	EPR Compliance Assessment Report	Report ID: PP3139GB/0256311		
This form will report compliance with your permit as determined by an NRW officer				
Site	Hafod Quarry Landfill EPR/PP3139GB		Permit Ref	PP3139GB
Operator/ Permit holder	Cory Environmental (Central) Ltd			
Date	26/01/2016	Time in		Out
What parts of the permit were assessed	TerraConsult (on behalf of Cory) Hydrogeological Risk Assessment Report No 10127-R01 December 2015			
Assessment	Report/data review	EPR Activity:	Installation: X	Waste Op: Water Discharge:
Recipient's name/position	Ian Craven - Site Manager			
Officer's name	Ian Oakes	Date issued	29/01/2016	

Section 1 - Compliance Assessment Summary				
<p>This is based on the requirements of the permit under the Environmental Permitting Regulations. A detailed explanation and any action you may need to take are given in the "Detailed Assessment of Compliance" (section 3). This summary details where we believe any non-compliance with the permit has occurred, the relevant condition and how the non-compliance has been categorised using our Compliance Classification Scheme (CCS). CCS scores can be consolidated or suspended, where appropriate, to reflect the impact of some non-compliances more accurately. For more details of our CCS scheme, contact your local office.</p>				
Permit Conditions and Compliance Summary			Condition(s) breached	
a) Permitted activities	1. Specified by permit	A		
b) Infrastructure	1. Engineering for prevention & control of pollution	N		
	2. Closure & decommissioning	N		
	3. Site drainage engineering (clean & foul)	N		
	4. Containment of stored materials	N		
	5. Plant and equipment	N		
c) General management	1. Staff competency/ training	N		
	2. Management system & operating procedures	N		
	3. Materials acceptance	N		
	4. Storage handling, labelling, segregation	N		
d) Incident management	1. Site security	N		
	2. Accident, emergency & incident planning	N		
e) Emissions	1. Air	N		
	2. Land & Groundwater	N		
	3. Surface water	N		
	4. Sewer	N		
	5. Waste	N		
f) Amenity	1. Odour	N		
	2. Noise	N		
	3. Dust/fibres/particulates	N		
	4. Pests, birds & scavengers	N		
	5. Deposits on road	N		
g) Monitoring and records, maintenance and reporting	1. Monitoring of emissions & environment	A		
	2. Records of activity, site diary, journal & events	N		
	3. Maintenance records	N		
	4. Reporting & notification	N		
h) Resource efficiency	1. Efficient use of raw materials	N		
	2. Energy	N		
KEY: C1, C2, C3, C4 = CCS breach category (* suspended scores are marked with an asterisk), A = Assessed (no evidence of non-compliance), N = Not assessed, NA = Not Applicable, O = Ongoing non-compliance – not scored				

Number of breaches recorded	0	Total compliance score (see section 5 for scoring scheme)	0
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If the Total No Breaches is greater than zero, then please see Section 3 for details of our proposed enforcement response

Section 2 – Compliance Assessment Report Detail

This section contains a report of our findings and will usually include information on:

- the part(s) of the permit that were assessed (e.g. maintenance, training, combustion plant, etc)
- where the type of assessment was 'Data Review' details of the report/results triggering the assessment
- any non-compliances identified
- any non-compliances with directly applicable legislation
- details of any multiple non-compliances
- information on the compliance score accrued inc. details of suspended or consolidated scores.
- details of advice given
- any other areas of concern
- all actions requested
- any examples of good practice.
- a reference to photos taken

This report should be clear, comprehensive, unambiguous and normally completed within 14 days of an assessment.

Hydrogeological Risk Assessment Review - REQUEST FOR FURTHER INFORMATION.

We are currently unable to accept the submitted HRA in its current form, and request further information / clarification as outlined below:

1 - Information received:

Hafod Landfill Site Hydrogeological Risk Assessment Review. TerraConsult, Report number 10127-R01, December 2015.

2 - Additional information reviewed:

- a. Hafod Quarry Landfill Site (PP3139GB) Leachate Management Plan (v2.1). Cory Environmental (Central) Limited, April 2015.
- b. Permit EPR/PP3139GB/V006, February 2012.

3 - General Comments/Observations

- Location of Cells - SLR drawing has phases 1 to 5 where are the cells within the phases? (assumed phase 1 is cell 1).
- Figures (graphs) – too much information on one graph with secondary vertical axis – please provide two graphs to aid interpretation.
- Figure 4 to 7 – too much in one graph – again please split out to make review of data easier.
- Figure 9 and 10 – need to join the dots up to determine the trends.
- Figure 11 and 12 – why is there a gap around 2011 – reason for this?
- Figure 17 to 19 – previous comments on figures apply.

4 - Detailed comments

a. Leachate (Source)

We note the issues with monitoring and controlling the leachate over the last few years and understand that the Leachate Management Plan was submitted in April 2015 to detail and resolve the problems – how successful has this management plan been since its implementation?

Table 3 – note the change in leachate source term over the three HRAs does this feed into the modelling of the site?

- Should leachate level measurements be taken from leachate wells that are being abstracted – does this increase the amount of foaming etc.?
- Discussion on leachate levels and elevations in mAOD (top of page 7) – a diagram would help in visualising the sloping bases of the cell(s).
- Leachate monitoring wells – which wells for which cells? Drwg HAF092 (March 2015) has marked leachate wells – are these the LMP series or another set of locations?

b. Pathways

Previously it was suggested to triangulate monitoring boreholes from the same geological units to determine the groundwater flow direction – has this been done?

- What does borehole A and B and then T, M and B labelling define? Are these boreholes nested piezometers or separate boreholes? The borehole construction details are needed to clarify the labelling.
- Why have borehole locations 7 and 8 been removed from the monitoring network? If not longer required, have they been decommissioned to prevent a pathway?
- After the relocation of HA12, the old location should be decommissioned to prevent it being a pathway for pollution from road drainage.
- The same detection limits should be maintained between sampling rounds to avoid elevated concentration being lost. They should ideally be below EQS or something similar.

c. Receptor

A number of boreholes have been identified as being impacted by non-landfill derived contamination, mainly along the eastern (down gradient) boundary. The contamination has been reported as ammoniacal nitrogen and chloride, which would be considered landfill contamination marker substances. HA01 is located up gradient of the site, HA09 is the furthest down gradient borehole (based on groundwater flow direction of NW to SE) and would be impacted by groundwater from the site and HA11 is between the two and would be impacted by groundwater flows from the site. Previous HRA reviews identified the potential impact of a slurry store close to HA09 as being the likely source for the elevated ammoniacal nitrogen – was this investigated further? HA11 is now impacted by ammoniacal nitrogen and it has been proposed by spreading of manure in the adjacent downgradient field – this should be investigated further to confirm the source.

The last HRA mentioned manganese oxides nodules in the Upper Ruabon Limestone – there is no discussion on this within the latest HRA – has the understanding of the limestones units changed and why, on what evidence?

We note the issues of using EPH in the analysis and the proposal to stop analysing for this – is there an alternative analysis that could be used? Can TPH and S/VOC scans been used instead? The previous HRA was going to undertake TPH sampling over a 12 month period to set limits and levels – was this undertaken as there is no mention of this within the report?

There is limited explanation of the operation of the Basal Groundwater Management System.

Please provide details on the installation and operation of the system, i.e. volumes abstracted, collection and discharge locations etc.

d. Exceedance of permit limits

Ammoniacal nitrogen and chloride are the only contaminants that exceed the limits set in the permit. The chloride is only exceeded in HA12, which is due for relocation due to its location on the road side of the dual carriageway. HA11B(M) records a maximum value of chloride at 200 mg/l, which is just at the permit limit – it is not known if this is a one off occurrence; based on the average value at 18 mg/l it is likely to be a one off occurrence.

Ammoniacal nitrogen permit limit is 2 mg/l, in borehole HA09A(B) a maximum results of 2 mg/l was observed with the average at 0.49 mg/l; it is not known if this is also a one off occurrence.

Table 7 is a good summary table, but the graphical data (ideally as an appendix) would confirm if the maximum values observed and recorded in the table are one off occurrences or a more consistent elevated occurrence.

e. Requisite Surveillance

Cory propose three changes to the current monitoring scheme at the site.

Firstly, changes to leachate levels from 2 m above the base of the liner to 1 m below the top of the terminal bund and 1 m below external groundwater level if no terminal bund. From the description it is not clear how this relates to the previous 2 m above base of liner – further explanation is required and if possible a cross section should be used to explain the changes.


Secondly, relocation of HA12A and B to new location at HA12C and the subsequent monitoring to allow derivation of the permit limits – we agree with relocating site and recommend 12 rounds of monthly monitoring to allow derivation of permit limits for this new site at HA12C.

Thirdly, removal of SW4 from the sampling network – we accept this given its detached location from the landfill site especially as HA12A and B are now being decommissioned.

Finally, changes to determinands sampling in the surface waters. We note the comment that ammoniacal nitrogen and chloride are the only contaminants found in the leachate of sufficient concentration to cause pollution and therefore it is proposed to only monitoring these. However, to remove all other determinands from the SW monitoring is not considered acceptable. Table 13 details the proposed SW monitoring schedule with ammoniacal nitrogen, chloride, suspended solids, BOD and iron – why does iron remain when all the other major ions have been removed?

There is no proposal to take temperature, electronical conductivity and pH of the surface water as field parameters. Measurement of field parameters at the time of the sampling and analysis of major ions all help with determining if the surface water is impacted by pollution and potentially indicate likely sources.

- Table 10 – could you explain internal and external cells – where are these? Please explain or draw on a map the differences.
- Table 11 and 12 noted.
- Table 13 and 14 – comments made above.

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Operator/ Permit	Cory Environmental (Central) Ltd	Date 26/01/2016

Section 3- Enforcement Response	Only one of the boxes below should be ticked
<p>You must take immediate action to rectify any non-compliance and prevent repetition. Non-compliance with your permit conditions constitutes an offence and can result in criminal prosecutions and/or suspension or revocation of a permit. Please read the detailed assessment in Section 2 and the steps you need to take in Section 4 below.</p>	
Other than the provision of advice and guidance, at present we do not intend to take further enforcement action in respect of the non-compliance identified above. This does not preclude us from taking enforcement action if further relevant information comes to light or advice isn't followed.	X
In respect of the above non-compliance you have been issued with a warning. At present we do not intend to take further enforcement action. This does not preclude us from taking additional enforcement action if further relevant information comes to light or offences continue.	
We will now consider what enforcement action is appropriate and notify you, referencing this form.	

Section 4- Action(s)			
Where non-compliance has been detected and an enforcement response has been selected above, this section summarises the steps you need to take to return to compliance and also provides timescales for this to be done.			
Criteria Ref.	CCS Category	Action Required/Advised	Due Date
See Section 1 above			

Section 5 - Compliance notes for the Operator

To ensure you correct actual or potential non-compliance we may

- advise on corrective actions verbally or in writing
- require you to take specific actions in writing
- issue a notice
- require you to review your procedures or management system
- change some of the conditions of your permit
- decide to undertake a full review of your permit

Any breach of a permit condition is an offence and we may take legal action against you.

● We will normally provide advice and guidance to assist you to come back into compliance either after an offence is committed or where we consider that an offence is likely to be committed. This is without prejudice to any other enforcement response that we consider may be required.

● Enforcement action can include the issue of a formal caution, prosecution, the service of a notice and or suspension or revocation of the permit.

See our Enforcement and Civil Sanctions guidance for further information

This report does not relieve the site operator of the responsibility to

- ensure you comply with the conditions of the permit at all times and prevent pollution of the environment
- ensure you comply with other legislative provisions which may apply.

Non-compliance scores and categories

CCS category	Description	Score
C1	A non-compliance which could have a major environmental effect	60
C2	A non-compliance which could have a significant environmental effect	31
C3	A non-compliance which could have a minor environmental effect	4
C4	A non-compliance which has no potential environmental effect	0.1

Operational Risk Appraisal (Opra) - Compliance assessment findings may affect your Opra score and/or your charges. This score influences the resource we use to assess permit compliance.

Section 6 – General Information

Data protection notice

The information on this form will be processed by the Natural Resources Wales (NRW) to fulfill its regulatory and monitoring functions and to maintain the relevant public register(s). The NRW may also use and/or disclose it in connection with:

- offering/providing you with its literature/services relating to environmental matters
- consulting with the public, public bodies and other organisations (e.g. Health and Safety Executive, local authorities) on environmental issues
- carrying out statistical analysis, research and development on environmental issues
- providing public register information to enquirers
- investigating possible breaches of environmental law and taking any resulting action
- preventing breaches of environmental law
- assessing customer service satisfaction and improving its service
- Freedom of Information Act/Environmental Information Regulations request.

The NRW may pass it on to its agents/representatives to do these things on its behalf. You should ensure that any persons named on this form are informed of the contents of this data protection notice.

Disclosure of information

The NRW will provide a copy of this report to the public register(s). However, if you consider that any information contained in this report should not be released to the public register(s) on the grounds of commercial confidentiality, you must write to your local area office within twenty working days of receipt of this form indicating which information it concerns and why it should not be released, giving your reasons in full.

Customer charter

What can I do if I disagree with this compliance assessment report?

If you are unable to resolve the issue with your site officer, you should firstly discuss the matter with the officer's line managers. If you wish to raise your dispute further through our official Complaints and Commendations procedure, phone our general enquiry number 0300 065 3000 (Mon to Fri 08.00–18.00) and ask for the Customer Contact team or send an email to enquiries@naturalresourceswales.gov.uk. If you are still dissatisfied you can make a complaint to the Public Services Ombudsman for Wales. For advice on how to complain to the Ombudsman phone their helpline on 0845 607 0987.