a network of drains leading to air/water separators (as detailed in Section 3.2.7). Process water, accumulated from the operations, will be sent to process water tanks, as detailed in Section 3.2.5.

Once accepted at the facility, the contaminated wastes will be transferred to the treatment area by HGV and/or excavator, and arranged into biopiles. The biopiles will be managed using a system of lots which trace waste from its point of origin to its location on the treatment area. The lots system allows a certain area of the treatment pad to be dedicated to a particular consignment for the duration of the process.

3.2.3 The Biopiles

The word biopile is a North American term, which describes the process of the biological treatment of a stockpile of soil. It refers to an active aeration system rather than a windrowing method for soil or sludge treatment. The biopiles comprise linear mounds of imported soils typically around 3-4m high, although the height may vary depending on the soil type and work operation being undertaken. The biopile will be arranged in a mound across the width of the treatment area.

Inorganic nutrients such as ammonium nitrate and organic inputs such as compost and green waste for example, may be used, if required, in low quantities. Specific requirements are detailed in the WTF Operational Manual. Any organic inputs would be taken directly to the treatment pad and incorporated into the biopiles and so would not be stored on site. Inorganic inputs may be stored on site and these materials would be segregated and stored separately on pallets within the onsite storage area.

Soils are typically treated over an 8-16 week period, depending on the contaminants present. During this time the material is turned infrequently, typically once every eight weeks using a mechanical excavator to ensure that the correct aeration of the material is achieved. Turning of the lots will facilitate the following:

- adding organic amendments (if necessary);
- adding inorganic nutrients (if necessary);
- adding water (if necessary);
- de-compaction of the soil; and
- soil sampling.

During the turning process separate batches are not mixed and no material is removed from the treatment area. When completed the material will be removed from the biopile and will be used as daily cover or restoration material for landfill restoration works as and when required.

Optimum conditions for biodegradation are created by controlling parameters including: oxygen level, nutrient concentrations, moisture content, pH level, temperature, etc. This is achieved in biopiles that are ventilated and controlled to provide optimum conditions for treatment. The biopiles are located on a prepared and contained surface with perforated aeration pipes at the bottom and may be covered by a membrane, if operational needs require.

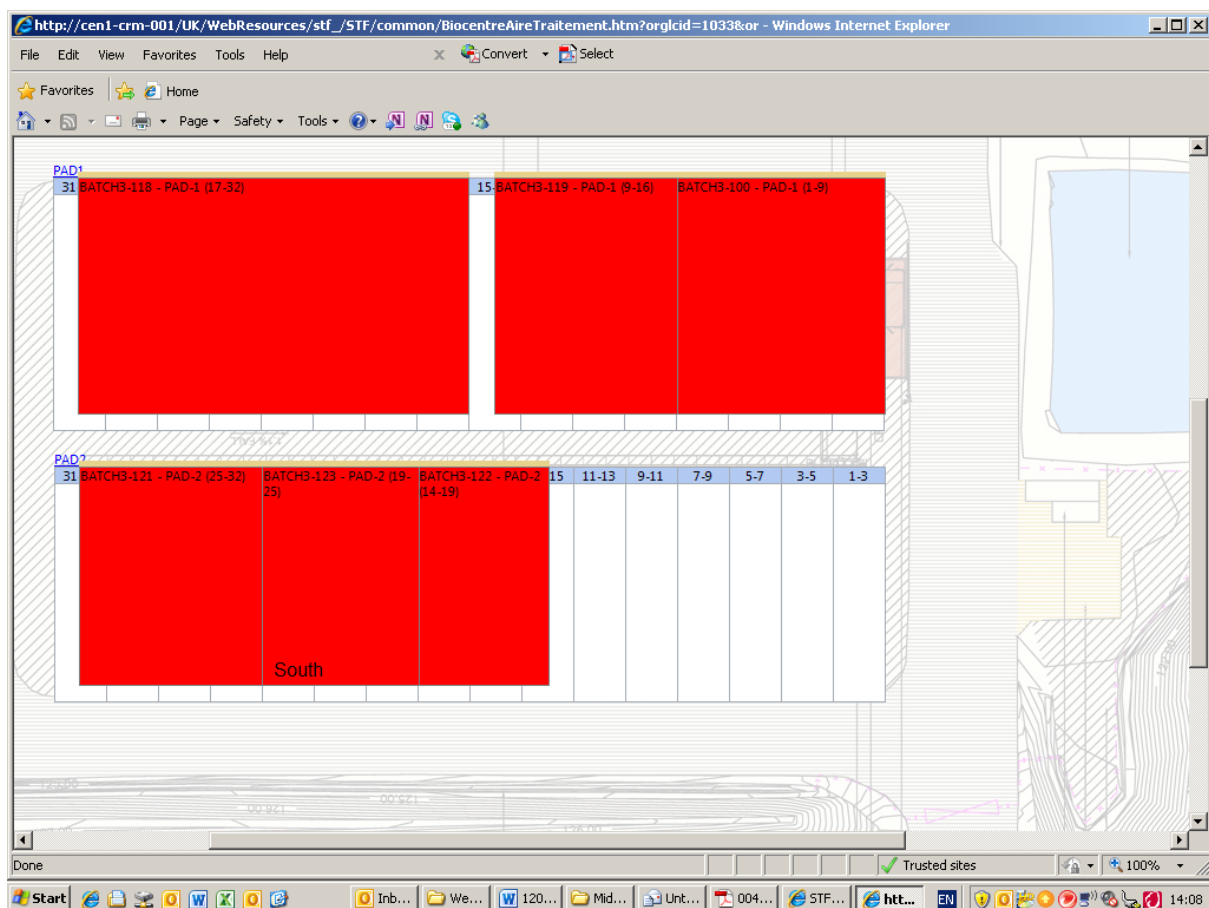
The biopile process consists of a number of unit operations that in addition to the above, allow for the control of all gaseous and aqueous emissions (as detailed in the following sections below).

Biopiles will be managed using a system of batches which trace waste from its point of origin to its location on the treatment area. The progress of treatment and despatch is shown in Figure 3-1.

**Figure 3-1
Biopile Batch System**

Batch 1	Batch 2	Batch 3	Batch 4	Batch 5	Batch 6
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**Figure 3-2
Screenshot from Redhill Materials Management System (Batch Location)**



The bio – remediation process can be typified as follows:

- Arrival of soil on a particular batch:
 - a consignment note indicates:
 - soil origin (soil type and pollutants derived from the Site Investigation data);
 - addition of organic amendments (if necessary);
 - addition of nutrients (if necessary); and

- addition of water (if necessary)
- Once a batch is constructed:
 - sampling of the lot;
 - analysis of soil samples will typically confirm:
 - concentration of target pollutants; and
 - pH
- Periodically, batches are turned over for the following purposes:
 - adding organic amendments (if necessary);
 - adding nutrients (if necessary);
 - adding water (if necessary);
 - de-compaction of the soil; and
 - soil sampling

Wastes with similar contamination characteristics may be blended prior to treatment.

Waste acceptance testing prior to and on arrival at the site will determine the suitability of wastes for blending to produce a batch of waste. This process will be overseen by the site manager to ensure operational procedures are followed.

Blending the wastes enables an efficient use of space and an effective, viable treatment method for hazardous wastes and non-hazardous wastes. As an example, up to two thousand tonnes of waste may comprise one batch, but this could be derived from four different waste sources sharing similar characteristics with regard to their suitability for treatment.

Recoverable wastes and wastes only suitable for disposal will be kept separate from each other throughout the entire process, including receipt, storage, handling and treatment.

Similarly, hazardous and non-hazardous wastes will be kept separate throughout each stage of the operation.

Subject to the soil quality post treatment, soils will be either utilised for restoration material or cover material. Waste dispatch will typically take place when Biffa's requirements for restoration soils and intermediate daily cover are achieved.

3.2.4 Bio-physical remediation of contaminated soils using mechanical turning.

Bio-physical remediation of hydrocarbons can also be achieved by mechanical means using a propriety turning device such as tractor driven Menart Turner as shown in Figure 3-3 below. The technique is highly flexible and can accommodate variations in the physical nature of the impacted soils, contaminant concentrations, ambient weather conditions and volumes.

Figure 3-3
Bioremediation Process – Mechanical Turning (Menart)



Biopile Construction and Operation

A 70 mm screen will be located within the WTF, following screening, a 21 tonne tracked excavator or a similar machine will be located on the WTF to construct the biopiles following unloading of the dump trucks.

The biopile shape influences the mode and efficiency of treatment. A 3m wide gap in between the biopiles and around the perimeter of the WTF will allow access for excavators and tractors.

Once the biopiles are constructed, active treatment involves the use of equipment to aerate the substrate. The mechanical processing relocates material central to the biopile out to the edge of the heap ensuring optimal aeration of the substrate. Material is added to the biopiles to condition and promote microbial activity in line with Section 3.4.1 as required.

The machinery proposed for this remediation process will be a tractor pulled turner which is capable of an approximate through feed capacity of 1,000 m³/hr.

Any moisture draining from the biopile system will be recovered through the drainage system of the WTF; however, typically, due to the turning action water loss from mechanically turned piles is minimal.

Covering System

The covers are specifically designed for bioremediation operations. The fleece material is composed of chemically and biologically stable polypropylene fibres manufactured to shed rainwater whilst gas-permeable and UV resistant. These properties allow the biopile to

remain at an optimum moisture level and conserve heat generated by hydrocarbon degradation.

The biopiles will be mechanically covered after construction in order to minimise rainwater infiltration, moisture deficiency and release of odours. They will be uncovered during mixing and sampling operations.

Maintenance Schedule

During the treatment period the biopiles will be turned and aerated consecutively using the biopile turner. Following the uncovering of the biopile to treat, the tractor will run the turner through the material along each of the windrows. Once the task is completed, the covers present on the next biopile due to be turned will be removed and used to cover the freshly turned biopile. The process will then be continued until all biopiles are turned before a new turning cycle starts.

3.2.5 Process Water Tanks

Process water (i.e. effluent) from the biopiles will pass into a drain at the lowest point of the treatment pad. The treatment pad will have low level bunding and laid to appropriate falls, thereby keeping the process water from the biopiles separate from clean surface water run-off from the hard surfaced areas around the treatment pad, as indicated in Drawing 003. Process water from the biopiles will be collected and managed in an engineered drainage system thereby ensuring that emissions to groundwater are minimised.

The integrated water treatment equipment at the WTF includes a control panel, blower and fan and allows for water recirculation and / or treatment (with bag filter and carbon filter). Following testing, process water will be tested at the WTF and either;

- re-circulated in the biopiles;
- used to water the biofilter;
- tankered off site to suitably permitted facility; or
- discharged to surface water

The majority of water arising from the WTF operation will be storm water run-off from the engineered surfaced areas, and will be managed as surface water run-off.

It is proposed that there would be one above ground process water storage tank. The tank would be cylindrical in shape, approximately 6m in length, 3m in diameter and 2.7m high. The tanks will be located on a bunded storage area (with 110% tank capacity in containment) to accommodate any potential leaks. The tank will collect process water from the biopile areas and subject to testing will maybe be tankered off site to a suitably licensed facility or released to the existing Trecatti leachate treatment system or surface water system. The location of the tanks is illustrated on Drawing 002.

3.2.6 Air Extraction System

The air extraction system comprises of a network of perforated pipes which will be installed beneath the soil biopiles and will be linked by a main collection system to a high performance vacuum blower system. The air extraction system will allow for flow rates to be controlled at various locations within the biopile to optimise process control. The blower will be designed in such a way that the oxygen required for contaminant degradation is never

insufficient. The blower is an electric motor and fan system which is housed within an acoustically insulated shipping container.

Extraction ventilation to an abatement plant and biofilter treat biodegradation products and reduces emission of particulate and odour.

3.2.7 Air Water Separators

The air/water separators allows for the collection of process water from the biopile. The separators will ensure that air extracted from the biopile does not contain water, which could damage air extraction equipment. Collected water will be pumped from the separators by an automated pump that will be operated by a level detection system. The water will be pumped to the process water tank(s) for primary settlement prior to discharge as described above.

The water collection system (air/water separators and process water tanks) will include water level detectors, which will automatically shut down the pumping system before critical levels are reached. The detectors will also be linked to a warning light system, which notify the operator.

3.2.8 Humidifying Chamber

This is a simple spray system installed within the exhaust system to ensure humid air is pumped towards the biofilter and will ensure moisture content within the air treatment filter is maintained within an optimal range.

3.2.9 Biofilter

Air will pass through a biofilter. The extracted air will pass through the biofilter which will provide an active filter capable of removing potentially odorous or harmful substances from the air leaving the biopiles.

This biofilter will comprise of a wood medium filter which that would be contained within an area approximately 6m by 20m in plan and 2.5m high. The biofilter medium will be covered with exhaust holes to allow gaseous emissions to be released. The biofilter will be measured on a monthly basis for volatile organic compounds, total petroleum hydrocarbons and polycyclic aromatic hydrocarbons.

The atmospheric releases from the biofilter will consist mainly of low levels of volatile organic compounds (VOCs) but will also include carbon dioxide, and water vapour. Figure 3-4 illustrates the biofilter and process water tank at the Risley Landfill site which is a permitted installation and was successfully operated by Biffa Waste Services Limited.

Biffa operated a remediation facility as proposed by this variation application successfully at their Risley Landfill Site, near Manchester (Permit Reference BV7877IR). In addition, the Environment Agency has issued Biffa with a PPC Permit variation for the operation of a facility at the Meece landfill in Staffordshire (Permit reference BV4967IW), Skelton Grange in Leeds (Permit reference BJ9339IF-V013), at the Redhill Landfill Site in Surrey (Permit Reference AP3838UC), Westmill Landfill Site in Hertfordshire (Permit Reference DP3431PC-V006) and Northern Ireland Environment Agency have similarly issued a Permit for the operation of a facility at Cottonmount Landfill in Northern Ireland (Permit Reference P0090/05A/V2).

**Figure 3-4
Biofilter and Process Water Tank**



3.2.10 Ancillary Infrastructure

A site office will be located on the WTF compound. In addition to housing the site office, this portacabin type building will also provide staff welfare facilities.

3.3 Limits of Activities

3.3.1 Permitted Categories and Types of Waste

The list of European Waste Catalogue Codes for acceptance at the site is as detailed in Appendix to the Application Forms C3_1.

Trecatti WTF will accept biodegradable garden waste (20 02 01) and other suitable materials, as highlighted in Appendix C3_1 as additives. The purpose of addition of such woody wastes is to break up cohesive soils to enable a matrix which is easier to aerate. Biffa may add some green waste to the process and this will have been previously composted due to the nitrogen demand of fresh green waste. Biffa do not envisage accepting fresh green waste as this has a high nitrogen demand. Biodegradable wastes are also used on Biffa's specialist contractor's 23 other soil treatment facilities with the same methodology, so the use of these materials for the purposes set out above is widely accepted. All soil additives are minimised as far as practicable due to both cost reasons as well as the need to ensure that soil meets the strict physical criteria for the restoration scheme after treatment is complete

Biffa has recently been issued with an Environmental Permit variation (reference EA/EPR/BJ9339IF/V013) for the operation of a Soil Treatment Facility at Skelton Grange Landfill Site and this permits the use of green waste as part of the process for the reasons set out above.

3.3.2 Waste Quantities

The proposed WTF will be capable of treating up to 30,000 tonnes per annum of the waste types detailed in Section 3.3.1.

3.3.3 Hours of Operation

The WTF facility will be operational (delivery and transfer of waste) in accordance with the hours specified in the planning permission. However, aspects of the plant (for example the air circulation motor(s)) will operate on a continuous basis, 24 hours a day, 7 days a week throughout the year, operating for a total of 365 days per year when the remainder of the site is not operational. This is no different to the operation of similar equipment on the adjoining landfill at Trecatti that is required for environmental control purposes (landfill gas extraction and generation/flaring, and leachate extraction and storage/disposal off site. Where this is the case, acoustic treatment and silencing of equipment to acceptable noise output levels will be in place.

3.3.4 Means of Measurement

A computerised weighbridge is present at the entrance and exit of the Landfill facility and this will be used to record the deliveries to the WTF. The computerised weighing control system will record the following:

- vehicle weights;
- issued transfer ticket numbers;
- tare weights;
- gross weights;
- net weights;
- waste type;
- waste carrier identification;
- vehicle registration; and
- vehicle type

CCTV cameras will be positioned to view vehicles at the weighbridge. Audio communication will be provided between the weighbridge and the central control room.

The equipment located at each weighbridge (weighing terminal) will include:

- weatherproof casing;
- electrical heater;
- digital display;
- ticket printer;
- two way intercom system;
- induction loops, entrance and exit barriers; and
- traffic light.

Equipment located in the control room includes as a minimum:

- one digital weight indicator;
- one complete computer (Pentium widows based); and
- one printer for summaries / reports

Wastes will be characterised, as required under the Duty of Care requirements, prior to acceptance of the delivery. On inspection, deliveries which do not have the required information, will either have to produce the correct information, or will be refused entry to the WTF. Non-conforming wastes will be removed off-site if appropriate for disposal at a suitably licensed facility. Records of the waste characteristics and destination of the waste will be kept in accordance with Duty of Care requirements.

Operational procedures at the site will include specific procedures for waste reception, checking and handling of non-conforming loads/items as detailed in Biffa's EMS and the WTF Operational Manual. These procedures will be developed to ensure that the requirements of the Duty of Care requirements and The Environmental Permit (England & Wales) Regulations 2010 and subsequent amendments are met.

3.3.5 Waste Acceptance Procedures

All drivers bringing waste material to the WTF will report to the weighbridge where the paperwork for the load will be inspected. Further waste acceptance procedures are detailed in Section 3.2.1 of this report and Appendix BATOT1.

3.3.6 Waste Quarantine Procedures

It is not expected that non-conforming waste will be deposited at the WTF following the waste acceptance procedures. A record will be kept of all rejected wastes.

There will be no direct disposal of waste to land within the footprint of the WTF operation.

3.4 Waste Handling

3.4.1 Materials Input

This section describes the materials that will be used at the WTF. The selection and substitution of materials used are also discussed and the techniques used to minimise their use described. Measures include the keeping of an inventory of materials, minimisation, regular review of new developments in raw materials and the implementation of suitable substitutions where possible.

The most significant material input at the WTF is the waste accepted for treatment.

In addition to the soils and wastes accepted at the crushing and screening area, the material input at the bioremediation area is confined to:

- organic amendments (if necessary, and as detailed in the Operations Manual);
- inorganic nutrients (if necessary, and as detailed in the Operations Manual);
- any replacement parts for the WTF plant and infrastructure; and
- water to add to the biopiles as necessary (mains water will be minimised by re-using water from the on-site process tank(s), where appropriate).

3.4.2 Raw Materials Selection at the WTF

A list of all substances used, stored, or produced as waste by-products from the treatment process at the WTF will be contained in the WTF Operations Manual however, a summary is provided below and in Table 3-2.

Soil or Sludges for Treatment

The WTF will treat soils or sludges contaminated with organic compounds, which may be considered as hazardous waste under the Hazardous Waste (England and Wales) Regulations 2005 and Waste (England and Wales) Regulations 2010 and subsequent amendments. The proposed waste types are listed in Appendix to the Application Forms C3_1.

Other Materials

Inorganic nutrients such as ammonium nitrate may be used in low quantities in a small number of cases. A detailed description of the nutrients used is included within the WTF Operations Manual. These materials may be segregated for storage in bags or small containers.

Bulk Storage Tanks

A bund will surround the biopile(s) pad and within it is included the WTF infrastructure e.g. roadways, fuel storage, process water tank, site office and parking area, biofilter and equipment unit. Water run-off from within this bund will all be managed as potentially contaminated water and routed to the process water tank. The water will be stored at the process water tank prior to discharge to a suitably licensed facility. Subject to quality testing, the water may be released to the surface water management lagoon as detailed on Drawing 003 or may be discharged to Trecatti's Leachate Treatment Plant.

A cut-off valve will be provided at the surface water lagoon and should any contamination become evident, the water will be prevented from entering the existing surface water management system and controlled waters.

Drums

Any chemicals will be stored in drums, sacks or other suitable containers upon sealed surfaces and within contained areas or structures. Only relatively small amounts are required and these materials are mostly inert or of low toxicity.

Drums that may be received for occasional maintenance or repair of plant and equipment will be stored and used in accordance with site procedure. Drums will be returned to the supplier or disposed of in accordance with relevant regulations and site waste management procedures.

Table 3-1
Principal Raw Materials and Storage at the Bioremediation Pad (Listed Activity)

Raw Material	Use	Storage/ Containment	Maximum amount stored on site at any one time	Annual Throughput	Chemical Composition	Hazard Code	Fate of Material (% of product to air, water, land)	Alternatives
Soil / Sludge for Treatment	Remediation of contaminated soils / sludges to materials suitable for use as restoration soils at Trecatti Landfill Site	Storage on biopiles at the WTF pad of engineered surfacing and served by an engineered drainage system	15,000m3 on each biopile pad at any one time	The facility will be capable of treating up to 30,000 tonnes per annum (this does not include materials for processing)	Soils / sludges may be special waste or hazardous waste as detailed in Section 3.3.1	Low – High	To land for use as restoration material or daily cover as appropriate at the adjacent landfill	None. The purpose of the facility is to remediate contaminated soils
Nutrients (organic and inorganic as appropriate)	To maintain growth conditions within the soils.	These materials may be segregated for storage in bags or small containers within a site storage shed/workshop	<5 tonnes	As detailed in the WTF Operations Manual: the actual quantities are considered commercially sensitive	As detailed in the WTF Operations Manual: the actual quantities are considered commercially sensitive	As detailed in WTF Operations Manual	As detailed in WTF Operations Manual	None identified. The process will be reviewed once operational to ensure that the nutrients used are optimal for the process
Diesel	Fuel for excavators and mobile plant	Storage of diesel in accordance with the Oil Storage Regulations (double skinned and bunded to 110%of capacity on hardstanding.	Approx 2,500L	As required by site plant	Diesel	As detailed in WTF Operations Manual	Combustion in site plant	Alternatives will be considered when site plant is upgraded; currently site plant runs on diesel.

Wherever possible, raw materials will be selected that minimise environmental impact. Consideration will be given to such factors as degradability, bio-accumulation potential and toxicity. Reviews will be frequently undertaken to ensure that all raw materials are appropriate for use, that consumption is optimised and that opportunities for reduction and improvements are implemented.

Materials storage and management will be governed by the WTF Operations Manual. An inventory of materials held and used will be maintained by the Site Manager and or the purchasing office. Biffa periodically reviews the use and sourcing of raw materials and where cost effective environmental benefits can be obtained through the use of alternatives this is implemented. Quality assurance systems in place maintain materials quality requirements and stock levels will be minimised as far as practicable, consistent with operational needs.

3.4.3 Waste Minimisation

Given the nature of the processes, the opportunity for waste minimisation is limited. However, minimisation of waste will be considered as and when appropriate.

Materials will be recycled and re-used, wherever possible. The process does not need a significant input of water except for maintaining moisture levels. Generated process water will be recycled where possible.

Use of raw materials and opportunities for substitution or minimisation will be considered as part of Biffa's EMS.

Measures will be in place for the prevention and reduction of waste and will include:-

- process control to minimise the creation of rejects or unacceptable materials; and
- plant and equipment will be maintained on a routine basis to prevent breakdowns and loss of product.

3.4.4 Waste Streams and General Arrangements

The WTF will generate relatively small amounts of waste that require disposal. The largest potential waste streams will be recycled to the process or used on site; however a small quantity of waste will be produced as detailed below in Table 3-3.

Table 3-2
Annual Waste Streams and Amounts

Waste Stream	Annual Volumes	Storage for Disposal	Main Action or Disposal Route
Paper, plastic & general packaging	Approx 50 m ³	Skips and bins in plant or from office bins	Off site (from the WTF) to a suitable permitted facility which may include the adjacent Trecatti landfill site.
Metal: engineering workshop scrap	Unknown	Open skip	Off site (from the WTF) to a suitable permitted facility which may include the adjacent Trecatti landfill site.

Other industrial and commercial waste which may arise as a result of the operations will be segregated and consigned to appropriate skip or container for onward disposal in compliance with the Duty of Care requirements as follows:-

- general industrial waste will be contained within skips located throughout the facility. This will be disposed of off-site on a regular basis;
- office waste will be contained in bins or closed skips and removed for disposal; and
- empty drums will be stored within the facility or storage shed for return to supplier.

The site will not produce a hazardous waste on a routine basis except for small quantities of waste oil, batteries and occasional batches of solvents. These will be segregated, labelled and stored in a secure vessel(s) prior to disposal by licensed contractor. The Site Manager will be responsible for implementing waste management requirements and ensuring that skips are labelled and, maintained in an appropriate location and condition. Staff will be responsible for ensuring waste is correctly consigned and for notifying the Site Manager when skips or containers may contain inappropriate items.

Waste will be managed by the WTF Operations Manual and Biffa Procedures, as described in Section 2.2.1.

3.4.5 Disposal Options and Controls

Materials that are not recycled or re-used on site will be disposed off-site as controlled waste. All controlled waste will be disposed of in accordance with the duty of care requirements to licensed disposal facilities.

Copies of transfer notes will be held for a minimum of two years and any hazardous waste consignment notes (if required) are held for a minimum of three years. Arrangements for disposal of waste will be reviewed annually by the environmental support staff. This provides checks on contractors and review of requirements for licensing and registration.

3.4.6 Records

Records will be maintained to satisfy the requirements of the Duty of Care requirements and Biffa's WTF Operations Manual and Biffa Procedures.

3.5 Waste Recovery or Disposal

3.5.1 Recovery and Disposal Options

Containers will be segregated, labelled, covered and maintained in a satisfactory condition. Storage areas will be protected from vandalism by site security arrangements. Storage areas will be designated and marked as appropriate.

Consideration will be given to the most appropriate disposal route for waste arising, with disposal being as close to the facility as possible. Where practicable, recycling and reuse of materials and plant will be undertaken.

The recovery and disposal details for the waste streams are likely to be as specified below:

- solid rejects and soils will be stored in situ in a skip prior to transport off site (from the WTF) to a suitable permitted facility;
- paper, plastic & general packaging from office waste will be stored in situ in skips or office bins and will be either recycled as appropriate or transport off site (from the WTF) to a suitable permitted facility; and

- waste associated with machine parts and other wastes generated as a result of malfunction or routine maintenance will be transported off site and disposed of at an appropriately authorised facility.

It is considered that the chosen routes for recovery or disposal represent the best environmental option given the circumstances prevailing at the site namely the minimal waste volumes and therefore minimal environmental impacts associated with off-site disposal.

3.5.2 Water Use

Mains water will be minimised by re-using water from the on-site process tanks, where appropriate. Biffa will review water use on a regular basis.

3.5.3 Best Practicable Environmental Option (BPEO)

Waste management will be reviewed every year as part of the site's Environmental Management System. This will be undertaken to confirm that the best environmental options are being used for the dealing with waste from the installation.

It is considered that present arrangements represent BAT and represent the BPEO.

3.5.4 Packaging Waste Regulations

The Producer Responsibility Obligations (Packaging Waste) Regulations 1997 implement EU Directives on Packaging Waste. The Regulations place a legal requirement on UK businesses to recover and recycle packaging so the UK can achieve the European packaging recycling targets. Biffa has registered with the Environment Agency as an obligated company under the Regulations (Biffa handles more than 50 tonnes of packaging a year).

Biffa operate 'Biffpack' the leading waste management industry based Compliance Scheme. Biffpack is registered to ISO 9001:2000. Biffpack operates on the basis that it will meet the aggregated obligations of its members by obtaining Packaging Recovery Notes (PRNs) generated through the recovery and recycling of packaging waste. The cost of acquiring PRNs is charged back to members quarterly according to each member's obligation.

The WTF will not be a significant producer of packaging and would not normally be required to manage packaging. In practice packaging that may be received will be forwarded to the main installation landfill site for disposal.

Typical annual estimates of packaging waste that may be generated by the WTF as follows;

- paper (tonnes) <5;
- metal (tonnes) <5;
- wood (tonnes) <5; and
- plastic (tonnes) <5.

3.6 Plant and Equipment

All items of plant and equipment will be regularly inspected and maintained in accordance with the manufactures specifications and Biffa's programme of plant maintenance (as detailed further in Section 2.3 of this report).

4.0 EMISSIONS AND MONITORING

This section of the report details the emissions that will result from the WTF. The emissions from Trecatti Landfill will continue to be monitored and regulated in accordance with the conditions of the Environmental Permit for the site. The techniques for pollution control described below conform to the indicative BAT requirements contained within the IPPC S5.06, 'Guidance for the Recovery and Disposal of Hazardous and Non Hazardous Waste', Issue 4, December 2004 for the IPPC Directive activity only (the treatment of hazardous soils at the bioremediation centre).

Potential emissions to air, water and land from each stage of the WTF (including any during start up, shut down and any breakdown/abnormal operation) are summarised in Table 4-1 below.

Table 4-1
Summary of Potential Releases - WTF (Modified from S5.06)

	Materials Receipt	Biopile Creation	Biopile Bio-remediation	Biofilter Emissions	Materials Sorting	Materials Export	Other Oil & Chemical Storage
Particulate	A	A	A	A	A	A	
Odour		A		A			
Solid Rejects					L		
Effluent			W				W
Noise	Low	Low	Low		Low	Low	
Key	A - Releases to Air. W – Releases to Water. L - Releases to Land						

Standards and Obligations

Emissions from the WTF generally comply with associated sector guidance and relevant emission standards such as those described by S5.06.

Benchmarks or limits (including units used) will be expressed as defined by Guidance S5.06 or as appropriate.

4.1 Point Source Emissions to Air

4.1.1 Sources of Emissions

There will be no point source emissions to air. The main source emission to air will be from the biofilter which will be designed to remove potentially odorous or harmful substances.

The potentially significant polluting substances produced by the biofilter are as follows, and as a consequence an Air Quality Assessment has been undertaken and is included in Appendix BATOT3:-

- particulate;
- organic breakdown products (untreated or partially treated); and
- odour.

4.1.2 Control of Emission to Air

BAT – Guidance S5.06

BAT for bioremediation projects is not specifically described by BAT Guidance S5.06; though are described as one of the available air abatement options (S5.06 Table 2.5). With respect to biofilters (termed biobeds or infiltration in the Guidance), S5.06 states:-

“Biofilter is a generic term applied to any biological oxidation process taking place in a packed system. This includes the conventional trickling filters, bioscrubbers (microbial population supported in scrubber liquor) or biobeds (packed system using soil, peat and bark). Biobeds have been installed on waste treatment sites for the abatement of odorous emissions.

Operational conditions include:

- *incoming air must have a relative humidity of >90% (this may require the use of a humidifier);*
- *particulate must be removed;*
- *major operating parameters such as gas temperature and backpressure should be checked daily;*
- *moisture content in the filters should be monitored regularly;*
- *a low-temperature alarm should be fitted to warn of freezing, which may damage the filter and affect the growth of the microbial population;*
- *the packing medium must be supported to allow a fast, even air flow without pressure drop;*
- *the medium should be removed when it starts to disintegrate, affecting air flow (bark is less resistant than, for example, heather);*
- *choice of medium and supporting system affects the power requirement to maintain air flow with power to overcome bed resistance. This is the largest operational cost; and*
- *biofiltration and bioscrubbing have lower operating costs than many other air pollution control technologies for treating low concentrations of biodegradable organic pollutants. Bioscrubbers have the higher maintenance cost of the two”.*

The use of the biofilter is considered the Best Available Technique (BAT) to prevent, minimise and treat releases to air from the WTF. The biofilter is considered a suitable abatement technique and release heights are considered sufficient to ensure adequate dispersion of the air under normal conditions. Environmental benefits include low energy requirements and the avoidance of cross-media transfer of pollutants.

Biofilter Construction & Operations

Abatement will comprise an air abstraction and conditioning unit, followed by a biofilter. Air will be continuously removed from the biopile and typically treated first through a conditioning unit (humidifier). The humidifier will regulate conditions to ensure the soil is kept at appropriate conditions (warm and moist). The air will then pass to the biofilter to remove particulate and odour and then released directly to the atmosphere.

The biofilter would be contained within an area approximately up to 6m by 20m in plan and 2.5m high. Airflow will be diverted to all parts of the biofilter bed(s) as required. The biofilter bed will be constructed with perforated piping to distribute air flow, followed by surface layers of organic material such as peat or similar. The large area will ensure a low rate of air flow

through the biofilter media with a large surface area to intercept and/or treat particulates and odours.

Biofilter Emissions and Control

Temperature and condition of the biofilter will be observed on a daily basis together with odour.

On a monthly basis, monitoring of the biofilter will take place for:-

- total Petroleum Hydrocarbons (TPH);
- benzene, Toluene, Ethyl Benzene and Xylenes (BTEX); and
- polycyclic Aromatic Hydrocarbons (PAHs).

Monitoring will be undertaken by a specialist laboratory for accredited analysis.

Greenhouse Gases Emissions

Estimated annual contributions to greenhouse gases as carbon dioxide are shown in Table 4-2.

Emissions are estimated from the use of imported energy including diesel, electricity, LPG etc., which are detailed further in Section 4.15 of this document. Standard factors for carbon dioxide emissions are provided in the Environment Agency horizontal guidance H2 (Version 3, February 2002).

Table 4-2 also includes an estimate of carbon dioxide arising from soil / sludge treatment. This value is approximate only and actual mass emissions could be more than double this – depending on soil concentrations of hydrocarbon and the amount treated in any year.

Table 4-2
Greenhouse Gas Contributions (Bioremediation Pad Only)

Energy option	CO ₂ Emission (tonnes/year)
As delivered Electricity use	2.64
Fuel	78
LPG	15
Coal	-

* estimated as 30,000 tonnes soil treated with 1% contamination as hydrocarbon and converted to carbon dioxide.

Mobile Plant Emissions and Control

Releases as nitrogen oxide will be minor and associated with mobile plant and occasional space heaters only. Emissions from mobile equipment will be controlled by proprietary exhaust systems.

Biopile Emissions and Control

Dust is unlikely to appear during the turning of soils. Dust indicates that the moisture content of the soil is too low. Should dust be identified, water will be added to the biopile to maintain humidity at an appropriate level to enhance bio-degradation. Water would be added by either automatic or manually deployed irrigation pipes.

4.1.3 Monitoring of Emissions to Air

The monitoring regime will enable Biffa to assess the performance of the abatement systems and facilitate early identification of any potential environmental impacts.

The Site Manager will be responsible for ensuring emission abatement is adequate and identifying the need for further control. Emissions monitoring is covered by Biffa Operational Procedure DGNL/02 Environmental Management.

In addition the WTF Operations Manual details the following;

- monitoring & Reporting for Gases and Vapours
- control of Dust, Fibres and Particulates; and
- monitoring & Reporting for Gases and Vapours.

Biffa will immediately notify Natural Resources Wales of the detection of the release of any substance which exceeds any relevant limit or criteria specified in relation to the substance in the permit or any other substance that might cause harm and of any malfunction or breakdown that has the potential to cause serious pollution of the environment.

4.1.4 Sampling Techniques/Calibration

Sampling and analytical methods will comply with the Environment Agency's / Natural Resources Wales Monitoring Certification Scheme (MCERTS), where appropriate. In general methods will be undertaken in accordance with British Standards or other recognised technique accepted for measurement or as agreed with the regulator. Concentrations will generally be expressed at standard reference conditions of; Temperature 273 K (0°C); pressure 101.3 kPa (1 atmosphere); no correction for water vapour or oxygen.

All monitoring at the facility will be in accordance with the conditions of the Environmental Permit and best practice and Biffa's monitoring procedures (as detailed in the EMS).

4.2 Point Source Emissions to Groundwater

4.2.1 Sources of Emissions

There will be no direct discharges containing List I or List II substances to groundwater from the WTF.

4.2.2 Control of Point Source Emissions to Groundwater

As detailed in Section 4.2.1 above, there will be no point source emissions to groundwater from the WTF. Note that drainage details with regards to the Green Waste Composting Operations are included within the Non-Technical Summary.

The proposed MWTRP comprise a single impermeable surfaced pad. The pad will have overall maximum dimensions of around 125m by 82m and orientated in a south east to north west fashion. The northern most part of the pad would be used for the composting of green waste and would be 45m by 70m in footprint (3,250m²). Adjoining this would be an area used for the bioremediation of contaminated soils or sludges; this area would be 80m in length and between 56m and 82m in width (having a footprint of around 6,000m²). The two areas would be separated by low level bund.

The main item of infrastructure on the WTF will comprise the treatment pad which would comprise from top to bottom of impermeable surfacing, 150mm Type 1 sub-base, geogrid with 200mm layer of capping stone. The integrity of the treatment area will be confirmed before soil is placed on it. Due to the site specific engineered containment system proposed at the WTF it is unlikely that there will be releases to groundwater.

The impermeable surface of the MWTRP would be graded to a 1-2% fall. Water from the biopiles/windrows would be collected and managed in a separate sealed drainage system thereby ensuring that emissions to groundwater are prevented.

There will be no underground storage tanks for the bulk storage of fuels or bulk chemicals. The only underground structures that will be installed at the facility will be:-

- air/water separator sumps; and
- foundations.

The geology, hydrogeology and groundwater vulnerability at the site is described within the H1 Risk Assessment (reference 407.00034.00461/H1).

4.3 Point Source Emissions to Surface Water

4.3.1 Sources of Emissions

The point source emission to surface water from the WTF is the release of clean surface water.

The surface water will be collected at the holding lagoon (Lagoon 1) and pumped to join the existing permitted surface water management system at the Trecatti landfill prior to discharge under the conditions of the Environmental Permit.

4.3.2 Control of Point Source Emissions to Surface Water

Surface water volumes will be variable and dependant on rainfall. Surface water at the WTF will be collected separately to process water and will be routed to surface water Lagoon 1 within the footprint of the MWTRP.

Process water generated by the treatment process at the biopile(s) will be removed via the internal air and water extraction pipes and routed to the process water tank prior to discharge to a suitably permitted facility. Subject to quality testing, the water may be released to the existing Trecatti Landfill leachate management system or surface water management system. The collection network for the biopile(s) is illustrated on Drawing 003.

A bund will surround the biopile(s) pad and within it will be included the WTF infrastructure e.g. roadways, fuel storage, process water tank, site office and parking area, biofilter and equipment unit. Water run-off from within this bund will all be managed as potentially contaminated water and routed to the process water tank. The water will be stored at the process water tank prior to discharge to a suitably licensed facility. Subject to quality testing, the water may be released to the existing Trecatti Landfill leachate treatment system or surface water management system.

If required, biopile(s) maybe covered with biocovers, rainfall running off the biocovers will be managed as clean surface run-off and directed to the surface water ditch to the east of the biopile(s); the biocovers will be secured within the surface water ditch. Clean surface

water from the ditch is routed to the surface water lagoon via a pipe. Water is discharged from the surface water management lagoon to the existing Landfill surface water management system. Empty pads may also have clean surface water diverted into surface water drains using sandbags.

A cut-off valve will be provided at the surface water management lagoon and should any contamination become evident, the water will be prevented from entering the existing surface water management system and controlled waters.

The proposed drainage layout is shown on Drawing 003.

4.3.3 Monitoring of Point Source Surface Water

Surface water quality will continue to be monitored in accordance with the Environmental Permit for the Trecatti landfill site. The surface water retention pond at the WTF will have a cut off valve so that should the surface water at the WTF become contaminated, the contaminated surface water would not enter the landfill surface water management system.

Monitoring procedures are covered by Biffa's Operation Procedure DGNL/02, Environmental Management.

The proposed monitoring regime will enable Biffa to assess the performance of the abatement systems and facilitate early identification of any potential environmental impacts.

4.4 Point Source Emissions to Sewer

4.4.1 Sources of Emissions

There will be no direct emissions to sewer at the WTF.

4.5 Point Source Emissions to Land

4.5.1 Sources of Emissions

There will be no direct deposit of waste to land at the WTF.

4.5.2 Control of Point Source Emissions to Land

There will be no direct deposit of waste to land at the WTF. However, the resultant material (non-contaminated soils) will be used at the adjacent landfill facilities as restoration material and daily cover material as appropriate and subject to quality. It is not anticipated that resulting soils will be transported off site.

4.5 Fugitive Emissions to Air

4.5.3 Sources of Emissions

There may be the following sources of fugitive or diffuse emissions to air from the WTF;

- biopile construction: emission of dust and particulate from soils;
- biopile remediation: emission of dust, particulate and VOC from soils during treatment;
- biopile turning: emission of dust and particulate from soils during turning of the piles; and

- hardcore access road, stone surfacing pavement and site access area: emission of dust as vehicles track over the pavement.

Odour is addressed separately in Section 4.9 of this report.

4.5.4 Control of Fugitive Emissions to Air

Dust

Roadways and hardstanding will be periodically cleaned. During potentially dry or unfavourable conditions, mud and dusts collecting on hard surfaces, including access routes will be removed by scraping and sweeping. Surfaces will also be dampened down by water bowser.

The operation of the WTF process will be conducted in such a way as to control mud and debris from leaving the WTF area. Biffa will take suitable precautions to ensure that mud and debris are not deposited on public roads. No plant or machinery involved in the WTF process shall leave the landfill without having used the vehicle washes located at various positions along the site haul road.

The presence of dust is unlikely to appear during the turning of soils. Dust is an indication that the moisture content of the soil is too low. Thus, should dust be identified, water will be added to the biopile to prevent proliferation of dust and to maintain humidity at an appropriate level to enhance biodegradation. If necessary, water will be added to the biopile by either automatic or manually deployed irrigation pipes.

VOC

The potential for VOC release during biopile remediation will be low. Operation of the treatment process and plant will be carried out in such a way as to minimise the release of VOCs from the facility as far practicable.

Soils will be typically well-weathered. However standard procedures do allow for the receipt of soils with light hydrocarbons, which have an elevated VOC content. The biofilter is a proven method of removing VOCs with a low odour threshold prior to venting to atmosphere. Details of emissions to air are included Appendix BATOT3, Air Quality Assessment.

Bonfires

No bonfires or rubbish burning will be permitted on site.

4.5.5 Monitoring of Fugitive Emissions to Air

Monitoring for fugitive emissions to air will include the daily visual inspection of the facility by site operatives, and will be in accordance with Biffa procedures, the WTF Operations Manual and the conditions of the Environmental Permit.

In the event of a significant release of fugitive emissions to air, Biffa will record the occurrence and take remedial action in accordance with the EMS and WTF Operations Manual. The WTF Operations Manual will include the Biffa procedures, 'Control of Dust, Fibres and Particulates and Monitoring & Reporting for Gases and Vapours'.

4.6 Fugitive Emissions to Groundwater

4.6.1 Sources of Emissions

In accordance with the Groundwater Regulations and Environmental Permitting Regulations, there will be no direct discharge of List I or List II substances to groundwater. The site will be designed and operated to minimise the potential risk of fugitive emissions to groundwater.

4.6.2 Control of Fugitive Emissions to Groundwater

Storage of waste soils will only occur on the engineered pad which will be served by an engineered drainage system. Water resulting from the WTF (process water and clean surface water) will be managed as part of a combined system described in Section 4.3 of this report.

All storage tanks on site will be bunded and will be of sufficient size to accommodate 110% of the volume of one of the storage tanks it contains. Bunded areas will be kept contamination free. These bunded areas will be checked regularly by competent persons for integrity.

In line with best practice, appropriate storage facilities will be provided at the facility for substances with special requirements (for example, nutrients and amendments as detailed in the WTF Operations Manual) and operational procedures at the site will ensure that where necessary, the storage of materials is kept separate. Storage areas will have appropriate signs and notices and all containers and packages will be clearly labelled.

4.6.3 Monitoring of Fugitive Emissions to Groundwater

Monitoring for fugitive emissions to groundwater will include the daily visual inspection of the WTF (including bunded areas) by site operatives, and will be in accordance with Biffa procedures, the WTF Operations Manual and the conditions of the Environmental Permit.

In the event of a significant release of fugitive emissions to groundwater, Biffa will record the occurrence and take remedial action in accordance with the EMS and WTF Operations Manual.

4.7 Fugitive Emissions to Surface Water and Sewer

4.7.1 Sources of Emissions

Surface water at the WTF is managed via the surface water management system detailed in Section 4.3 of this report. Any failure of the engineered drainage system or of the containment structures (process water tanks and fuel tank) at the WTF may lead to fugitive or diffuse emissions to surface water.

4.7.2 Control of Fugitive Emissions to Surface Water

A bund will surround the biopile(s) pad and within it will be included the WTF infrastructure e.g. roadways, fuel storage, process water tank, site office and parking area, biofilter and equipment unit. Water run-off from within this bund will all be managed as potentially contaminated water and routed to the process water tank as illustrated on Drawing 003 and managed as described in Section 4.3. The water will be stored at the process water tank prior to discharge to a suitably licensed facility. Subject to quality testing, the water may be

released to the existing Trecatti Landfill leachate treatment system or surface water management system.

The stone surfacing at the site and the components of the engineered drainage systems will be maintained and repaired as required. The site will be regularly inspected and areas in poor condition will be reported at daily operation meetings and/or the quarterly management meetings for inclusion within the environmental protection programme as appropriate.

It is proposed that an appropriate sealed storage facility is created that will attenuate clean surface water runoff from all paved areas. A separate sealed drainage system for composting proposes occurring on the multipurpose pad is also provided, and detailed within the NTS.

The attenuation pond (lagoon 1) will be designed for a total storage volume of 157m³ plus 0.3m freeboard. The attenuation facility will discharge to an existing network of perimeter drains and surface water lagoons at Trecatti Landfill. The retention pond will be designed to provide sufficient storage for rainfall events up to a 3 day 20% Annual Exceedance Probability rainfall event which is the maximum length of time that the site is likely to remain closed and non-pumping would take place.

The surface water attenuation pond will be located to the south east of the pad as illustrated on Drawing 003. The final design will be determined at a detailed design stage, and agreed with Natural Resources Wales prior to construction as required by the conditions of the Environmental Permit.

All storage tanks will be bunded and will be of sufficient size to accommodate 110% of the volume of one of the storage tanks it contains or 125% of the total tank volume within the bund, whichever is the greater. The bunded areas will be checked regularly by competent persons for integrity. A hardstanding surface will underlay all chemical and oil storage areas to prevent fugitive emissions to groundwater should spills/ leaks occur.

In line with best practice, appropriate storage facilities will be provided for substances with special requirements (for example, nutrients and amendments as detailed in the WTF Operations Manual) and operational procedures at the site will ensure that where necessary, the storage of materials is kept separate. Storage areas at both the WTF will have appropriate signs and notices and all containers and packages will be clearly labelled.

4.7.3 Monitoring of Fugitive Emissions to Surface Water and Sewer

Monitoring for fugitive emissions to surface water will include the daily visual inspection of the WTF (including bunded areas) by site operatives, and will be in accordance with Biffa procedures, the WTF Operations Manual and the conditions of the Environmental Permit.

In the event of a significant release of fugitive emissions to surface water, Biffa will record the occurrence and take remedial action in accordance with the EMS and WTF Operations Manual.

4.8 Fugitive Emissions to Land

4.8.1 Sources of Emissions

There may be the following sources of fugitive or diffuse emissions to land;

- Surface water attenuation area: aqueous emissions to land (release route);
- Process water tanks: aqueous emissions to land (release route);
- Fuel storage tanks: aqueous emissions to land (release route);
- Biopiles: emission of dust and particulate from soils (settlement on land)

4.8.2 Control of Fugitive Emissions to Land

The WTF site will be operated to reduce fugitive emissions to land. Waste will arrive at the site in sheeted vehicles and will be stored and treated within the designated areas only.

In addition, and as detailed in previous sections (Sections 4.2 – 4.4) the engineered drainage systems and on site containment systems at the WTF shall be constructed, operated and maintained in order to mitigate against the potential release of substances which may be harmful to the receiving environment.

4.8.3 Monitoring of Fugitive Emissions to Land

Monitoring procedures at the site will be in place to ensure that emissions (dust, particulate, litter from waste packaging etc) from the site do not escape on to neighbouring land.

Monitoring for fugitive emissions to land will include the daily visual inspection of the facility (including bunded areas) by site operatives, and will be in accordance with Biffa procedures, the WTF Operations Manual and the conditions of the Environmental Permit.

In the event of a significant release of fugitive emissions to land, Biffa will record the occurrence and take remedial action in accordance with the EMS and WTF Operations Manual.

4.9 Odour

An odour assessment has been undertaken as part of the planning application for the WTF and as part of the Air Quality Assessment appended to this BATOT in Appendix BATOT3.

Control of odour at the WTF will be governed by the WTF Operations Manual and Biffa Procedure DGNL/02, Environmental Management.

Odour Sources & Treatment

Contaminated soils may contain odorous organic substances including aromatic hydrocarbons such as, diesel range organics, PAHs, and phenols. Operation of the treatment process and plant will be carried out in such a way as to minimise offensive odours travelling outside the boundaries of the site. The waste list has been specifically chosen to minimise potentially high odorous wastes.

Under normal operation forced air extraction biopiles will be provided with extraction ventilation and air abatement (biofilter), as described in Section 3.2.9. Mechanically turned biopiles will be covered.

Fugitive odour from exposed soils during construction or stockpiling is unlikely, however, all operations are designed in order for this potential to be minimised. During the pre-acceptance procedure potentially odorous soils will be identified. These will not be accepted without there being arrangements in place for the soils to be received and managed in a manner which would minimise the potential for odour emissions. At all other times potentially

fugitive odour will be controlled by minimising the area of the biopile exposed at any one time.

BAT for Odour Control

It is considered that suction extraction and odour abatement (biofilter) meet the requirements of BAT, as does the covering of mechanically turned biopiles

Alternatives such as pre-blending adsorbents such as activated charcoal would not only inhibit the treatment process but are prohibitively expensive requiring the construction of additional storage and preparation equipment and buildings. It would also create additional opportunities for the release of odour through additional handling of soils.

Monitoring and Management

As part of the environmental management programme associated with the landfill operations, perimeter odour monitoring will be implemented, in accordance with the conditions of the Environmental Permit for the landfill Installation.

4.10 Noise and Vibration

The H1 Environmental Risk Assessment submitted in support of this variation application (reference 407.00034.00461/H1) considers the amenity type risk in a qualitative manner and considers noise at receptors within 500m of the existing Trecatti Landfill Permit boundary as a worst case scenario. Consideration is also given to the distance from the proposed Multipurpose pad to sensitive receptors. In summary, it is concluded that there will be no significant impact on surrounding human receptors.

4.10.1 Control of Noise

The Site Manager will be responsible for ensuring noise is minimised and site personnel will be trained in the need to minimise noise.

Site Operatives will undertake daily routine observations of noise from activities and plant. Noisy or potentially noisy activities or noisy equipment will be reported to the Site Manager. Depending on the scale of the noise the activity will be stopped or re-scheduled. Equipment may be withdrawn and sent for immediate service or listed for service.

Specific mitigation measures will include:-

- internal haul roads shall, where possible, be routed to allow maximum acoustic screening and separation distances to noise sensitive receptors;
- haul roads shall be kept clean and maintained in a good state of repair and subject to a 20mph speed limit so as to avoid unwanted rattle and “body slap” from vehicles;
- mobile plant will have noise emission levels that comply with the limit levels as defined by the EC Directive 86/662/EEC and subsequent amendments;
- plant shall be operated so as to minimise noise emissions; for example, minimisation of drop heights, no unnecessary revving of engines, etc;
- plant shall be subject to regular maintenance. Vehicles and mechanical plant would be fitted with effective exhaust silencers and maintained in good working order to meet the manufacturers’ noise rating levels. Silencers which become defective would be replaced as soon as possible;

- generation and level of noise emissions from the reversing beepers may necessitate use of reverse warning systems incorporating broadband noise, if appropriate;
- quiet plant shall be selected where appropriate. Such machines may be fitted with lined and sealed acoustic covers which would be kept closed whenever the machines are in use;
- machines that are intermittently used shall be shut down in the intervening periods between working periods or throttled back to a minimum;
- where possible pumps and mechanical plant shall be located behind existing screening mounds and be electrically powered. Acoustic enclosures shall be used where necessary, but particularly if pumps, etc. were to operate 24 hours per day; and
- the air circulation plant will be enclosed in an acoustically treated shipping container, which would minimise noise of the electrical pumps and blowers housed inside.

In addition, noise at the site will be controlled by operating in accordance with all relevant planning permissions (including working hours).

4.10.2 Noise Monitoring

As part of the environmental management programme associated with the landfill operations, noise monitoring will be implemented in accordance with the conditions of the Environmental Permit.

4.11 Pest Control

Due to the strict operational procedures employed at the site and the nature of the waste type, pests are not envisaged as being a nuisance. However, should pests become a nuisance at the site or the surrounding environment (and attributed to operations at the site) a pest control contractor will be brought in immediately to alleviate the problem.

4.12 Litter

Due to the nature of the waste to be accepted at the WTF it is considered unlikely that litter will be generated at the WTF.

4.13 Mud on Road

The WTF area will consist of stone surfacing which will be maintained free of potholes to prevent the pooling of surface water. Soils stored on the biopiles will not overhang the 'pad', and so vehicles (other than mobile plant used in the operations) should not come into contact with significant quantities of soil which may then leave the WTF on vehicles.

Should mud on road be attributable to operations at the site Biffa will take remedial action (road sweeping, washing of vehicles on site) as necessary in accordance with the procedures set out in the EMS and the conditions of the Environmental Permit.

4.14 Monitoring and Reporting of Waste Emissions

Waste management will be the responsibility of the Site Manager and will be undertaken as detailed in Biffa's EMS. On-going monitoring will be addressed as part of a waste minimisation audit and implemented through the EMS.

4.14.1 Monitoring of Process Variables

Monitoring of conditions within the soil biopiles will be undertaken as described in the WTF Operations Manual section, Waste Sampling and Testing.

Monitoring of the biofilter will be undertaken as detailed in Section 4.1.3 & 4.1.4 of this report. Sampling will be carried out by competent personnel trained in the use of sampling tools and methods appropriate for the waste being handled. Any samples will be shipped in suitable containers, to laboratories for analysis.

Laboratory analysis and testing will be carried out by qualified personnel in accordance with methods and protocols appropriate for determining the nature and concentrations of contamination present. A typical sampling regime includes:

- one (1) sample / 500m³ taken approximately every 4-6 weeks:
 - composite sampling from top, middle and bottom of Biopile

The typical parameters analysed will be (including but not exhaustive):

- Pollutants;
- Temperature; and
- pH.

Treatment of the contaminated soils (the remediation process) will be deemed to be complete when contaminant concentrations are below the target criteria to a confidence level of 95%.

4.15 Energy Efficiency

Whilst Biffa has certain obligations in relation to the Climate Change Levy Agreement (CCA) for example, fuel emissions and methane emissions, Biffa is not a participant in a CCA.

4.15.1 Basic Energy Requirements (1) – Energy Use

The WTF will be a minimal user of energy.

An estimate of the typical breakdown of primary energy usage by fuel type is shown below in Table 4-3. The main energy use will be fuel for the mobile plant. Electricity will be used for fans, pumps, lighting and general works activities. The WTF will not be connected to the mains gas supply.

Primary energy uses will be (in order):

- mobile plant to construct and handle biopiles (daytime intermittent) – diesel;
- blower fan(s) (continuous) – electrical;
- pump(s) (intermittent as required) – electrical; and
- lighting and welfare (intermittent as required) – electrical & LPG (heaters).

**Table 4-3
Delivered and Primary Energy Consumption**

Energy Source	Energy consumption (estimated)		
	As Delivered, MWh	At Primary Source, MWh	% of total
Electricity	0.6	1.56	0

Energy Source	Energy consumption (estimated)		
Gas	0	0	0
LPG	60	60	16
Coal	0	0	0
Fuel oil/gas oil/diesel	300	300	82
Total	360.6	361.56	100

4.15.2 Basic Energy Requirements - Energy Efficiency

Energy will be in line with the EMS and reviewed as part of Biffa's energy procedure at least annually as one of the significant environmental aspects of operation. The purpose of the procedure is to reduce energy usage within the Biffa group.

Energy specification and consumption of each unit operation for the treatment equipment will be described within the WTF Operations Manual.

Periodic energy audits and training for key staff will take place. Areas where new technology provides an opportunity for energy reduction will be identified and incorporated into the EMS environmental management plan.

The installation and equipment will be operated and maintained to minimise the use and loss of energy. Basic energy control measures will be in place:-

- process equipment when not in use will be turned off;
- operating housekeeping and maintenance measures will be in place for:
 - operation of motors and drives;
 - lubrication to avoid friction losses;
 - other maintenance relevant to the WTF; and
 - mobile plant in efficient running condition.
- where new equipment is purchased consideration will be given to energy efficiency; and
- doors and windows will be kept closed when heating or air conditioning is on and thermostats will be kept as low as possible; consistent with comfort levels.

4.15.3 Further Energy Efficiency Requirements

The energy plan will be reviewed annually.

As part of this plan and with reference to the WTF, consideration will be given to further savings by the selection of the preferred source of energy (e.g. 'green' electricity), the fuel type, e.g. LPG or diesel and fuel efficiency measures.

5.0 CLOSURE

This report has been prepared by SLR Consulting Limited with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the client.

This report is for the exclusive use of Biffa Waste Services Limited; no warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR. SLR disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of the work.

Appendix BATOT1

407.00034.00461/WAP This is a Controlled Document Issue 1

Waste Acceptance Procedure Waste Treatment Facility (WTF).

Document Status

Document No	: TBC	Issue No.	: 1
Author	: J. Stringer / S. Rutledge	Approved By	: G Peacock
Issue Date	: 14/11/2013	Approval Date	: 14/11/2013

THE ONLY VERSION OF THIS DOCUMENT GUARANTEED AS CURRENT IS THAT ON SCREEN WITHIN BIFFANET OR THAT ISSUED BY THE BUSINESS SYSTEMS DEPARTMENT UNDER MANUAL DOCUMENT CONTROL.

Reason for Issue or Re-Issue:

- To satisfy the requirements of the PPC permit.

Purpose & Scope:

Biffa / Celtic EnGlobe waste treatment facilities are limited to accepting wastes which can be treated to a standard that is acceptable for disposal in the landfill void or for use as restoration material. Candidate wastes for treatment must be assessed prior to their acceptance to ensure their suitability.

Prior to acceptance at a non-hazardous landfill site the treatment outputs must be assessed and pre-characterised so that its acceptance will not:

- Result in unacceptable emissions to groundwater, surface water or the surrounding environment;
- Jeopardise environment protection systems (such as liners, leachate and gas collection and treatment systems) at the landfill;
- Put at risk waste stabilisation processes (such as degradation or wash out) within the landfill; or
- Endanger human health

References and Forms:

- PPC Permit
- PPC Regulations 2000
- Landfill Regulations (England and Wales) 2002

Definitions & Abbreviations

- ECA – Environmental Control Advisor
- WTFWTF – Waste Treatment Facility

Waste Acceptance Procedure WTF

Who What When

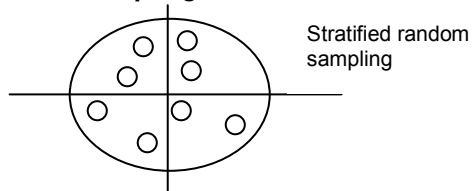
1.0	Waste enquiry receipt, data collection and classification.	
ECA/Site Management	Upon receipt of a new permit or permit variation, all existing wastes should be evaluated in line with the procedures below.	Upon issue of new permit
Sales Team	The initial stage of the WTF waste acceptance procedure commences via an enquiry from a potential customer. Information is received via a number of methods, the most common being e-mail, fax, telephone and post. These enquiries are generated in response to visits from the Sales Team, previous trading history, referrals from present customers and referrals from the Environment Agency.	Ongoing
Sales/ECA	The Environmental Control Advisor (ECA) is informed of the nature of the waste and shall carry out a full technical assessment. As a first step toward this aim, the following details shall be gathered: • Source and origin of the waste; • Discussion to be held between the Biffa Sales team and Celtic EnGlobe to establish suitability on the proposed material prior to undertaking the full technical assessment. • Information on the process producing the waste • Appearance of the waste e.g. smell, colour and physical form; • Code in accordance with the European Waste Catalogue or List of Wastes Regulations; • Data on the composition of the waste and the levels of contamination; • Any additional information that may require special precautions to be taken at the WTF.	Ongoing
ECA	Waste types acceptable at the WTF are limited to those detailed in Appendix C3_1 of the environmental permit variation application, December 2013. If the candidate waste is not classified in one of the categories above, it shall be rejected. Any asbestos containing wastes will be rejected. Wastes containing free tars or free oils and muddy materials will be rejected. Wastes only accepted if able to stand their own weight, not spread and have no free water will be rejected.	Ongoing
ECA	As part of the classification process described above, the waste will be assessed to determine whether it is hazardous or non-hazardous in accordance with Environment Agency guidance "WM3" and the associated "How to determine if waste oils and wastes which contain oils are hazardous".	Ongoing
ECA	The ECA will gather all of the above information and pass to the site staff at the Celtic EnGlobe process.	Ongoing

2.0	Assessment of Treatment Suitability	
Celtic EnGlobe	The waste shall be assessed to ensure that it comprises treatable substances. Such substances predominantly comprise of the following, but are not limited to: • A range of petroleum hydrocarbons (petrol, heating fuel, diesel, used oils, crude oil etc) • Polycyclic Aromatic Hydrocarbons (PAHs) • Pentochlorophenols (PCP) • Creosote • Phenols • Volatile Organic Compounds (VOCs) and Solvents If the waste contains no treatable materials, or materials which are likely to render the waste unacceptable at the landfill post-treatment, the waste will be rejected.	Ongoing
Celtic EnGlobe	Celtic EnGlobe will forward confirmation to the ECA that the waste is suitable for treatment together with a statement of any limitations on physical and chemical characteristics (particle size, pH, moisture content etc) which they wish to impose. Celtic EnGlobe will at this point advise of the acceptable frequency of incoming loads for treatment. They will also advise with regard to any relevant, additional parameters to be tested for compliance testing and output testing.	Ongoing

3.0	Waste stream Approval / Rejection	
Sales/ECA	A Customer Enquiry Form is generated on the computer network at this stage.	Ongoing
Sales/ECA/ Site Manager	All details gathered above will be entered into the waste assessment screens associated with the enquiry. Including the frequency of sampling. Once the assessment is completed and the waste approved for acceptance at the WTF, the enquiry is allocated a specific Approval Number and the Customer Enquiry form becomes the Technical Approval. If the waste is rejected the reasons for rejection are keyed onto the Customer Enquiry Form so that a letter of rejection may be generated informing the customer of our decision.	Ongoing
ECA	Following the allocation of an Approval Number to a specific waste all the technical data obtained during and following the appraisal, will be forwarded to the Site Manager and a copy forwarded to the WTF Manager.	Ongoing
Sales / Site Manager	A contract detail line for the waste will created on the Central System and a quotation created and sent to the customer. The contract detail line will require all vehicles to “tare off” following delivery of the waste.	Ongoing

4.0	Waste acceptance and booking in.	
WTF Manager	No waste will be accepted unless it has been pre-booked for disposal with the WTF manager at least 24 hours in advance. Upon booking in, the following information will be required: • Date of proposed deliveries to site • Confirmation of source and approval number (provided on the quotation paperwork) The Sales Team will confer with the Site Manager in relation to the number of the expected loads to the site weighbridge prior to the site opening each day.	Ongoing
Weighbridge Operator	The weighbridge operator will weigh all incoming loads and assign them to the appropriate contract detail line. If the waste is hazardous the system will demand the entry of the consignment note details. These details should be entered at this point but the paperwork should remain with the driver for completion & signing by Celtic EnGlobe staff. The driver should be directed to the WTF making them aware of the need to tare off after deposit of the waste.	Ongoing
Celtic EnGlobe	Celtic EnGlobe staff will inspect any associated hazardous waste consignment notes and sign them prior to deposit of any load. The paperwork will be returned to the delivery driver with an explanation that it must be handed in at the weighbridge. They will direct the deposit of the waste into the suitable treatment lot. During unloading, a visual inspection will be carried out. If the waste appears to be different to that specified in the approval, the material will be rejected.	Ongoing
Weighbridge Operator	When the driver returns to tare off the weighbridge operator will collect the signed hazardous waste consignment note (where relevant) and file it securely. The weighbridge ticket will be completed and appropriately signed.	Ongoing

5.0	WTF Reception - Compliance sampling and testing	5.0																
	All incoming wastes for treatment at the biopile process will be subjected to thorough pre characterisation as described above.	Ongoing																
Celtic EnGlobe	In addition to this, further testing will be performed to ensure that the materials accepted are consistent with the analysis and description supplied at the pre-characterisation stage. This is known as Reception and Compliance testing.	Ongoing																
Celtic EnGlobe	WTF Reception and Compliance Sampling methodology: Scale; A sample is to be collected from all consignments of soil delivered to the WTF. As the soil volume and number of lorry movements associated with each clients contract can vary the sampling of incoming soils is adjusted to ensure that representative data is obtained. The table below shows how the number of recovered samples relates to the volume of soil delivered under each contract. Table 1 – Reception – Sampling Frequency <table><tr><th>Volume of soil (m³)</th><th>No. of samples recovered for analysis</th></tr><tr><td>< 30</td><td>1</td></tr><tr><td>30-60</td><td>2</td></tr><tr><td>60-100</td><td>3</td></tr><tr><td>100-200</td><td>4</td></tr><tr><td>200 – 1,000</td><td>4 + 1 for every 100m³ after 200m³</td></tr><tr><td>1,000 - 2,000</td><td>12 + 1 for every 250m³ after 1000m³</td></tr><tr><td>2,000 +</td><td>16 + 1 for every 500m³ after 2000m³</td></tr></table> Sampling Population: The sampling exercise is intended to represent the volume of material accepted from each contaminated land site. Its purpose is merely to ensure that the material accepted is that which was described during the pre-characterisation stage and that the material being accepted does not significantly differ either qualitatively or quantitatively in terms of its chemical composition. Specify detailed sampling location: Samples to be collected immediately from the discharged waste upon reception at the WTF as per the Celtic EnGlobe Sampling Matrix. Specify date and time(s) of sampling; Each consignment of soil delivered to the WTF will be sampled once it has been deposited in the WTF & prior to being mixed with any existing material. The number of samples taken is dependent on the scale of the delivery (see Table 1 above).	Volume of soil (m³)	No. of samples recovered for analysis	< 30	1	30-60	2	60-100	3	100-200	4	200 – 1,000	4 + 1 for every 100m³ after 200m³	1,000 - 2,000	12 + 1 for every 250m³ after 1000m³	2,000 +	16 + 1 for every 500m³ after 2000m³	Ongoing
Volume of soil (m³)	No. of samples recovered for analysis																	
< 30	1																	
30-60	2																	
60-100	3																	
100-200	4																	
200 – 1,000	4 + 1 for every 100m³ after 200m³																	
1,000 - 2,000	12 + 1 for every 250m³ after 1000m³																	
2,000 +	16 + 1 for every 500m³ after 2000m³																	

	Specify persons to be present: The sampling of soils during the reception process is conducted by the WTF Manager or Celtic EnGlobe Technician. Identify equipment: Stainless Steel trowel, Sample containers (with air tight lids) and a permanent marker pen. Specify no. of samples to be collected: See Table 1 and associated notes above. Specify number of increments per sample: 8 (eight) Specify increment size/sample size: Approximately 200g removed with a trowel. Description of Sampling event:  The pile of discharged soil is split into quarters (visually) and 2 (two) incremental samples are taken from random locations within each quarter. These incremental samples are placed in plastic containers with air tight lids for subsequent mixing and sub-sampling. Detail Requirements for on site determinations: No onsite testing is undertaken on these samples Identify sample-coding methodology: Each sample should be labeled (written in indelible ink) twice. One label on the lid of the container and once on the outer body of the container both should contain identical information including: Contract and Line Number, Approval Number, Time of sample collection, date, signature of sampler. SUB-SAMPLING No sub sampling is undertaken with soils recovered at the point of reception. Each sample is considered to fairly represent the quality of the material delivered by the client. The number of samples submitted for external analysis (by an accredited laboratory) from each running contract is outlined in Table 1 and the associated notes above. PACKAGING, PRESERVATION, STORAGE AND TRANSPORT REQUIREMENTS Packaging: Samples are packaged into (1 litre) plastic containers, with airtight lids, as supplied by the laboratory. Each container is labelled using the sample coding specified above. These are packed into plastic cool boxes supplied by the laboratory along with a copy of the Chain of Custody documentation, specifying the analysis to be completed. Preservation: The addition of preservatives is not required. Storage: All soils awaiting analysis are stored at <4°C in a fridge up to the point of transport to the laboratory Transport: The samples should be collected and delivered to the laboratory using a propriety courier with proof of collection and delivery confirmed by time, signed and dated receipts.	
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	WTF Input Compliance Testing: The samples collected above should be submitted for the following analytical testing: - Metals (As, B, Cd, Cr, Cu, Pb, Hg, Ni, Se and Zn) - pH - Benzene, Toluene, Ethyl benzene and Xylene - Volatile Petroleum Hydrocarbons (C5-C10, C10-C12) - Extractable Petroleum Hydrocarbons (C10-C12, C12-C16, C16-C21, C21-C36, C36-C40, C10-C40)* - USEPA priority 16 PAHs⁺ * At the time of writing, BSRL are in the process of changing the carbon bands to reflect recent changes in hazardous waste assessment practises (A guide to Hazardous Waste Regulations HWR08 Version 3.1 – June 2007) ⁺ At the time of writing, BSRL are to revise the PAH compounds assessed within in coming soils. This is based on 7 compounds from the USEPA priority 16 plus the introduction introduce one additional PAH (Benzo (j) fluoranthene) to reflect recent changes in hazardous waste assessment practises. (A guide to Hazardous Waste Regulations HWR08 Version 3.1 – June 2007) Any additional parameters suggested by Celtic EnGlobe at stage 2.0.	Ongoing			
	Any material found to be inconsistent with the pre-characterisation description will be removed, at the waste producers cost, to an appropriately licensed disposal point.	Ongoing			
	Following treatment, further analysis of the treatable organic fraction will be performed to ensure the material's subsequent suitability for use as restoration material or as daily cover on site.	Ongoing			
	WTF Output Sampling methodology: <table border="1"><tr><td> Scale: A sample is to be collected from each batch (Biopile) of processed soils following treatment to confirm the level of decontamination. </td></tr><tr><td> Sampling Population: The sampling exercise is intended to represent the volume of material arising from each batch of soil that has been through the process. </td></tr><tr><td> Note - The size of a typical process batch (referred to as a Biopile) can vary from as little as 800 tonnes to over 4000 tonnes. Soils that are formed into treatment batches at the start of the treatment (Biopiles) contain soils </td></tr></table>	Scale: A sample is to be collected from each batch (Biopile) of processed soils following treatment to confirm the level of decontamination.	Sampling Population: The sampling exercise is intended to represent the volume of material arising from each batch of soil that has been through the process.	Note - The size of a typical process batch (referred to as a Biopile) can vary from as little as 800 tonnes to over 4000 tonnes. Soils that are formed into treatment batches at the start of the treatment (Biopiles) contain soils	Ongoing
Scale: A sample is to be collected from each batch (Biopile) of processed soils following treatment to confirm the level of decontamination.					
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Note - The size of a typical process batch (referred to as a Biopile) can vary from as little as 800 tonnes to over 4000 tonnes. Soils that are formed into treatment batches at the start of the treatment (Biopiles) contain soils					

	with similar, or compatible, chemical and physical properties. Once treatment begins sampling is based on stratified random sampling at a frequency of one composite sample for every 500 m³ in process. Specify detailed sampling location: Samples to be collected from Lots on the basis of a stratified random sampling plan. Specify date and time(s) of sampling: Each batch will be sampled once it is considered to have completed the treatment process to the required standard. The end point of each treatment is tracked through the collection and analysis of "in-process" soil samples over a period of typically 8 to 16 weeks. This work is conducted by Celtic EnGlobe in conjunction with an accredited analytical laboratory. Specify persons to be present: The sampling of soils during the reception process is conducted by the WTF Manager or a Celtic EnGlobe technician. Identify equipment: Stainless Steel trowel, Sample containers (with air tight lids) and a permanent marker pen. Specify no. of samples to be collected: 1 (one) composite sample from each 500m³ of soil within the batch (Biopile). Specify number of increments per sample: 8 (eight) Specify increment size/sample size: Approx 200g removed with a hand held auger at depths of between 0.5m and 1.5m below the surface. Description of Sampling event: The upper surface of the biopile is visually divided into 3 (three) meter wide strips. This equates to the area influenced by a single aeration pipe and contains approximately 400 tonnes of soil. This area is then visually divided once more into 4 (four) equal zones and 2 (two) incremental samples are taken from random locations within each quarter. These incremental samples are placed in a clean 25 litre plastic tub for mixing and sub-sampling. Detail Requirements for on site determinations: No onsite testing is undertaken on these samples SUB-SAMPLING Detailed procedure: Recovered soils from a single batch sampling process are placed in a clean 25 litre plastic container and mixed using a stainless steel hand trowel, for a minimum of two minutes, to generate a uniform sample. Each mixing operation is limited to a maximum of 2kg of soil at any one time. A 1 (one) kg sub sample from each mixing operation is transferred as a the sub-sample to a sample container (1 litre plastic container with air tight lid) One sub sample is submitted for chemical analysis for every 500m³ of soil held within the treated batch (Biopile) PACKAGING, PRESERVATION, STORAGE AND TRANSPORT REQUIREMENTS	
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	Identify sample-coding methodology: Each sample should be labelled (written in indelible ink) twice. Once on the lid of the container and once on the outer body of the container. Both should contain identical information including: Batch identification Number, Time of sample collection, date, signature of sampler. Sample numbers have the following structure: WTF -1-X-Y Where X corresponds to batch number and Y corresponds to the nth sample number taken. E.g. – if batch 14 underwent three separate sampling events, the samples would be numbered: WTF -1-14-1 WTF -1-14-2, and WTF -1-14-3 Packaging: Samples are packaged into (1 litre) plastic containers, with air tight lids, as supplied by the laboratory. Each container is labelled using the sample coding specified below. These are packed into plastic cool boxes supplied by the laboratory along with a copy of the Chain of Custody documentation, specifying the analysis to be completed. Preservation: The addition of preservatives is not required. All soils awaiting analysis are stored at <4°C in a fridge up to the point of transport to the laboratory. Storage: Store sample containers in a cool darkened environment (preferably a cold store) until collected. Transport: The samples should be collected and delivered to the laboratory using a propriety courier with proof of collection and delivery confirmed by time, signed and dated receipts.	
	WTF Output Testing: The samples collected above should be submitted for the analytical testing as detailed in WTF Input Compliance Testing.	Ongoing

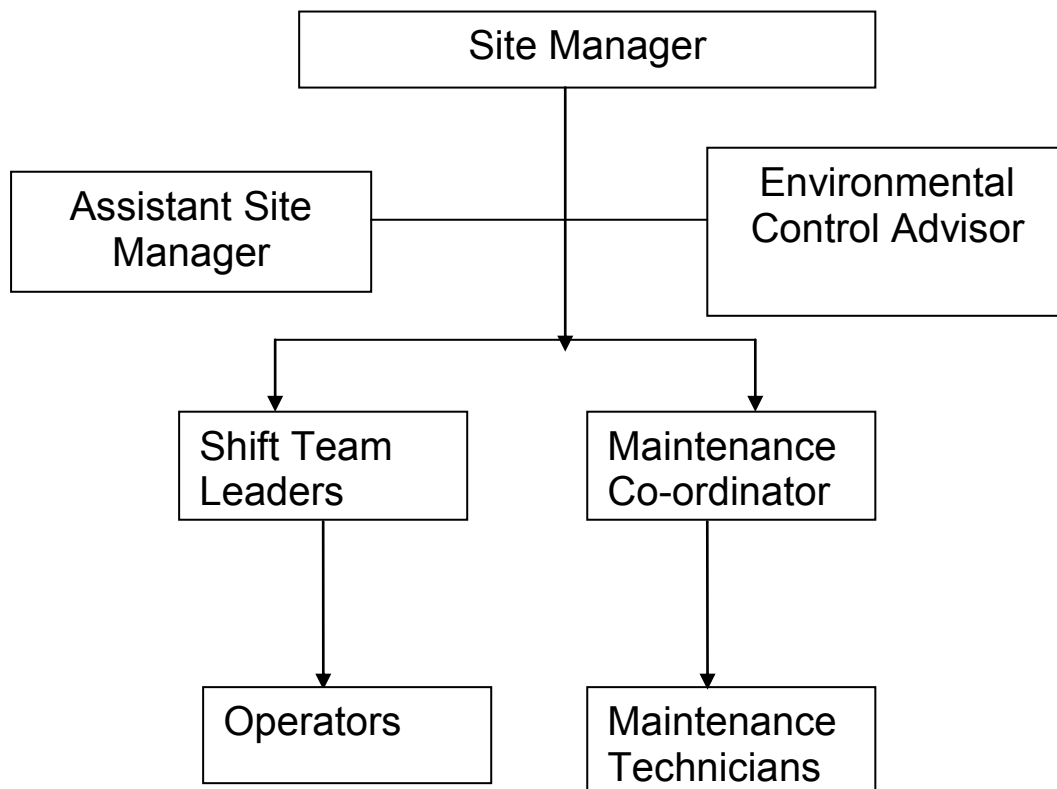
6.0	Acceptance of treated material at the landfill.	
ECA	Results of WTF output testing will be forwarded to the landfill ECA for review. All materials accepted from the WTF into the landfill must be subjected to a full technical assessment and approval in accordance with existing landfill procedures.	Ongoing
ECA	Material leaving the WTF following treatment will be coded under the list of Wastes as either: 19 13 02 An assessment will therefore be required to determine whether the material is hazardous or non-hazardous in accordance with Environment Agency guidance "WM3" using the Approved Supply List (ASL) as the reference source for substance classification. The biodegraded petroleum hydrocarbons present will have their classifications assessed individually rather than being classified on the basis of the complex mixtures (e.g. oil or petrol) from which they originally derived. 19 13 01* Any materials found to be hazardous will not be accepted at the landfill and will remain at the WTF to undergo further bioremediation or off site disposal to a suitably permitted facility.	Ongoing
ECA	Materials which are shown to be non-hazardous and which are shown to display levels of contamination below the Inter-departmental Committee for the Redevelopment of Contaminated Land (ICRCL) trigger thresholds for "Parks Playing fields and Open Spaces" (set out in ICRCL 59/83) may be used for restoration purposes Once CLEA based soil guideline values are available for "Parks Playing fields and Open Spaces" these will be used instead of the ICRCL thresholds. Materials which are shown to be non-hazardous which contain levels of contamination in excess of the trigger thresholds for "Parks Playing fields and Open Spaces" but do not exceed any CLEA thresholds for Industrial / Commercial end use, will be used as daily or intermediate cover on site Materials which are shown to be non-hazardous but which contain levels of contamination in excess of the trigger thresholds for "Parks Playing field and Open Spaces" and which are malodorous or which exceed any CLEA thresholds for Industrial / Commercial end use will be buried. It is anticipated that a site specific risk assessment will be undertaken within 6 months of the operation of the WTF to more clearly define the approval of restoration soil quality.	Ongoing

Appendix BATOT2

APPENDIX BATOT2

**WASTE TREATMENT FACILITY /
GREEN WASTE COMPOSTING FACILITY**

MANAGEMENT STRUCTURE



Appendix BATOT3

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INTRODUCTION

- 5.1 This chapter comprises an air quality assessment considering the potential for the proposed Multipurpose Waste Treatment and Remediation Pad (MWTRP) at the Trecatti landfill site to impact upon air quality in the vicinity of the application site.
- 5.2 This air quality assessment describes the scope, relevant legislation, assessment methodology and the baseline conditions currently existing at the application site and its surroundings. It then considers any potentially significant environmental effects that the proposed facility would have on this baseline environment; the mitigation measures required to prevent, reduce or offset any significant adverse effects; and the likely residual impacts after these measures have been employed.
- 5.3 As has been set out in Chapter 3 above, the proposed MWTRP would essentially comprise a Soils Treatment Facility (STF) and an Open Windrow Composting (OWC) facility. This will also require a variation to the Environmental Permit for the Trecatti landfill site which is regulated by Natural Resource Wales (NRW). As part of this Permit variation process, assessments of the risk associated with fugitive releases of dust, bioaerosols, Volatile Organic Compounds (VOCs) and odour will be required.
- 5.4 These risk assessments will be reviewed by NRW to ensure that the MWTRP operations will not cause significant pollution to the environment (including offence to human senses) or harm human health prior to issuing a Permit Variation. This chapter is therefore based on the presumption (as per the requirements of the Planning Policy Wales (PPW)) that the pollution control regime operates effectively (as summarised in paragraph 5.46).

SCOPE OF THE ASSESSMENT

Identification of Potential Impacts

Odour, Bioaerosols, VOC's and Dust

- 5.5 Given the handling of green waste, waste soils and the biologically active composting and bioremediation processes there is a potential risk for the generation of odour, bioaerosols, VOCs and dust. There is also the risk of generation of dust during construction activities.
- 5.6 The actual magnitude and nature of the generation and release of odour, bioaerosols, VOCs and dust from the process is dependent on the nature of the incoming wastes (green and soils) and the ongoing application of effective control measures. These control measures, which would include limitations on the type of wastes to be accepted at the facility; monitoring (of moisture, temperature and oxygen levels) and turning of windrows; negative aeration and biofiltration of biopiles and covering of biopiles; alongside monitoring regimes to demonstrate their effectiveness and management

procedures will be defined in the Odour Management Plan (OMP) and Environmental Management Systems for the MWTRP.

- 5.7 Adherence to the operational procedures defined in these documents will be a condition of the Environmental Permit for the site, compliance with which will be inspected and audited by NRW. Non-compliance with a condition of an Environmental Permit is an offence and can lead to enforcement action being taken by NRW.
- 5.8 It is therefore assumed, in accordance with the PPW that the pollution control regime will operate effectively (as summarised in paragraph 5.46) to ensure that the generation and release of odour, bioaerosols, VOCs and dust are mitigated to an appropriate extent to prevent unacceptable offsite impacts.

Vehicle Exhaust Emissions

- 5.9 Vehicle exhaust emissions resulting from traffic generated by the operation of the proposed MWTRP has the potential to affect local pollution levels, both within and surrounding the application site.
- 5.10 The pollutants of greatest concern in respect of the impact on public health, which are found in the exhaust emissions of road traffic and plant, are NO₂, PM₁₀, CO and benzene. Of these pollutants, NO₂ and PM₁₀ are present in the highest concentrations relative to air quality standards; where Air Quality Standard (AQS) objectives for these are met it is found that the AQS Objectives for the other pollutants are also met.

Required Scope of Assessment

- 5.11 The following potential releases to atmosphere have been considered:
- construction dust;
 - combustion pollutants from traffic exhausts; and
 - potential releases of odour, bioaerosols, VOCs and dust from operations.
- 5.12 The baseline scenario, against which any changes to impacts on local air quality would be assessed, includes the existing waste disposal operations undertaken at the Trecatti landfill site.

RELEVANT LEGISLATION, STANDARDS AND GUIDANCE

The Environment Act

- 5.13 The Environment Act 1995 requires the Welsh Government (alongside DEFRA) to produce a national air quality strategy containing standards, objectives and measures for improving ambient air quality and to keep these policies under review. In addition it sets out the responsibilities of local authorities on air quality management.

Air Quality Strategy

- 5.14 The 'Air Quality Strategy for England, Scotland, Wales and Northern Ireland' (AQS) 2007, contains air quality objectives based on the protection of both human health and vegetation (ecosystems). The Air Quality Strategy sets out a framework for reducing hazards to health from air pollution and ensuring that international commitments are met in the UK.
- 5.15 These objectives have been set taking into account the AQS defined in the Air Quality Standards Regulations (Wales) 2010.
- 5.16 The AQS actually includes more exacting objectives for some pollutants than required by EC legislation. This assessment refers only to the UK air quality standards, as compliance with these standards will ensure that the less demanding European Air Quality limit values also being met.
- 5.17 A summary of the current air quality standards for relevant pollutants as detailed in the AQS 2007 is provided in Table 5-1 below.

Table 5-1
UK AQS Air Quality Standards

Pollutant	Concentration	Measured as
Nitrogen dioxide (NO ₂)	200 µg/m ³	1 hour mean (18 exceedences per year 99.79%ile of hourly averages)
	40 µg/m ³	Annual mean
Particulate matter PM ₁₀ (gravimetric)	40 µg/m ³	Annual mean
	50 µg/m ³	24 hour mean (35 exceedences per year ; 90.41%ile of 24-hr averages)

Local Air Quality Management (LAQM)

- 5.18 Part IV of the Environment Act 1995 requires local authorities to review and assess existing and predict future air quality in their areas as part of a rolling 'review and assessment' process. In areas where exceedence of one or more of the air quality objectives are predicted the local authority must designate an Air Quality Management Area (AQMA). Once designated; the local authority must then draw up an Air Quality Action Plan (AQAP) setting out the measures it intends to take in pursuit of achieving the air quality objectives in the AQMA.
- 5.19 The core guidance documents for use by persons involved in Local Air Quality Management (LAQM), or considering the impacts of a development with the potential to impact on air quality as covered by LAQM, are LAQM TG (09)¹ and LAQM PG (09)².

¹ DEFRA, Local Air Quality Management Technical Guidance LAQM.TG(09), (February 2009).

² DEFRA, Local Air Quality Management Policy Guidance, LAQM.PG(09) (February 2009).

Environmental Permitting Regulations

- 5.20 The STF and OWC operations would be authorised under the EP Regulations by the NRW and would be regulated by its Environmental Permit.
- 5.21 Guidance Notes produced by DEFRA provide a framework for regulation of installations and additional Technical Guidance Notes produced by NRW are used to provide the basis for permit conditions as regards releases to air and mitigation measures.
- 5.22 Of particular relevance to the assessment of air quality impacts is Horizontal Guidance Note H1 - *Environmental risk assessment for permits*³. The purpose of this guidance note is to assist operators to assess risks to the environment and human health when applying for a permit under the EP Regulations. Annex F⁴ of the H1 Guidance Note is specifically concerned with emissions to air and the process of carrying out a bespoke risk assessment. Included in the H1 Guidance Note are Environmental Assessment Levels (EALs) for each pollutant in air against which impact of potentially significant releases may be assessed.

Standards and Guidance Relating to Odour

- 5.23 Currently, in the UK there are no statutory numerical standards or levels against which to assess odour nuisance, however relevant guidance has been published as discussed below.

NRW - H4 Odour Management Guidance

- 5.24 Guidance on odour management and assessment under the EP Regime has been published by the EA and adopted by NRW⁵. This guidance focuses on the minimisation of odour releases at source (where possible) through effective site management (to be demonstrated through ongoing process monitoring) and requires a detailed OMP for all sites where odour is likely to have an offsite impact.
- 5.25 The NRW's H4 guidance also provides a framework for assessing the odour risk presented by a site which follows the normal source–pathway–receptor approach. This approach is used for identifying mitigation requirements and residual environmental impacts, therefore these general principals have been applied in this assessment.

Institute of Air Quality Management (IAQM) Odour Guidance

- 5.26 The Institute of Air Quality Management (IAQM) is the professional body for air quality professionals and aim to be the authoritative voice for air quality by maintaining, enhancing and promoting the highest standards of working practice in the field.

³ Environment Agency, Horizontal Guidance Note H1 - Environmental risk assessment for permits v2.0 (April 2010).

⁴ Environment Agency, Horizontal Guidance Note H1 - Annex (f) Air Emissions. v2.2 (December 2011).

⁵ Environment Agency H4 Odour Management, March 2011.

- 5.27 The IAQM has published a guidance document⁶ specifically for assessing the impacts of odour for the purposes of planning applications as summarised in Appendix 5/3.

Standards and Guidance Relating to Bioaerosols

- 5.28 The Environment Agency (England) have undertaken extensive research regarding the potential health effects of bioaerosols from composting sites and have published a position statement⁷ which NRW have adopted.
- 5.29 This identifies acceptable levels for bioaerosols at sensitive receptor locations and sets limits (in terms of proximity to receptors, tonnages and operations) that can be carried out at composting facilities to ensure these levels are met.
- 5.30 Specifically for new composting facilities where receptors are located within 250m of sensitive receptors, a Site Specific Bioaerosol Risk Assessment (SSBRA) will be required and either quantities of waste (handled at any one time) must be less than 500 tonnes or any uncontrolled releases of high levels of bioaerosols (i.e. turning) must be subject to mitigation (i.e. negative aeration or enclosure).

Standards and Guidance Relating to Dust

- 5.31 For the purposes of environmental assessment, dust is generally categorised into two size classifications; 'suspended dust' with diameters below 10µm (PM₁₀), and 'deposited dust' with diameters between 10µm and 75µm. The impacts associated with PM₁₀ are related to potential health impacts, thus air quality standards exist for this fraction, whilst deposited dust is related to potential nuisance effects.
- 5.32 Research indicates that particles of >30µm which make up the greatest proportion of dust emitted from minerals sites will deposit within 100m, and particles of <30µm but >10µm may travel 250 to 500m⁸. To allow for this effect of distance, buffer zones are often defined by mineral and waste planning authorities around potentially dusty activities to ensure that sufficient protection is provided. The 1995 DoE Guidance⁹ recommended a stand-off distance of 100-200m from significant dust sources (excluding short-term sources), although it is recognised that these distances can be reduced if effective mitigation measures are identified and implemented.
- 5.33 There are no statutory limit values for dust deposition above which 'nuisance' is deemed to exist – 'nuisance' is a subjective concept and its perception is

⁶ IAQM Guidance on the assessment of odour for planning. Institute of Air Quality Management, London. www.iaqm.co.uk/text/guidance/odour-guidance-2014

⁷ Position Statement 031: Composting and potential health effects from bioaerosols: our interim guidance for permit applications. Environment Agency. Version 1.0, 1st November 2010.

⁸ Arup, The Environmental Effects of Dust at Surface Mineral Workings. (Report to the DETR 1995).

⁹ Based upon research document - DETR, The Environmental Effects of Dust from Surface Mineral Workings (Dec 1995)

highly dependent upon the existing conditions and the change which has occurred.

- 5.34 Guidance for control of dust from construction has been produced by the Institute for Air Quality Management (IAQM)¹⁰. The IAQM guidance document provides site evaluation guidelines based upon the size of site, proximity to receptors, nature of activities and sensitivity of receptors and then prescribes a range of best practice mitigation measures to be applied at an application site as summarised in Appendix 5/1.

Traffic Exhaust Emissions - Regulation and Guidance

- 5.35 The emission of combustion pollutants from vehicle exhausts is regulated by European Directives with the phasing in of more stringent standards for new vehicles over the past 20 years for a range of pollutants including NO_x, CO, unburnt hydrocarbons and Particulate Matter. The actual emission limits vary depending on vehicle size (i.e. car, LDV, HDV) and fuel type (i.e. diesel or petrol).
- 5.36 The latest standard, 'Euro 6', applies to new type approvals from September 2014 and all new cars from September 2015 and requires significantly lower NO_x limits for diesel vehicles.
- 5.37 Similarly for HGV's, Euro VI is the current standard and also requires significant reductions in NO_x (and PM) emissions from the previous Euro V standard.
- 5.38 NRMM is defined as any mobile machine, item of transportable industrial equipment, or vehicle (with or without bodywork) that is:
- not intended for carrying passengers or goods on the road;
 - installed with a combustion engine - either an internal spark ignition (SI) petrol engine, or a compression ignition diesel engine.
- 5.39 In the UK, the legislation governing emissions produced by engines fitted in NRMM is the Non-Road Mobile Machinery (Emission of Gaseous and Particulate Pollutants) Regulations 1999, as amended which sets emission standards for carbon monoxide (CO), hydrocarbons, oxides of nitrogen (NO_x) and particulate matter (for diesel engines only).
- 5.40 The UK Design Manual for Roads and Bridges (DMRB) methodology (2007)¹¹ facilitates the prediction of pollutant concentrations near to roads, as a result of vehicle emissions. Predicted concentrations at receptors are made using an empirical relationship using different emission factors for different vehicle types. These emission factors change from year to year as the technology in the vehicle fleet improves.

¹⁰ Institute of Air Quality Management, Guidance on the assessment dust from demolition and construction. February 2014.

¹¹ Design Manual for Roads and Bridges Vol. 11 Environmental Assessment (Consolidated Edition), Section 3, Part 1 Air Quality (May 2007, with revisions 2009)

- 5.41 Owing to improvements in vehicle technology, the DMRB assumes that emissions per vehicle kilometre will fall with time. The vehicle improvements include progressive refinements in engine performance, the introduction of three-way catalytic converters and particle traps for diesel vehicles. As a consequence of these reductions in emission rates, predicted future pollutant levels can be lower than present day levels close to roads where traffic flows do not change significantly
- 5.42 The IAQM and EPUK have together published guidance¹² to ensure that air quality is properly accounted for in the development control process. It clarifies when an air quality assessment should be undertaken, what it should contain, and how impacts should be described and assessed. Importantly, it sets out a recommended approach to assess the significance of impacts as summarised in Appendix 5/2.
- 5.43 The guidance also states that best-practice design and operational measures should be recommended and applied to all developments that require an Air Quality Assessment, to reduce emissions and human exposure to poor air quality. Additionally, where appropriate, further measures are also suggested to off-set emissions, depending on the nature and scale of the development proposals.

Planning Policy Context

- 5.44 National, regional and local planning policy documents have been reviewed in Chapter 4 above. Policies relevant to Air Quality and this Planning Application are summarised below.

Planning Policy Wales (PPW)

- 5.45 PPW indicates (PPW para 12.7.2) that the impact of proposed waste management facilities on the amenity of local people and the natural and build environment must be adequately assessed. Where adverse impacts on amenity or the environment cannot be mitigated, planning permission should be refused.
- 5.46 PPW also stresses that Planning Authorities should operate on the basis that the relevant pollution control regimes will be properly applied and enforced by other agencies and they should not seek to control through planning measures, matters that are the proper concern of the pollution control authority (PPW para 13.10.2). This is of relevance to the Environmental Permit that will be required for the MWTRP and similar advice is provided in TAN21.
- 5.47 However, PPW continues by noting that where pollution considerations affect the use and development of land, then these may be material planning considerations. This provision extends to air quality objectives and the local authority's Air Quality Management Areas (ref para 13.10.3).

¹² Land-Use Planning & Development Control: Planning for Air Quality. EPUK & IAQM, May 2015.

Technical Advice Note 21 - Waste

- 5.48 TAN21 identifies (para 2.11 of TAN21) that planning authorities should ensure that all types of waste management facilities are located where a high level of protection for the environment and public can be ensured (as per the requirements of Article 13 of the Waste Framework Directive). In particular:
- (a) without risk to water, air, soil, plants or animals;*
 - (b) without causing a nuisance through noise or odours; and*
 - (c) without adversely affecting the countryside or places of special interest.*
- 5.49 TAN21 also identifies (para 2.12 of TAN21) that planning authorities should take account of the ability of Environmental Permits to control the operations and not duplicate controls and promotes parallel tracking of applications for both planning and permitting.
- 5.50 Annex C of TAN21 identifies potential detailed planning considerations for waste management facilities, which includes bioaerosols (para 1.4 of Annex C), dust (Section 3 of Annex C), odour (Section 10 of Annex C), and vehicle exhaust pollutants (para's 1.3 & 14.14 of Annex C).

Local Planning Policy

- 5.51 Caerphilly County Borough Local Development Plan up to 2021 (Adopted November 2010) contains policy CW2 'Amenity' which states:
- Development proposals must have regard for all relevant material planning considerations in order to satisfy the following requirements:*
- A There is no unacceptable impact on the amenity of adjacent properties or land.*
- 5.52 The Merthyr Tydfil Local Development Plan (LDP) 2006-2012 (adopted May 2011) contains policy TB10 relating to Waste Management facilities:
- Development proposals for new and expanded in-building and open-air waste management facilities other than those involving new landfill capacity/sites will be permitted subject to consideration against the following criteria:-*
- [...]*
- 2. the proposal must not have an unacceptable impact on the health and amenity of neighbouring land uses including the effects of dust and other emissions, noise and odours;*

ASSESSMENT METHODOLOGY

General

- 5.53 This assessment is based upon a comparison of the baseline situation against the air quality impacts resulting from the development proposal scenario.

- 5.54 Each of the activities associated with the proposal have been assessed in a staged approach for potential air quality impacts with the assumption that the pollution control regime enforced by NRW is applied effectively. The methodology used in each assessment is presented in the sections below.

Dust and Bioaerosols

- 5.55 There are potential risks of dust generation onsite through the handling of waste, soils and earthworks, associated with both construction and operation. For such operations the common concern regarding dust emissions is their potential 'nuisance' effect.
- 5.56 The potential nuisance effects of dust emissions are related to emissions of large and fine particles, generally larger than 30 microns in diameter. Deposition of these particles onto surfaces, such as windows and cars, can cause soiling that, if sufficiently great; will sometimes be considered to be a 'nuisance'.
- 5.57 To assess the impacts associated with particulate matter releases during the construction phase a qualitative assessment has been undertaken using guidance published by the Institute for Air Quality Management (IAQM) as detailed in Appendix 5/1.
- 5.58 This assessment of impacts also examines the potential dust and bioaerosol generation associated with the operation of the OWC and STF facilities. The assessment takes into account the prevailing meteorological conditions at the site; particularly the frequency of wind speeds capable of carrying airborne dust (greater than 3m/s)¹³ and bioaerosols, the frequency of rainfall considered sufficient to effectively suppress wind-blown dust emissions (greater than 0.25 mm/day¹⁴) in assessing dust nuisance impacts.
- 5.59 This assessment considers:
- the nature, scale and duration of activities undertaken on site in order to determine the potential magnitude of releases;
 - the potential magnitude of released dust and bioaerosols;
 - separation distances between sources and receptors; and
 - local meteorological conditions.

Odour and VOCs

- 5.60 Given the handling and composting of green waste and bioremediation of soils contaminated with hydrocarbons, there is a potential risk for the release of odour and VOCs. For such operations the common concern regarding odour resulting from the VOC emissions is their potential 'nuisance' effect.

¹³ K. W. Nicholson (1988) A review of particle re-suspension. Atmospheric Environment Volume 22, Issue 12, 1988, Pages 2639-2651

¹⁴ US Environmental Protection Agency AP-42 Section 13.2.2

- 5.61 To assess the impacts associated with the potential odour and VOC releases during the operational phase a qualitative assessment has been carried out in accordance with the IAQM guidance. This assessment considers:
- the potential magnitude of release;
 - separation distances between sources and receptors;
 - local meteorological conditions; and
 - sensitivity of receptors.

Traffic Exhaust Emissions Risk Assessment

- 5.62 The criterion for assessment of air quality contained within the latest DMRB¹⁵ guidance (207/07) focuses on roads with relatively high changes in flows or high proportion of HDV traffic. Affected roads are defined as those that meet any of the following criteria:
- road alignment will change by 5 m or more; or
 - daily traffic flows will change by 1,000 AADT¹⁶ or more; or
 - Heavy Duty Vehicle (HDV) flows will change by 200 AADT or more; or
 - daily average speed will change by 10 km/hr or more; or
 - peak hour speed will change by 20 km/hr or more.
- 5.63 Only properties and “*Designated Sites*” within 200m of roads affected by the project need be considered. If none of the roads in the network meet any of the traffic/alignment criteria or there are no properties or relevant Designated Sites near (within 200m) the affected roads, then the impact of the scheme can be considered to be ‘neutral’ in terms of local air quality and no further air quality assessment is required.
- 5.64 The EPUK/IAQM guidance sets lower thresholds for increases in vehicle movements; specifically in relation to the development an air quality assessment would be required for a change of HDV flows of
- more than 25 AADT within or adjacent to an AQMA; or
 - more than 100 AADT elsewhere.
- 5.65 For roads where either the DMRB or EPUK/IAQM criteria are met the predicted environmental concentration at receptors within 200m will be predicted using the ‘DMRB screening method’ and the latest ‘NO₂ from NO_x calculator’.

Air Quality Significance Criteria

- 5.66 The assessment of significance or air quality impacts within this assessment can be either ‘Adverse’ or ‘Beneficial’ and the magnitude will be judged as ‘Negligible’, ‘Slight’, ‘Moderate’, or ‘Substantial’, as detailed in Appendices 5/1 to 5/3.

¹⁵ Design Manual for Roads and Bridges

¹⁶ Annual Average Daily Traffic

BASELINE ENVIRONMENT

- 5.67 As described in Chapter 2 the Trecatti landfill site straddles the boundary between Caerphilly County Borough Council (CCBC) and Merthyr Tydfil County Borough Council (MTCBC) with the boundary running North-South through the site.
- 5.68 The Trecatti landfill Site is located approximately 250m south-east of the village of Dowlais close to the town of Merthyr Tydfil in South Wales. The land to the north, east and south of the site is predominantly agricultural with the outskirts of Dowlais village to the north-west. There are some isolated properties to the north and a commercial / industrial area on the outskirts of Dowlais.
- 5.69 The application site is located toward the eastern half of the Trecatti landfill site approximately 0.5km south east of extent of Dolwais.

Baseline Air Quality

Local Air Quality Management

- 5.70 The development has the potential to impact upon air quality of both MTCBC and CCBC and therefore consideration of both Councils LAQM assessments has been undertaken.
- 5.71 CCBC has regularly reviewed and monitored air quality within its boundary and has declared an AQMA within Caerphilly town centre for the annual objective for NO₂, primarily as a result of traffic congestion and at Hafod-yr-nys. These AQMA's are over 15km to the southeast of the application site and unlikely to be affected by the proposed development.
- 5.72 MTCBC has regularly reviewed and monitored air quality within its boundary and has not declared any AQMA's or identified any areas of concern.

Automatic Monitoring Data

- 5.73 There are two automatic monitors located in the vicinity of the application site, both of which monitor particulate matter (PM₁₀ and PM_{2.5}) in response to potential emissions of particulate matter from the nearby Ffos-y-fran surface coal mine.
- 5.74 In MTCBC a Tapered Elemental Oscillating Microbalance (TEOM) has been located at the Twynyrodyn Primary School since 2007 to track any changes in particulate levels during the operation of the nearby Ffos-y-fran surface coal mine.
- 5.75 In CCBC a Beta Attenuation Monitor (BAM) has been in operation since May 2012 due to concerns raised by residents regarding potential particulate emissions from the open cast coal scheme. A summary of the monitoring results is presented in Table 5-2.

Table 5-2
Automatic PM₁₀ & PM_{2.5} Monitoring Data (µg/m³) – Annual average

Site		2009	2010	2011	2012	2013
Twynyrodyn Primary School (MTCBC)	PM ₁₀	14.0 (5)	13.8 (5)	16.0 (8)	Not yet reported	
	PM _{2.5}	5.8	5.7	6.1	Not yet reported	
Fochriw (CCBC)	PM ₁₀		Not monitored			14.0
	PM _{2.5}		Not monitored			10.0

Table Note: (Number) indicates number of exceedences of the 24-hr PM₁₀ AQO of 50µg/m³; 35 exceedences per year are allowed.

Non-automatic monitoring data

- 5.76 The concentrations of nitrogen dioxide are monitored by both CCBC and MTCBC via a network of diffusion tubes. A summary of those in proximity to the application site is presented in Table 5-3.

Table 5-3
NO₂ Diffusion Tube Monitoring Data (µg/m³) – Annual average

Site	2009	2010	2011	2012	2013	2014
Victoria Street, Dolwais (MTCBC - WAQF32)	Not monitored	29.0	26.2	Not yet reported		
Upper Dolwais (MTCBC – WAQF25)	20.7	27.0	24.8	Not yet reported		
Pontlottyn Road, Fochriw (CCBC -61)		Not monitored		10.0	10.0	10.0

Defra Background Maps

- 5.77 Background pollutant concentrations have been obtained from the Defra Background Air Pollution Maps. These 1km grid resolution maps are derived from estimated background annual mean pollutant concentrations which are then projected to future years. A summary of the estimated annual mean background concentrations for the grid square containing the site (308500, 207500) are presented in

5.78 [Table 5-4.](#)

Table 5-4
Estimated Annual Mean Background Concentrations for 2015

Pollutant	Average ($\mu\text{g}/\text{m}^3$)
PM ₁₀	12.7
PM _{2.5}	8.6
NO ₂	10.5

Dust

- 5.79 Extensive dust monitoring in the vicinity of the application site is undertaken by the operators (Miller Argent) of the nearby Ffos-y-fran surface coal mine and a summary of the data¹⁷ does not indicate that significant adverse dust impacts are occurring.

Odour

- 5.80 There are no quantitative measurements of existing odour concentration available from the vicinity of the application site which comprises an active landfill.
- 5.81 A significant number of complaints in relation to odour attributed to the landfill site have been reported over recent years but none in recent months (since April 2015) following implementation of an action plan agreed with NRW to increase the efficacy of landfill gas collection.

Sensitive Receptors

- 5.82 The term 'sensitive receptors' includes any persons, locations or systems that may be susceptible to changes as a consequence of the proposed development.
- 5.83 Primarily in relation to odour, VOCs and dust the most sensitive receptors would be residential properties and amenity areas, with commercial or industrial receptors typically being less sensitive due to lower frequency of occupation and expectations.
- 5.84 Sensitive receptors within close proximity to the MWTRP are presented in Table 5-5 below and shown on Drawing TR 5/1.

Table 5-5
Sensitive Receptor Locations

Receptor	ID	X-coordinate	Y-coordinate	Elevation
Cwm Bargoed Bungalow	1	309040	208480	371.2
Blaen Dowlais St (Loc A)	2	307647	207849	355.9
Blaen Dowlais St (Loc B)	3	307624	207828	354.7
Blaen Dowlais St (Loc C)	4	307595	207894	354.8

¹⁷ Chapter 12 – Air Quality of Environment Statement for Nant Llesg Surface Mine, located to the East of Trecatti.

Receptor	ID	X-coordinate	Y-coordinate	Elevation
Blaen Dowlais St (Loc D)	5	307546	207899	353.8
High St (Loc A)	6	307694	208150	365.8
High St (Loc B)	7	307648	208098	359.9
High St (Loc C)	8	307512	208055	358.5
High St (Loc D)	9	307566	208110	362.0
High St (Loc E)	10	307359	207980	349.0
High St (Loc F)	11	307272	207937	336.1
Dennithorne Dr (Loc A)	12	307325	207771	330.5
Dennithorne Dr (Loc B)	13	307302	207842	332.7
Japonica Drive	14	307269	207741	330.3
Blanche Street	15	307256	207979	338.0

5.85 There are no nationally designated ecological sites within 2km of the application site and no international (European) designated sites within 10km of the site.

Meteorology – Dispersion of Emissions

5.86 The most important climatological parameters governing the atmospheric dispersion of pollutants are as follows:

- wind direction determines the broad transport of the emission and the sector of the compass into which the emission is dispersed; and
- wind speed will affect ground level emissions by increasing the initial dilution of pollutants in the emission. It will also affect the potential for dust entrainment.

5.87 Rainfall is also an important climatological parameter in the generation of dust. Sufficient amounts of rainfall can suppress dust at the source and eliminate the pathway to the receptor. Rainfall greater than 0.25mm per day is considered sufficient to suppress dust emissions¹⁸.

Rainfall

5.88 Relevant rainfall data applicable to the site has been obtained from the Meteorological Office website for Tredegar (1981 – 2010), which is located approximately 6km to the east of the application site. The average number of days with rainfall greater than 1mm is 166.5 days per year (46% of days/year).

Local Wind Speed and Direction Data

5.89 The closest weather station with sufficient and suitable records of wind direction and wind speed is Rhoose Airport Meteorological Station. This meteorological station is located approximately 40km south of the application site.

¹⁸ US Environmental Protection Agency AP-42 Section 13.2.2

- 5.90 A wind rose for the average conditions recorded at Rhoose Airport over a five year period from 2003-2007 is presented below in Figure 5-1.

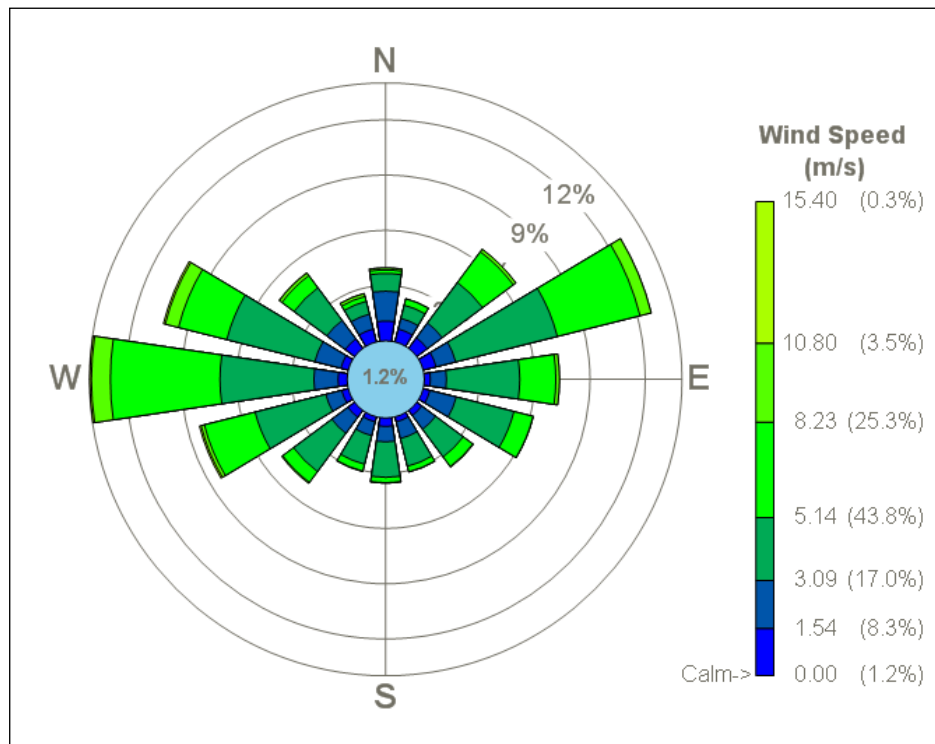


Figure 5-1
Windrose for Rhoose Airport Meteorological Station (2003 – 2007)

- 5.91 The predominant wind directions are from the westerly and easterly quadrants. Moderate to high speed winds ($>3.1\text{m/s}$), capable of dust generation occur for approximately 75% of the time.
- 5.92 High wind speeds tend to lead to odour emissions being more rapidly dispersed and diluted due to turbulence, while low wind speeds inhibit the dilution of odours. Low wind speed conditions of less than 1.5m/s occur for approximately 10% of the time.

Topography

- 5.93 The presence of elevated terrain can significantly affect the dispersion of pollutants and the resulting ground level concentration in a number of ways. Elevated terrain can increase turbulence and, hence dispersion, and can serve to channel airflows.
- 5.94 The topography in the vicinity of the application site is complex, of particular significance is the elevation of the landfill site (390m to 445m AOD) above the local receptors (330m to 370m AOD).

ASSESSMENT OF IMPACT, MITIGATION AND RESIDUAL EFFECTS

Construction Phase

Vehicular Exhaust Pollutants

- 5.95 Exhaust emissions associated with construction vehicle movements, particularly HDV movements and Non Road Mobile Machinery (NRMM) have the potential to result in increased concentrations of combustion related pollutants, such as NO₂ and PM₁₀ in the vicinity of the development site.
- 5.96 The number of HGVs associated with construction operations is not anticipated to result in a significant increase in movements (particularly relative to the IAQM or DMRB criteria). Allied to this, the duration of movements would be short term in nature and are therefore not considered further within the context of this assessment.
- 5.97 Similarly the on-site movements of NRMM are not considered to be significant in terms of numbers or duration and would be in excess of 200m from receptor locations. Therefore, in accordance with the DMRB, emissions from NRMM have not been considered further within the context of this assessment.

Dust

- 5.98 As defined within the IAQM guidance a dust assessment is as required where there is:
- a human receptor with 350m of the site; or
 - a human receptor within 50m of the access roads (up to 500m from the site entrance);
 - an ecological receptor with 50m of the site; or
 - an ecological receptor within 50m of the access roads (up to 500m from the site entrance).
- 5.99 As shown on Drawing TR 5/1, there are no 'human receptors' within 450m of the application site boundary or 50m of the site access road, and no habitat sites within 50m of the site boundary or within 50m of the site access roads (assessed up to 500m from the site entrance, as a worst-case scenario).
- 5.100 Therefore, a more detailed assessment of construction dust can be screened out from this assessment and potential impacts classified as 'negligible'.

Mitigation

- 5.101 Whilst given the location of the site the potential impacts are classified as 'negligible' the following good practice mitigation measures would be adopted:
- vehicles would be sheeted to prevent loss of materials off-site;

- regular inspection of local roads to check for dust deposits and any deposits removed;
- all vehicles would use the wheel wash onsite;
- use water as a dust suppressant as and when required; and
- a trained site manager (or his deputy) would be on site during working hours to be responsible for proper implementation of dust mitigation measures.

Operational Phase

Source of Emissions

Dust & Bioaerosols

- 5.102 It is considered the main potential release points for dust and bioaerosols from the proposed MWTRP would be from the compost windrows (particularly during formation, turning and screening), shredding of green waste, the biopiles, handling of contaminated soils (transfer and biopile formation) and haul roads at the site.
- 5.103 The amount of dust generated and the presence of any bioaerosols from each activity would depend on the nature of the material and crucially upon their moisture content. Dust emissions are greatest when there is a plentiful supply of small dry particles. Therefore potential for fugitive dust and bioaerosol emissions would be the greatest when working with dry materials (containing < 15% water by weight) and particularly under windy conditions (>3m/s wind speed).
- 5.104 Vehicle movements would be on existing haul roads within the site. Particulate emissions from road surfaces are primarily due to re-suspension of loose material present on the road surface (either due to wind-blow or entrainment) and through the erosion of the haul road.

Odour and VOC

- 5.105 The main sources of odour and VOCs would be from the compost windrows (particularly during formation, turning and screening), shredding of green waste and from soils containing volatile organic contaminants.
- 5.106 The main point source atmospheric release point from the STF process is the biofilter. The biofilter provides an active filter that removes potentially odorous and gaseous biodegradation products from the air leaving the biopiles and minimises emissions of VOC and odour. Following treatment of the air stream there would be a residual odour and VOC release from this point.

Mitigation Measures

- 5.107 Extensive mitigation measures for dust, bioaerosol, odour and VOC management and control would be required at both the OWC and STF and defined in the Environmental Permit. The effective application of these mitigation measures would continue to be monitored by NRW as part of their

regulatory role and are therefore not duplicated in detail in this assessment, but they are assumed to be effective for the purposes of the assessment of potential impacts.

5.108 The primary environmental design measures to mitigate the risk of dust, bioaerosols, VOC and odour generation and release during the composting process (including shredding, turning and screening), waste reception, biopile formation and bioremediation process are as follows:

- limitation of waste types (and ages) accepted to exclude dusty or odorous types (will be regulated by the NRW as part of the permit);
- extensive monitoring (as defined in the OMP) of the process parameters within the windrows and biopiles to ensure adequate moisture and oxygen content and that the biological processes occur effectively;
- negative aeration of biopiles to ensure aerobic bioremediation process and minimise the requirement to turn the biopiles;
- abatement of air extracted from the biopiles by biofiltration;
- enclosure of the biopiles under covers as necessary;
- adoption of good housekeeping measures to include regular cleaning of working areas and access roads;
- limit of vehicle speed limit, watering of haul roads, sheeting of vehicles and use of wheel wash; and
- when handling waste materials, in the event of unacceptable dust emission temporarily cease activities and avoid double handling of material.

Assessment of Impacts

Dust and Bioaerosols

5.109 Dust and bioaerosol emissions would be suppressed by the required moisture levels of the windrow and biopiles and by local rainfall which would significantly reduce the magnitude of emissions.

5.110 In terms of potential impacts, the prevailing wind directions for moderate to high winds expected at the application site is from the west and east. Therefore receptors located to the east and west of the application site are considered to be at a higher risk of experiencing impacts.

5.111 As shown on Drawing TR 5/1, there are no 'human receptors' within 450m of the application site boundary in any direction, well in excess of the distances where potential dust (typically impacts are limited to 100-200m) and bioaerosols (typically impacts are below background levels beyond 250m) impacts could occur.

5.112 It is therefore considered that the risk associated with potential dust and bioaerosol emissions from the OWC and STF operations is 'negligible'.

Odour and VOCs

- 5.113 The OWC and STF activities are considered to be potentially a significant odour source given the quantities of waste and applied processes; the OWC and STF therefore represent a 'large' source in the context of the IAQM guidance.
- 5.114 In terms of the pathway between the source and residential receptors (which are classified as highly sensitive); the closest residential receptors are over 450m from application site and low wind speeds towards these receptors only occur for a low percentage of time. Therefore, this is considered to represent an 'ineffective pathway' (i.e. significant dispersion would occur between source and receptor).
- 5.115 The risk of odour exposure can therefore be classified as a 'low risk; in accordance with the IAQM methodology. Given the highly sensitive nature of the receptors; this results in a 'slight adverse effect' of odour at the residential receptors.

Traffic Exhaust Emissions

- 5.116 As detailed in Chapter 7 (Transport Assessment) the proposed development would not result in a significant increase of vehicle movements to the Trecatti landfill site. The number of HDV movements associated with the OWC and STF operations is expected to be 49 AADT and in reality some of these movements would be replacing existing traffic associated with the landfill.
- 5.117 Assuming all these vehicle movements associated with the MWTRP are additional, using the screening criteria within the DMRB and EPUK/IAQM guidance, none of the screening criteria are met. Therefore the scheme can be considered to be 'neutral' in terms of local air quality and no further air quality assessment or vehicle exhaust emissions is required.

CUMULATIVE IMPACTS

- 5.118 There is a risk for cumulative impacts of dust and odour to occur between the OWC and STF operations and the ongoing landfilling and the nearby Ffos-y-fran surface coal mine/reclamation project.
- 5.119 In relation to dust, the potential risk of impact from the operation of the OWC and STF is assessed to be insignificant. Therefore given the control measures in place and the results of ongoing monitoring in the locality, the risk of cumulative impacts is also considered to be 'insignificant'.
- 5.120 In relation to odour, there is a risk for cumulative impacts to occur between the OWC and STF and ongoing activities at the Trecatti landfill site. It is considered that the application of effective odour control measures at the landfill site (as currently in place) alongside those that would required for the OWC and STF by NRW, can prevent significant adverse cumulative impacts.

CONCLUSIONS

- 5.121 An assessment of the air quality impacts associated with the proposed MWTRP at the existing Trecatti landfill site has been undertaken. The MWTRP would comprise an Open Windrow Composting (OWC) facility and Soil Treatment Facility (STF). The assessment has considered:
- Construction dust;
 - Air Quality Strategy Pollutants from vehicle exhausts; and
 - Odour, VOCs, dust and bioaerosol emissions during the operational phase.
- 5.122 The assessment of construction dust has found that impacts are negligible but mitigation measures are recommended in accordance with best practice.
- 5.123 There is predicted to be 49 AADT additional traffic movements associated with the OWC and STF and therefore the impact associated with vehicle exhaust emissions is considered to be 'insignificant'.
- 5.124 In terms of dust, bioaerosols, VOCs and odour from the OWC and STF during operation, the permit variation would not be approved by NRW unless they are satisfied that operations would not cause significant pollution to the environment (including offence to human senses) or harm human health.
- 5.125 Given the potential identified for the release of dust, bioaerosols and VOCs from the OWC and STF, the significant distance between source and receptors (>450m), prevailing meteorological conditions, and the mitigation measures that would be required by NRW; the residual impact is considered to be 'insignificant'.
- 5.126 Given the potential identified for the release of odour from the OWC and STF, the significant distance between source and receptors (>450m), prevailing meteorological conditions, and the mitigation measures that would be required by NRW; the residual impact is considered to be 'slight adverse'.
- 5.127 There is a risk for cumulative dust impacts to occur between the OWC and STF and ongoing activities at the Trecatti landfill site and the nearby Ffos-y-fran surface coal mine. However given the control measures in place and the results of ongoing monitoring in the locality, these cumulative impacts are considered to be 'insignificant'.
- 5.1 Finally, there is a risk for cumulative odour impacts to occur between the OWC and STF and ongoing activities at the Trecatti landfill site. However, it is considered that the adoption of effective control measures at the landfill site and those that would be required for the OWC and STF by NRW, can prevent significant adverse cumulative impacts.

H1 Environmental Risk Assessment

Trecatti Landfill Site
Multipurpose Waste Treatment and Remediation Pad
H1 Environmental Risk Assessment

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DRAWINGS

Drawing 001	Site Location Plan
Drawing 002	Proposed Site Layout and Boundary
Drawing 003	Proposed Site Drainage
Drawing 004	Sources, Pathways and Receptors
Drawing 005	Proposed Containment Bunding and Surfacing

1.0 INTRODUCTION

Biffa Waste Services Limited (Biffa) has retained SLR Consulting Limited (SLR) to prepare an application for their Trecatti Landfill site, Merthyr, under the Environmental Permitting (England and Wales) (EP) Regulations 2010 (as amended) for the operation of a Multipurpose Waste Treatment and Remediation Pad.

Full details of the proposed variation can be found in the Non Technical Summary submitted with this application, reference 407.00034.00461/NTS. The assessment has been completed in accordance with the Environment Agency Technical Guidance EPR – H1 '*Environmental Risk Assessment for Permits*' December 2011 and H1 Annex A – *Amenity & Accident Risk from Installations and Waste Activities*, December 2011. The aim of which is to identify any significant risks from the proposed waste management activities and demonstrate that the risk of pollution or harm would be acceptable by taking the appropriate measures to manage these risks.

Environment Agency (EA) Technical Guidance EPR – H1 requires all receptors that are near the site and could reasonably be affected by the proposed activities to be identified and considered as part of the assessment.

For the purposes of this H1 assessment, a 2km radius from the proposed permit boundary has been adopted in reviewing potentially sensitive receptors of ecological importance along with features such as sites of cultural and natural heritage. A radius of 500m from the proposed permit boundary has been adopted for all other potentially sensitive receptors (for example, residential, commercial, industrial, agricultural and surface water receptors).

The potentially sensitive receptors identified as part of this assessment are illustrated on Drawing Sources, Pathways and Receptors 004 a dated July 2015 and are described in Table 2-2. This document should be read in conjunction with;

- Environment Agency Forms; A, C2, C3 and F1;
- Non Technical Summary, (407.00034.00461/NTS dated July 2015); and
- Best Available Techniques and Operating Techniques (407.00034.00461/BATOT dated July 2015).

2.0 SITE SETTING & RECEPTORS

2.1 Proposed Development

This Permit variation application seeks to add a Multipurpose Waste Treatment and Remediation Pad (MWTRP) to the permitted activities undertaken at the site. The location of the pad in relation to the permitted landfill is shown on Drawing 002, dated July 2015.

The Pad layout is detailed in Drawing 002 and will allow the following distinct waste activities to take place:

1. Waste Treatment Facility (WTF) - treatment and bioremediation of hazardous and non hazardous waste; and
2. Green Waste Composting.

The area for the MWTRP would be located on top of a temporarily capped area subject to permanent deposit of non hazardous wastes. The MWTRP would be utilised until such time as the area is required for the further deposit of waste at which point it will be removed.

The MWTRP will be constructed so as to form two physically separate areas for the operations. Separation will be achieved through the use of low level bund and separate engineered drainage system.

The site infrastructure will comprise;

- General infrastructure;
 - office/welfare accommodation;
 - car parking.
- WTF Operations, including;
 - Treatment pad;
 - process water storage tanks (within a bunded enclosure);
 - biofilter;
 - air/water separators with attendant process equipment (blowers, pumps etc. housed within a metal container); and
 - ISO metal containers for the storage of equipment.
- Composting Operations, including;
 - Compost pad;
 - Contaminated Surface Water Lagoon.

Access to the Pad will be from the south utilising existing landfill haul roads. The landfill weighbridge and reception office on the existing haul road will be used to weigh wastes prior to acceptance at the Pad.

The WTF will accept up to 30,000 tonnes of the European Waste Catalogue (EWC) Codes listed in Appendix C3_1 of this application.

In addition to the contaminated surface water run-off lagoon associated with composting operations, there will be a clean surface water lagoon which will collect clean run-off from buildings and surfaced areas not used for waste operations. This lagoon will drain to the existing clean surface water management system associated with the landfill.

Process water generated by the waste treatment process at the biopile(s) will be removed via the internal air and water extraction pipes and routed to the process water tanks prior to discharge to a suitably licensed facility. Subject to quality testing, the water may be released to the existing Leachate Treatment System, surface water management system or tankered off site.

A bund will surround the biopile(s) pad and within it will be included the WTF infrastructure e.g. roadways, fuel storage, process water tank, site office and parking area, biofilter and equipment unit. Water run-off from within this bund will all be managed as potentially contaminated water and routed to the process water tank. The water will be stored at the process water tank prior to discharge to a suitably licensed facility. Subject to quality testing, the water may be released to the surface water management lagoon;

If required, the biopile(s) will be covered with a biocover, rainfall running off the biocover will be managed as clean surface run-off and directed to the surface water ditch to the east of the biopile(s); the biocover will be secured within the surface water ditch. Clean surface water from the ditch will be routed to the surface water lagoon via a pipe. Water will be discharged from the surface water management lagoon to the existing landfill surface water management system.

A cut-off valve will be provided at the surface water management lagoon and should any contamination become evident, the water will be prevented from entering the existing surface water management system and controlled waters.

The Composting Facility will be designed to prevent fugitive emissions to surface water and groundwater. The composting pad will be designed with a fall to a lagoon. All liquor arising from the composting process will run off to the Lagoon 2 prior to being pumped to the existing Trecatti Leachate Treatment Facility.

The composting and WTF operations will be kept physically separate by means of a low level bund and will have distinct engineered drainage systems.

This H1 Environmental Risk Assessment only looks at the risks posed by the activities associated with the WTF operations. It is considered that the proposed composting operations, as applied for under Standard Rules Permit SR2012No8: Composting in Open Systems – Part A Installation – Capacity more than 75 tonnes per day has undergone thorough assessment by Natural Resources Wales / Environment Agency as part of their Standard Rule Permitting Process.

2.2 Site Setting

Trecatti landfill is located to the immediate north-east of Merthyr Tydfil and approximately 3km west of Rhymney at National Grid Reference SO082077. It is located within an area of historic open-cast coal and ironstone working and lies to the north-west of the Gelligaer and Merthyr Common. The site is immediately surrounded by common land that includes vegetated colliery spoil tips and is used for rough grazing. The nearest residential area is Dowlais Top which lies approximately 170 metres to the north-west of the landfill. Access to the site is from the unclassified Fochriw Road to the east. The main watercourses present in the vicinity are the River Taff and Rhymney River, which flow in a general southerly direction 3.5km west and 2.1km east of the site respectively. A number of tributary drains and streams drain the land immediately surrounding Trecatti Landfill site.

Trecatti Landfill has been constructed above the regional groundwater table of the Coal Measures strata and therefore no permanent groundwater management system is required. However, temporary under-liner drainage systems have been installed beneath the Phases developed to date due to the presence of perched groundwater. Leachate accumulating within the site is abstracted and treated at the on-site treatment plant. Landfill gas is collected and pumped to an on-site gas management plant which is capable of producing up to 4MW electricity. Surplus gas is flared off.

The site location is shown on Drawing 001. The locations of the installation, surrounding land-use and receptors are identified on Drawing 004 - Sources Pathways and Receptors, and are identified in Table 2-1 and Table 2-2 below.

Table 2-1
Surrounding Land Uses

Boundary	Description
North	Open land, beyond which lies the A465 and industrial and commercial premises.
East	Open land / agricultural land and the Rhasias Pond.
South	The Ffos-y-fran mine, operated by Miller Argent.
West	Residential properties within Dowlais.

The immediate surrounding land use is described in further detail below:

Residential properties (including farms)

The closest residential properties are located within Dowlais, off Blaen Dowlais, located approximately 170m to the west of the landfill permit boundary, and some 600m from the proposed MWTRP.

Commercial and Industrial Premises

The Ffos-y-fran Mine site is located 30m to the south of the landfill permit boundary and 150m from the proposed MWTRP internal boundary.

Areas for public use / Open Land

The site is immediately surrounded by open land / agricultural land.

The A4060 and A465 public highways are located 100m to the west of the landfill permit boundary (approximately 450m from the MWTRP internal boundary) and the local Fochriw Road, from which the site is accessed, is located adjacent to the Landfill permit boundary, and approximately 450m from the MWTRP internal boundary to the east.

Recreational fields are located approximately 160m to the north-west from the landfill permit boundary and approximately 540m from the MWTRP internal boundary.

2.3 Geology, Hydrology & Hydrogeology

Geology

The site has been previously worked, suggesting that much of superficial and bedrock material will have been removed. However, searches conducted on the British Geological Society website (www.bgs.ac.uk, accessed July 2015) indicate the site is situated on bedrock geology consisting of the South Wales Middle Coal Measures Formation - Mudstone, Siltstone and Sandstone. Only partial superficial geology results are available however, the site is located within an area of superficial deposits consisting of Till, Devensian - Diamicton.

Hydrology and Hydrogeology

The nearest watercourse is a tributary to the Rhymney River which flows south-easterly, passing approximately 1km to the north-east of the application site at its closest point.

Previous NRW / EA mapping classified bedrock at the application site as a 'Secondary A' aquifer which is defined by the EA as *'permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.'*

Previous NRW / EA mapping classified the application site as not within a Groundwater Source Protection Zone (SPZ).

EA mapping¹ also indicates that the site does not lie within a flood zone.

¹<http://maps.environment-agency.gov.uk>, accessed July 2015

2.4 Ecology

European/International Sites

Nature conservation designations have been assessed within a 2km radius of the proposed site. Searches on the Multi-Agency Geographic Information for the Countryside (MAGIC)² website confirm the following;

European / International Sites

There are no European or International statutory nature conservation designations within a 2km radius of the proposed site.

Sites of Special Scientific Interest (SSSI)

There are no SSSI designations within a 2km radius of the proposed site.

Registered Park and Gardens

There are no registered parks and garden designations within a 2km radius of the proposed site

The woodland areas are illustrated on Drawing 004.

Other ecological receptors

There are none of the following ecological receptors identified within 2km of the permit boundary:

- Areas of Outstanding Natural Beauty;
- Local or National Nature Reserves;
- National Parks;
- National Forest;
- World Heritage Sites; and
- Woodland Trust Sites.

2.5 Cultural Heritage

Searches conducted on the MAGIC website also confirm the site does not lie within 2km of the following;

- Archaeological sites;
- Registered Battlefields; and
- National Trust Properties.

Listed buildings

A Search conducted on the British Listed Buildings website (www.Britishlistedbuildings.co.uk, accessed July 2015) show that there are a number of listed buildings within 2000m of the site, the closest of which are located within Dowlais.

² www.magic.defra.gov.uk, accessed July 2015

Scheduled Monuments

There are no Scheduled Monuments within 2km.

2.6 Receptors

Drawing 004 illustrate the locations of receptors that have been identified as potentially sensitive and that could reasonably be affected by the proposed WTF.

Table 2-2 Identified Receptors

Receptor Name	Receptor Type	Direction	Distance from landfill boundary	Distance from Proposed Multipurpose Pad Boundary
Identified receptors within 1km of the proposed Permit Boundary as shown on Drawing 004.				
Residential properties off Blaen Dowlais	Residential	West	170m	600m
Ffos-y-fran mine	Commercial / Industrial	South	30m	150m
Public highways, including Fochriw Road, A465 and A4060.	Public Highways	West	100m	450m
Recreational land, including sports fields	Recreational land	North West	160m	540m
Agricultural Land / open Land	Open Land	All	Adjacent	110m

2.7 Windrose

A wind rose for the average conditions recorded at Rhoose Airport over a five year period from 2003-2007 is presented below in Figure 2-1.

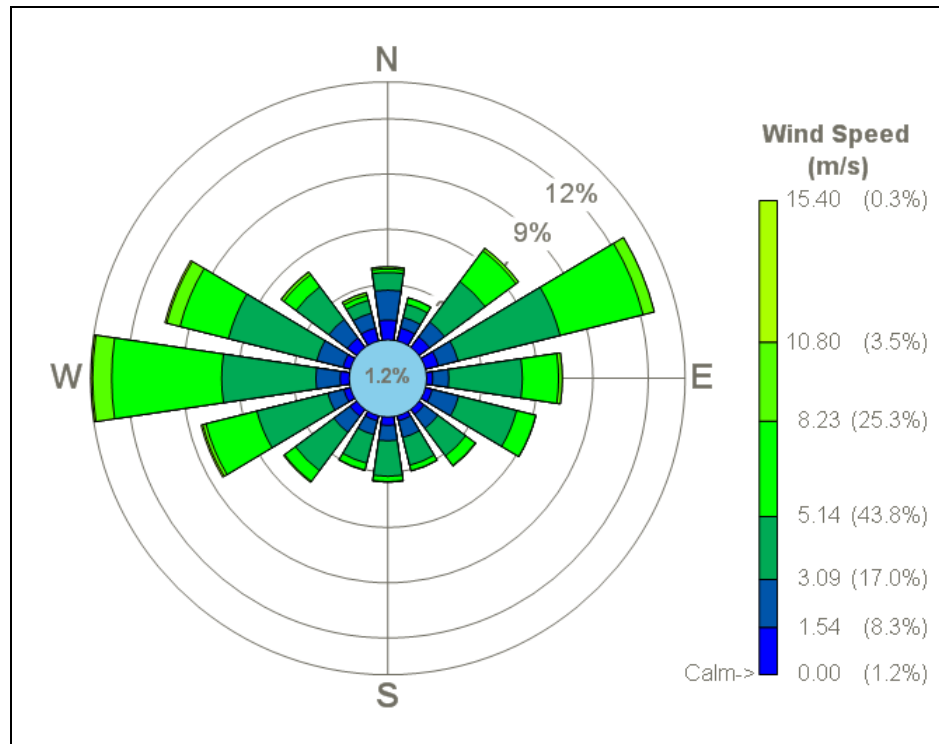


Figure 2-1 Windrose for Rhoose Airport Meteorological Station (2003 – 2007)

The predominant wind directions are from the westerly and easterly quadrants. Moderate to high speed winds (>3.1m/s), capable of dust generation occur for approximately 75% of the time.

High wind speeds tend to lead to odour emissions being more rapidly dispersed and diluted due to turbulence, while low wind speeds inhibit the dilution of odours. Low wind speed conditions of less than 1.5m/s occur for approximately 10% of the time.

3.0 H1 OVERVIEW AND APPROACH

The H1 Environmental Risk Assessment complies with regulatory guidance³ and uses the following approach for identifying and assessing the risks in four steps:-

- Step 1 Identify risks from your activity.
- Step 2 Where risks are identified from Step 1 then assess the risks and check that they are acceptable using the relevant modules provided as annexes to the H1 Guidance.
- Step 3 Justify appropriate measures to control your risks, if necessary.
- Step 4 Present your assessment.

Step 1 is a screening step to identify the potential risks to the environment from the proposed application.

There are however no point source emissions to surface water, groundwater or air resulting from the proposed variation. Therefore only annexe A 'Amenity and Accidents' is considered to be applicable for assessment in this instance, and includes the consideration of odour, noise and vibration, fugitive emissions (including dust, mud, litter and pests) and accidents in relation to the operation of the proposed site.

Step 2 identifies people or parts of the environment that could be harmed (at potentially significant risk) by the activity. Where appropriate, the assessment demonstrates how the risk of pollution or harm can be mitigated by measures to manage these risks (Step 3).

The following tables present the assessment (Step 4) in terms of hazards posed, receptors and pathways, along with management and residual risks for the following hazards:

- Odour;
- Noise & Vibrations;
- Fugitive Emissions (including dust and pests); and
- Accidents.

³ Environment Agency H1 Environmental Risk Assessment for Permits (and appendices) V4.0 December 2011.

Table A1 Odour Risk Assessment and Management Plan

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
What has the potential to cause harm?	What is at risk what do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? – who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
Odour caused by the acceptance and treatment of hazardous and non hazardous waste (Contaminated soils or sludges may have the potential to contain odorous organic substances including aromatic hydrocarbons such as diesel range organics, PAHs and phenols.)	Potentially sensitive receptors as listed in Table 2-2, including agricultural land and areas of open space, residential properties, surface water bodies and the local road network. As shown in Drawing 004	Air	The WTF will be operated to minimise potential odour emissions and in accordance with the conditions of the permit. Extraction ventilation to a biofilter will treat degradation products and prevent emissions of odour. The biofilter is a proven method of removing VOCs with a low odour threshold before emission to the atmosphere. It is considered that the suction extraction and odour abatement (biofilter) will meet the requirements of BAT. Strict waste acceptance procedures will be in place, no waste will be accepted unless it has been pre-booked with details of the source, physical and chemical compositions and hazard characteristics. Control of odour will be governed under the STF Operations Manual and Biffa Procedure DGNL/02 Environmental management. As part of the Trecatti environmental management programme perimeter modelling will be implemented in accordance with the conditions of the Environmental Permit. The Site Manager will be responsible for implementing risk management measures	Low – Medium The proposed WTF will be located within the existing Trecatti Landfill Site.	Nuisance and loss of amenity	Low
Odour caused by the delivery of non	Potentially sensitive receptors as listed in	Air	Strict waste acceptance procedures will mean that exceptionally malodorous waste should not	Low - Medium	Nuisance and loss of amenity	Not significant

conforming waste types associated with the WTF.	Table 2-2, including agricultural land and areas of open space, residential properties, surface water bodies and the local road network. As shown in Drawing 004		arrive at the WTF. The list of EWC codes has been selected to reduce the potential for odorous soils. Potentially odorous soils will not be accepted without there being arrangements in place for the soils to be received and managed in a manner which will minimise the potential for odour emissions. Non-conforming materials will be segregated and stored at a designated area prior to removal off site to an appropriately licensed facility as soon as practicable. Rejected wastes will be recorded in the site diary. The Site Manager will be responsible for implementing risk management measures.			
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Table A2 Noise Risk Assessment and Management Plan

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
What has the potential to cause harm?	What is at risk what do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? – who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
Vehicles manoeuvring and unloading waste associated with WTF.	Potentially sensitive receptors as listed in Table 2-2, including agricultural land and areas of open space, residential properties, surface water bodies and the local road network. As shown in Drawing 004	Air.	The MWTRP will be located on the existing footprint of Trecatti Landfill Site. Vehicles and plant will be appropriately maintained so as to ensure that the operation of the site does not give rise to unacceptable levels of noise or vibration. Internal haul roads shall, where possible, be routed to allow maximum acoustic screening and separation distances to noise sensitive receptors. Haul roads shall be kept clean and maintained in a good state of repair and subject to a 20mph speed limit so as to avoid unwanted rattle and “body slap” from vehicles. The Site Manager will be responsible for implementing risk management measures.	Low	Nuisance to receptors during delivery periods	Not significant.

Noise caused by traffic entering and leaving the site.	Potentially sensitive receptors as listed in Table 2-2, including agricultural land and areas of open space, residential properties, surface water bodies and the local road network. As shown in Drawing 004	Air (Noise) Ground (Vibrations)	Site traffic and site plant will be subject to site imposed speed limits to limit the noise and vibration associated with movements on site. Vehicles and plant will be appropriately maintained so as to ensure that the operation of the site does not give rise to unacceptable levels of noise or vibration. A Noise Risk Assessment was carried out in the planning application for the MWTRP. It concluded that the rating level of the MWTRP does not exceed the background sound level by more than 2dB(A). It is therefore considered that sound from the MWTRP would have a low impact at worst upon the residents assessed. Haul roads shall be kept clean and maintained in a good state of repair and subject to a speed limit so as to minimise vehicle noise. Generation and level of noise emissions from reversing beepers may make use of reverse warning systems incorporating broadband noise, if appropriate The Site Manager will be responsible for implementing risk management measures.	Low - The proposed pad is located within the confines of the fully operational Trecatti landfill site, where waste activities already take place. It should be noted that site traffic is already present for the non-hazardous landfilling operations and so the hazard is not a new hazard associated with the WTF.	Noise nuisance and loss of amenity	Not significant
Noise from operation of WTF	Potentially sensitive receptors as listed in Table 2-2, including agricultural land and areas of open space, residential properties, surface water bodies and the local road network. As shown in Drawing 004	Air and vibration through the ground	Site plant will be maintained according to the Manufacturer's instructions and fitted with silencing equipment where appropriate. The fixed plant will operate continually but will be housed in a container to minimise noise levels. Noise screening bunds will be considered if appropriate. The Site Manager will be responsible for implementing risk management measures.	Low – intermittent	Nuisance to local residents, loss of amenity.	Not significant.
Noise from engineering works e.g. construction of	Potentially sensitive receptors as listed in Table 2-2, including agricultural	Air and vibration through the ground	Site plant will be maintained according to the Manufacturer's instructions and fitted with silencing equipment where appropriate.	Low – construction operations will be	Nuisance to local residents, loss of amenity.	Not significant.

base pad for the MWTRP.	land and areas of open space, residential properties, surface water bodies and the local road network. As shown in Drawing 004		The Site Manager will be responsible for implementing risk management measures.	temporary.		
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Table A3 Fugitive Emissions Risk Assessment and Management Plan

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
What has the potential to cause harm?	What is at risk what do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? – who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
To Air						
Release of pollutants (PM ₁₀ , NO _x , etc) from traffic.	Potentially sensitive receptors as listed in Table 2-2, including agricultural land and areas of open space, residential properties, surface water bodies and the local road network. As shown in Drawing 004	Air – windblown.	To minimise releases, all vehicles will be subject to a programme of planned preventative maintenance and maintained in accordance with the manufacturers recommendations. Vehicle movements into and out of the site will be restricted to hours specified within the planning permission from the site. The Site Manager will be responsible for implementing risk management measures.	Low	Nuisance and health risk to local residents, and loss of amenity	Not significant.
Dust from vehicle movements.	Potentially sensitive receptors as listed in Table 2-2, including agricultural land and areas of open space, residential properties, surface water bodies and the local road network. As shown in Drawing 004	Air – windblown.	Waste will be brought to site in enclosed refuse collection vehicles and bulk loaders. Incoming waste vessels that are not enclosed will be sheeted to minimise escape of dust during transit. To minimise the emissions of dust arising from installation roads, suitable speed limits will be imposed for all vehicles. The main access road will be swept with a mechanical road sweeper as and when conditions dictate. During dry conditions, a water bowser will be available for use to spray the installation roads	Low	Nuisance and health risk to local residents, and loss of amenity.	Not significant.

			and the operational area, prior to and during vehicle movements. The Site Manager will be responsible for implementing risk management measures.			
Dust from waste handling operations. Release of dust and bio-aerosols from placement and turning of soil biopiles.	Potentially sensitive receptors as listed in Table 2-2, including agricultural land and areas of open space, residential properties, surface water bodies and the local road network. As shown in Drawing 004	Air	Waste will in general be delivered in enclosed refuse collection vehicles and bulk loaders. Where vehicles are not enclosed, they will be sheeted to prevent any escape of dust during transit. Potential sources of particulates will be maintained in moist conditions or covered to minimise the potential for wind whipping or dust release. Dust generation is controlled via the use of dust suppression measures. Roadways and yards will be periodically cleaned. During potentially dry or unfavourable conditions, mud and dusts collecting on hard surfaces, including access routes and stockyards, will be removed by scraping and sweeping. Surfaces will also be dampened down by water bowser. The operation of the WTF will be conducted in such a way as to control mud and debris from leaving the area. No plant or machinery involved in the WTF and composting processes will leave the site without having used the vehicle washes located at the site entrance / exit. Potential sources of particulates will be maintained in moist condition or covered to minimise potential for wind whipping or dust release. Dust is unlikely to appear during the turning of	Low	Nuisance, and harm to human health	Not significant

			the WTF soils as dust is an indication that the moisture content of the soil is too low. Should any dust be identified, water will be added to the biopile. If necessary water will be added to the biopile by either automatic or manually deployed irrigation pipes. The Site Manager will be responsible for implementing risk management measures.			
Release of VOCs from contaminated soils associated with WTF processes	Potentially sensitive receptors as listed in Table 2-2, including agricultural land and areas of open space, residential properties, surface water bodies and the local road network. As shown in Drawing 004	Air.	WTF Biopiles will be covered and provided with extraction ventilation when operational or meteorological conditions if required. Soils will typically be well weathered. The Site Manager will be responsible for implementing risk management measures.	Unlikely – the potential for VOC release during biopile remediation will be low.	Nuisance and health risk to site workers, visitors and local population.	Not significant.
Smoke or fumes.	Potentially sensitive receptors as listed in Table 2-2, including agricultural land and areas of open space, residential properties, surface water bodies and the local road network. As shown in Drawing 004	Air – windblown.	No waste shall be burned on the site. All site plant and machinery will be operated and maintained in accordance with manufacturer's specifications. Smoking will not be permitted anywhere on site. Fire-fighting equipment is kept on site. In the unlikely event of fire, the Biffa fire action plan will be followed. The Site Manager will be responsible for implementing risk management measures.	Unlikely.	Nuisance and health risk to Site workers, visitors and local population.	Not significant.

Continued...

To Water						
Potentially contaminated run off.	Surface water close to and downstream of site. Land and groundwater	Land and surface water	Waste treatment will take place on areas of engineered surfacing (pad) which will be fit for purpose and suitably maintained.	Low – due to surface and process water	Contamination of surrounding surface water, land and groundwater.	Not significant.

	beneath the site. Secondary A aquifer within the bedrock.		The surfacing of the treatment pad will be engineered and impermeable with a sealed drainage system. Process water generated by the waste treatment process at the biopile(s) will be removed via the internal air and water extraction pipes and routed to the process water tanks prior to discharge to a suitably licensed facility. Subject to quality testing, the water may be released to the existing Leachate Treatment Plant, Surface Water Management System or tankered off site for disposal / treatment. The conceptual and typical collection network for the biopile(s) is illustrated on Drawings 003 and 005. A bund will surround the biopile(s) pad and within it will be included the WTF infrastructure e.g. roadways, fuel storage, process water tank, site office and parking area, biofilter and equipment unit. Water run-off from within this bund will all be managed as potentially contaminated water and routed to the process water tank. The water will be stored at the process water tank prior to discharge to a suitably licensed facility or subject to quality testing, the water may be released to the leachate treatment plant or surface water management system. Operationally, at times when the biopile(s) are covered with a biocover, rainfall running off the biocover will be managed as clean surface run-off and directed to the surface water ditch to the east of the biopile(s). Clean surface water from the ditch will be routed to the surface water lagoon via a pipe. Water is discharged from the surface water management lagoon to the existing Landfill surface water management system; A cut-off valve will be provided at the surface water management lagoon and should any	management systems.		
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			contamination become evident, the water will be prevented from entering the existing surface water management system and controlled waters. All storage tanks will be bunded to 110% of the tank volume and located on hardstanding. Tanks and containers used for the storage of any liquid fuel oil will be located on hardstanding, labelled as to its contents, and bunded to 110% of the capacity of the fuel stored. Spill kits will be kept on site. Process and surface water management will be carried out in accordance with the Operating Techniques document prepared for the site, SLR reference 407.0034.00461/BATOT. The Site Manager will be responsible for implementing risk management measures.			
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Continued...						
Pests						
Birds, vermin and insects attracted to site.	Potentially sensitive receptors as listed in Table 2-2, including agricultural land and areas of open space, residential properties, surface water bodies and the local road network. As shown in Drawing 004	Land and Air.	Waste soils are not considered to be an attractor for birds and vermin. There will be no putrescible waste accepted at the WTF. The proposed WTF will be located within the larger Trecatti site and as such will have the benefit of existing pest and vermin control measures. Constant vigilance will be exercised in order to determine any pest activity. Remedial measures will be taken if necessary, for example employing a specialist contractor. A record of any occurrence of vermin will be maintained with any information of subsequent action taken. The Site Manager will be responsible for	Low - there is not anticipated to be any impact on the attraction of birds, vermin and insects to the site from the proposed variation.	Nuisance and health risk to local residents and loss of amenity.	Not significant.

			implementing risk management measures.			
Mud/Litter						
Vehicle movements. Litter may escape from site and/or delivery vehicles.	Local roads including Pontefract Road. Surrounding land Local residents. See Table 2-2 and Drawing 004.	Tracked by vehicles arriving at and leaving the site. Windblown litter.	Incoming vehicles containing waste will be enclosed or sheeted. Vehicles will be visually inspected to ensure they are clear of loose waste and that any material being exported from site is secure. Roadways and yards will be periodically cleaned. During potentially dry and unfavourable conditions, mud and dusts collecting on hard surfaces, including access routes and stockyards, will be removed by scraping and sweeping. Surfaces will also be dampened down by water bowser. The proposed waste types to be accepted at the WTF for treatment are not considered to pose a high risk of litter. Regular site inspections will identify any problems associated with mud or litter. Should wind-blown litter be identified as having escaped the permitted area, it will be collected as soon as possible. The Site Manager will be responsible for implementing risk management measures.	Low.	Nuisance and health risk to local residents and other road users.	Not significant.

Table A4 Accidents Risk Assessment and Management Plan

What do you do that can harm and what could be harmed			Managing the Risk	Assessing the Risk		
Hazard	Receptor	Pathway	Risk management	Probability of exposure	Consequence	What is the overall risk
What has the potential to cause harm?	What is at risk what do I wish to protect?	How can the hazard get to the receptor?	What measures will you take to reduce the risk? – who is responsible for what?	How likely is this contact?	What is the harm that can be caused?	What is the risk that still remains? The balance of probability and consequence
Leak or spillage of waste soils, other potentially polluting matter at the WTF.	Local land quality, surface water and groundwater. Surface water close to and downstream of site. Land and groundwater beneath the site. Secondary A aquifer within the bedrock. Local residents and surrounding land use.	Direct run-off from site across ground surface, via surface water drains.	Wastes will be brought to site in enclosed vehicles and bulk loaders. Incoming waste vessels that are not enclosed will be sheeted (or netted) to ensure no escape during transit. Tanks and containers used for the storage of potentially polluting liquids, including oils and fuel, will be labelled as to its contents, and bunded to 110% of the capacity of the fuel stored. Spill kits will be kept on site. Process water tanks will be enclosed and bunded and the tanks will be fitted with float controls to prevent them from overflowing and to switch off the pump when the tank is full. Tanks will be surrounded by a leakage containment bund capable of containing at least 110% of the volume of the largest tank within the bund, or 125% of the total tank volume within the bund, whichever is greater. The Site Manager will be responsible for implementing risk management measures.	Low.	Contamination of local surface water with consequences such as algal bloom and fish kill. Contamination of land. Nuisance and health risks.	Not significant.

Containment failure (i.e. bunds, drainage interceptors).	Local land quality, surface water and groundwater.	Direct run-off from site across ground surface.	Inspection and preventative maintenance programme will be in place for site surfacing and containers. Spill kits will be kept on site. The Site Manager will be responsible for implementing risk management measures.	Low.	Contamination of local surface water with consequences such as algal bloom and fish kill. Contamination of land. Nuisance and health risks.	Not Significant.
Flooding	Land and surface water.	Flood waters over land.	Containment measures will be put in place along with appropriate drainage measures. The site will have appropriate surface and process water management systems in place. The Site Manager will be responsible for risk management.	Low. The site is not located within a flood zone.	Contaminated flood waters may contaminate property and land.	Not significant
Accidental fires resulting in the release of polluting materials to air, land or water.	Local population, staff, fire fighters could be caused respiratory irritation, illness and nuisance. Pollution of water or land with firewater.	Air transport of smoke, spillages and contaminated firewater by direct run off from site and via surface water drains and ditches.	There will be no burning of waste on site. Fire extinguishers will be kept on site. The Site Manager will be responsible for implementing risk management measures.	Low.	Harm and nuisance to local population and site staff.	Not significant.
Incompatible substances coming into contact/unwanted reactions.	Local population, site staff.	Land, air.	Any potentially polluting substances will be appropriately stored. The Site Manager will be responsible for implementing risk management measures.	Low.	Deterioration of air quality or production of harmful substances which could cause fire or damage health of those exposed.	Not significant.
Vandalism / unauthorised access - causing loss of containment or fire.	Local population, staff, fire fighters could be caused respiratory irritation, illness and nuisance. Pollution of water or land with firewater. Local land quality, surface water and groundwater.	Land, air.	The site gates will remain closed and locked when the site is unmanned. The site perimeter is secure. No machinery will be left unsecured. The Site Manager will be responsible for implementing risk management measures.	Low.	Harm and nuisance to local population and site staff. Contamination of land and surface water.	Not significant.

4.0 CONCLUSION

Environmental Risk Assessment has been undertaken as described by regulatory guidance EPR H1. Assessment is provided as part of the application for an Environmental Permit Variation for the Trecatti Waste Treatment Facility.

Qualitative risk assessment has considered odour, noise, fugitive emissions, dust, releases to water, litter, and potential for accidents and incidents. Assessment concludes that with the implementation of the risk management measures described above, potential hazards from the Trecatti Multipurpose Waste Treatment and Remediation Pad are not likely to be significant.

5.0 CLOSURE

This report has been prepared by SLR Consulting Limited with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the client. Information reported herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of Biffa Waste Services Limited; no warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of the work.

Site Condition Report

Trecatti Landfill Site
Multipurpose Waste Treatment and Remediation Pad
Site Condition Report

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DRAWINGS

Drawing 001	Site Location Plan
Drawing 004	Proposed Site Layout and Boundary
Drawing 003	Proposed Site Drainage

1.0 INTRODUCTION

Biffa Waste Services Limited (Biffa) has retained SLR Consulting Limited (SLR) to prepare an application to;

1. vary Environmental Permit reference EPR/RP3733PC for Trecatti landfill, Merthyr, Wales under The Environmental Permitting (England and Wales) Regulations 2010 (as amended) for the operation of a Waste Treatment and Remediation Facility; and
2. vary the same Permit to add Standard Rules Permit SR2012 No 8 to allow for the operation of a Composting Facility on the Multipurpose Pad.

This Site Condition Report (SCR) provides the baseline conditions for the proposed area associated with the proposed Composting Facility and is provided for information purposes only.

In addition to this Site Condition Report, the following documentation is also submitted in support of the application of a Standard Rule Environmental Permit Application:

- Non Technical Summary;
- Application Forms Parts A, C1 and F1 and supporting documentation;

This SCR has been prepared in accordance with the Environment Agency's (EA) H5 Guidance Note on SCR¹. The objective of the SCR is to record and describe the condition of the land at the site at the time of the permit application. The SCR will provide a point of reference and baseline environmental data so that when the permit is surrendered it can be demonstrated that there has been no deterioration in the condition of the land as a result of the proposed operations, and ensure that the condition of the land is in a 'satisfactory state' on surrender of the permit.

Sections 1 to 3 of the EA's SCR template have been completed in the preparation of this document, which comprises the following:

- site details;
- condition of the land at permit issue;
 - geology;
 - hydrogeology;
 - hydrology;
- pollution history;
- evidence of historic contamination; and
- permitted activities.

Section 4 to 7 of the SCR template will be maintained during the life of the permit and Sections 8 to 10 will be completed and submitted in support of the application to surrender the permit.

¹ EA Guidance; Site Condition Report – guidance and templates, Version 3, May 2013.

2.0 SITE CONDITION REPORT H5 TEMPLATE

1.0 SITE DETAILS	
Name of the applicant	Biffa Waste Services Limited
Activity address	Trecatti Landfill Fochriw Road Merthyr Tydfil Mid Glamorgan CF48 4AB
National grid reference	SO 08342 07666
Document reference and dates for Site Condition Report at permit application and surrender	407.00034.00461/SCR, July 2015 – for a Standard Rule Environmental Permit application.
Document references for site plans (including location and boundaries)	Drawing 001 – Site Location Plan Drawing 002 – Proposed Site Layout and Boundary Drawing 003 – Proposed Site Drainage

Note:

In Part A of the application form you must give us details of the site's location and provide us with a site plan. We need a detailed site plan (or plans) showing:

- Site location, the area covered by the site condition report, and the location and nature of the activities and/or waste facilities on the site.
- Locations of receptors, sources of emissions/releases, and monitoring points.
- Site drainage.
- Site surfacing.

If this information is not shown on the site plan required by Part A of the application form then you should submit the additional plan or plans with this site condition report.

2.0 Condition of the land at permit issue	
Environmental setting including: • geology • hydrogeology • surface waters	<u>Geology</u> The site has been previously worked, suggesting that much of superficial and bedrock material will have been removed. However, searches conducted on the British Geological Society website (www.bgs.ac.uk, accessed July 2015) indicate the site is situated on bedrock geology consisting of the South Wales Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone. Only partial superficial geology results are available however, the site is located within an area of superficial deposits consisting of Till, Devensian - Diamicton. <u>Hydrology and Hydrogeology</u> The nearest watercourse is a tributary to the Rhymney River which flows south-easterly, passing approximately 1km to the north-east of the application site at its closest point. Previous EA (now NRW) mapping classified bedrock at the application site as a 'Secondary A' aquifer which is defined by the EA as '<i>permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.</i>' Previous EA (now NRW) mapping classified the application site as not within a Groundwater Source Protection Zone (SPZ). EA (now NRW) mapping (www.maps.environment-agency.gov.uk) indicates that the site does not lie within

	an area subject to flooding.
Pollution history including: • pollution incidents that may have affected land • historical land-uses and associated contaminants • any visual/olfactory evidence of existing contamination • evidence of damage to pollution prevention measures	<u>Pollution History</u> The NRW website includes details of pollution incidents on and off site; On site: There have been no on site pollution incidents on record. Off site: Within 1km of the site there have been no recorded pollution incidents. <u>Historical Land-uses</u> On site: Merthyr Tydfil Borough Council commenced landfilling at Trecatti in 1986 and operated the site up until 1992 when the management transferred to Biffa Waste Services Limited. The site was licensed at that time to receive domestic, commercial and industrial wastes including difficult and special wastes. Engineered containment principles were introduced at Trecatti from 1993. The proposed multipurpose pad will be sited on an area of land subject to the permanent deposit of waste. Off site: Within 1km of the site boundary, the area has been developed for housing to the east (Dowlais) and industrial uses to the south (mining operations). The NRW website confirms there are no current or historic landfill sites within 1km. NRW maps indicate there is one site operating with an OPRA (Dowlais Slaughterhouse, Permit reference: EA/EPR/BK1759IE/V004) located approximately 800m to the north of the site. A further site classed as an A20 (salvage) site is located approximately 600m to the north. <i>Registered substance sites</i> Within 1km of the site, there are no registered radioactive substance sites.

	There are no registered chemical substances sites within 1km of the site. All of the above represent sources of potentially contaminative former land uses in the locality of the site.
Evidence of historic contamination, for example, historical site investigation, assessment, remediation and verification reports (where available)	Not applicable – The pad will be sited on an area of land subject to permanent deposit of waste.
Baseline soil and groundwater reference data	Not applicable – The pad will be sited on an area of land subject to permanent deposit of waste.
Supporting information	Not applicable

3.0 Permitted activities	
Permitted activities	Digestate Storage Lagoon R3: Recycling/reclamation of organic substances which are not used as solvents; and R13: Storage of wastes pending the operations numbered R3 and R5.
Non-permitted activities undertaken	Not applicable.
Document references for: - Plan showing activity layout; and - Environmental risk assessment.	Drawing 001: Site Location Plan Drawing 002: Proposed Site Layout and Boundary Drawing 003: Proposed Site Drainage

Note:

In Part B of the application form you must tell us about the activities that you will undertake at the site. You must also give us an environmental risk assessment. This risk assessment must be based on our guidance (*Environmental Risk Assessment - EPR H1*) or use an equivalent approach.

It is essential that you identify in your environmental risk assessment all the substances used and produced that could pollute the soil or groundwater if there were an accident, or if measures to protect land fail.

These include substances that would be classified as 'dangerous' under the Control of Major Accident Hazards (COMAH) regulations and also raw materials, fuels, intermediates, products, wastes and effluents.

If your submitted environmental risk assessment does not adequately address the risks to soil and groundwater we may need to request further information from you or even refuse your permit application.

3.0 CLOSURE

This report has been prepared by SLR Consulting Limited with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the client. Information reported herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of Biffa Waste Services Limited; no warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of the work.

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