

**This form will report compliance with your permit as determined by an NRW officer**

Site	Docksway Landfill	Permit Ref	DP3733BK		
Operator/Permit holder	Newport City Council				
Regime	Installations				
Date of assessment	07/10/2016	Time in	10:00	Out	14:00
Assessment type	Audit				
Parts of the permit assessed	Capping, gas extraction				
Lead officer's name	Willey, David				
Accompanied by	Ward, Tyrone				
Recipient's name/position	Jonathan Davey/ Landfill manager	Date issued	31/10/2016		

### Section 1 – Compliance Assessment Summary

This is based on the requirements of the permit under the Environmental Permitting Regulations or the licence under the Water Resources Act 1991 as amended by the Water Act 2003. A detailed explanation is captured in "Compliance Assessment Report Detail" (Section 2) and any actions you may need to take are given in the "Action(s)" (section 4). 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.

Permit conditions and compliance summary	CCS Category	Condition(s) breached
B1 - Infrastructure - Engineering for prevention and control of emissions	C4	3.6.1
	C3	2.7.1
	C4	2.5.3
E2 - Emissions - Land and groundwater	C4	3.6.1

**KEY:** See Section 5 for breach categories, suspended scores will be indicated as such.

**A** = Assessed or assessed in part (no evidence of non-compliance), **X** = Action only,

**O** = Ongoing non-compliance, not scored.

<b>Number of breaches recorded</b>	<b>4</b>	<b>Total compliance score</b> (see section 5 for scoring scheme)	4.3
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**If the Number of breaches recorded is greater than zero, please see Section 3 for 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 (eg. 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 advice given
- Any other areas of concern
- Any actions requested
- Any examples of good practice
- A reference to photos taken

### Docksway site visit – 7th October 2016

This Compliance Assessment Form covers the following:

1. Actions from last meeting
2. Capping at Area 2
3. Gas extraction
4. CQA reports and plans
5. Monitoring returns
6. Litter picks
7. Waste returns
8. Asbestos cell

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#### 1. Actions from last meeting

The actions below have been completed with the following comments:

**ACTION:** *Please could NCC / INFINIS provide the gas compound readings (gas quality and flow) on the date of the survey.*

Data has been provided from INFINIS.

**ACTION:** *Please could NCC / INFINIS provide the last 3 months well balancing data for analysis.*

Data has been provided from INFINIS.

**ACTION:** *(Reference location 11) In cell 1, gas wells XX recorded levels of XX methane with associated strong odour. These wells appeared to be under positive pressure with a visible plume. Please can you arrange for these to be investigated as a matter of urgency, and either*

*repaired or replaced. An associated strong odour was detected in the surrounding area, and we advised that operational staff and visitors should avoid this part of the site until negative pressure can be resumed. Taken in total, this area represents a significant fugitive emission and is a main source of odour (Infinis).*

Wells in this area have been identified with capping work being undertaken and new wells being drilled at the end of October 2016. This work will improve gas extraction and reduce odour impact off site.

***ACTION:*** (Reference location 11) *Infinis to investigate the health, and provide timelines for completing any works, of gas well 3 and the other gas wells in this area.*

Wells in this area have been identified with capping work being undertaken and new wells being drilled at the end of October 2016. This work will improve gas extraction and reduce odour impact off site.

***ACTION:*** (Reference location 11) *A random inspection of gas extraction wells revealed several had no apparent flow. Please can you provide the last 3 month's balancing data for analysis (NCC/Infinis).*

Data has been provided from INFINIS.

***ACTION:*** (Reference location 13) *Infinis to investigate the health, and provide timelines for completing any works, of gas well Ref. 1009 and associated pipework.*

This location is believed to be leachate well DWYL0002. There are perforations at bottom of well that are flooded. With the capping work being undertaken the situation here should improve.

***ACTION:*** (Reference location 14) *Infinis to investigate the health, and provide timelines for completing any works, of gas well Ref. 1006.*

Completed. This has been rebalanced to increase vacuum.

***ACTION:*** (Reference location 16) *Infinis to investigate why this leachate well was turned off.*

This leachate well has air ingress has air ingress. The capping programme will rectify this situation.

***ACTION:*** (Reference location 17) *Infinis to investigate the health, and provide timelines for completing any works, of the gas wells in the south west area of Area 2.*

Infinis suspect this to be leachate well DWYL0005. Similar to DWYL0002 where perforations at bottom of well are flooded. The capping programme will rectify this situation.

***ACTION:*** (Reference location 18) *Infinis to investigate and fix the gas well Ref.1002.*

Infinis have investigated with camera survey demonstrating the well is intact with good

perforations at 7.5m and liquid dips to 12m depth.

**ACTION:** (Reference location 19) *There is a large area of cell 1 where there is no gas extraction at all (this includes a flat valley feature) Action NCC/Infinis/NRW to discuss further, including filling sequence, improving local profiles and timing for the next round of gas extraction wells.*

Capex has been applied for this work. There is considerable buried infrastructure in area adjacent to this. There is the possibility of drilling two location here.

**ACTION:** (Reference location 26) *Infinis to investigate the health and provide timelines for completing any works of gas well 21.*

Capping in this area will improve gas extraction.

**ACTION:** (Reference location 31) *Infinis to investigate the health and provide timelines for completing any works of gas wells Ref. 1502.*

Well checked by Infinis with good suction. This area will be capped which will improve extraction.

**ACTION:** (Reference location 32, 33 and 35) *NCC to ensure that all employees are aware that no naked flames are permitted in this area.*

Completed. See photo below of sticker on leachate well.

**Photo 1: No smoking sign on leachate well**



**ACTION:** *Please could NCC provide the timelines for the capping in Area 2?*

The capping programme has begun at the site with the document 'Docksway Waste Disposal Site, Area 2 Development, 2016 Capping Program CQA Plan, Project Ref: 2511 Date: September 2016'.

### **Actions carried forward**

**ACTION:** (Reference location 11) Infinis to provide update plans for leachate wells and gas wells and ensure that the wells are clearly signed.

NRW have been informed that the wells are signed but NRW have not received an updated drawing with these wells on.

**ACTION:** (Reference location 19) NCC to demonstrate how gas extraction will be incorporated into the current tipping area as well as ensuring there is good fall from the wells.

**ACTION:** (Reference location 19) NCC to look into removal or a reduction of the valley feature which may, under certain metrological conditions, act as a confined space. Also recommend that landfill workers who are on the open tipping area are provided with H2S monitors at all times.

Viridor downtimes have enabled the 'valley feature' to be filled, this has improved the landform and reduced the chances of a confined space situation.

**ACTION:** (Reference location 27) Infinis to investigate and fix the valve leak at Well 21.

**ACTION:** (Reference location 28) Condensate blockages were found in transmission pipe-work low points for wells the cell 2 east flank; please investigate and improve falls (Infinis)

**ACTION:** (Reference location 28) Infinis to investigate the health, and provide timelines for completing any works, of gas well Ref. 1607.

## **2. Capping at Area 2**

Permanent capping at Area 2 has commenced with temporary capping to be laid on the north east flank of cell 2 where high fugitive emissions were previously monitored. The permanent capping will extend around the perimeter of the cell across the upper flanks in accordance with the drawing Cells 1 & 2 Capping 2016, Overall Scheme Extents drawing number: 2511\_GA\_01.

NCC have begun the capping works across Phase 2 that started on the 3rd October. The timeframe for these works is between 12 and 14 weeks.

As part of the rolling programme 10 gas wells are currently disconnected.

**ACTION:** NCC to inform NRW when significant works commence at site or have been completed. For example capping at the site or commencement of waste acceptance at the asbestos cell.

PBA will once again act as CQA Project Managers with NCC acting as CQA Site Engineers. Jim Davies Civil Engineering will act as Principle Contractors with Celtic Lining as the specialist lining Sub Contractors.

**ACTION:** NCC to forward PBA's third party engineer details.

The document '*2016 Capping Program CQA Plan*' sets out the extent of the proposed works.

**Photo 2: View along capped east flank**



**Photo 3: View west along flank to be capped over the laid regulation layer**



The Upper flank areas are graded to final profiles with a placement of a 300mm min regulation layer consisting of screening fines. On closer inspection by NRW the regulation layer was not considered to be best practice. The aim of the regulation layer is to provide a uniform, smooth and firm layer on which to place the protective geotextile.

During the inspection NRW found several pieces of sharp plastic, and there is the potential for other items (nails, screws) to be present if not separated out by a magnet.

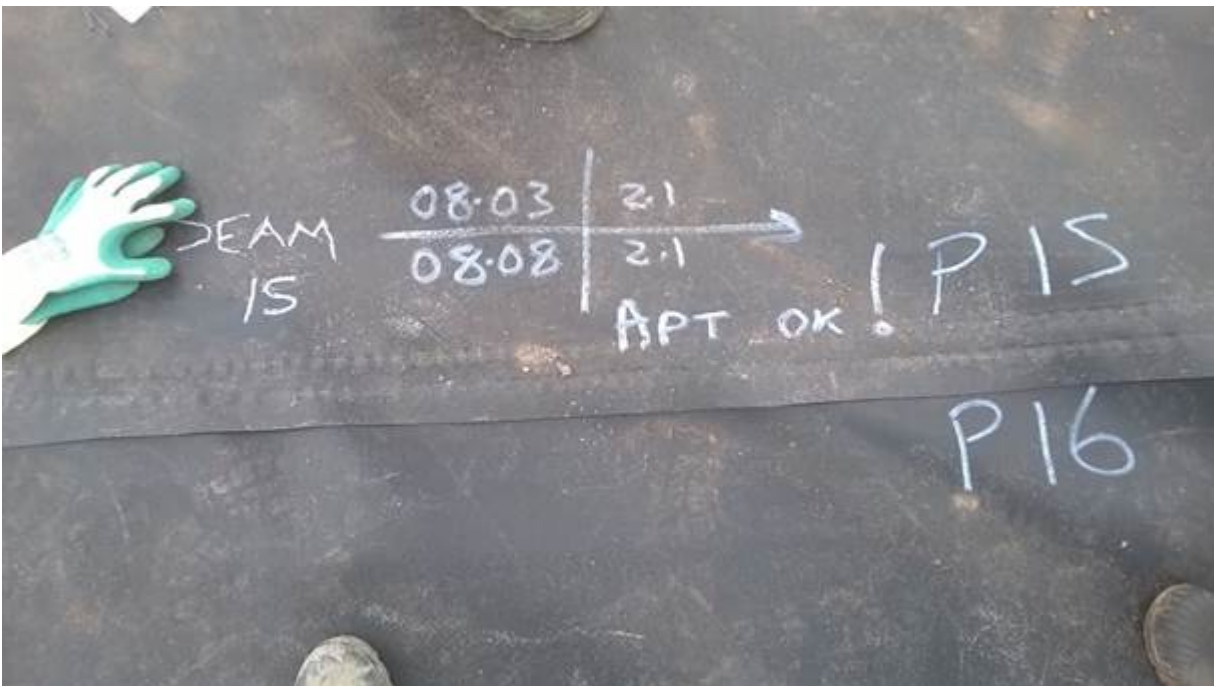
**ACTION:** NCC to confirm the use of this regulation layer with the geotextile manufacturer to ensure suitability. NCC to increase the frequency of visual inspections of the regulation layer to ensure the layer is suitable and avoid the potential of damage to the membrane.

**Photo 4: Regulation layer**



NRW discussed capping works with NCC including on-site supervision and the completion of daily CQA check sheets. Non-conformances will be included in the validation report.

**Photo 5: Photograph of APT (air pressure testing) checks**



NRW observed that spreader bars were being placed directly onto the LLDPE membrane. This is not considered to be best practice. NCC informed the contractor immediately.

**Photo 6: Spreader bars resting on membrane**



Breach of permit condition 2.5.3 where the construction proposals will not impact on the performance of the element of the design. **Considered a category 4 breach of the permit as there was no damage made to the liner with immediate action taken by NCC.**

### **3. Gas extraction**

An inspection of cell 1 within Area 2, where high fugitive emissions were recorded, was undertaken. Infinis detailed that during filling and raising of well headworks the slotted sections are now only targeting gas at depth, and that mid and surface emissions have poor collection due to extended plain pipe-work. As a result, a CQAP has been provided for 6 re-drills which will greatly improve gas collection efficiency. It is anticipated these will be installed at the end of October 2016. NRW officers will avoid cell 1 until these works have been completed.

NCC and Infinis are working closely so that extraction is maximised during these works and pin wells will be retained where possible.

Following capping of cell 1 upper flanks it will be straightforward to supplement with new pins (odour control) if required. NRW discussed pipe-work falls to the gas collection main post-works.

**ACTION:** NCC/Infinis to provide last 6 months Balancing and Compound data for analysis.

### **4. CQA reports and plans**

The following CQA reports and plans have been received by NRW:

#### ***Base stabilisation***

Stabilisation report for Area 2 Cells 3 and 4 was received in March 2016 that covers the CQA

validation. Area 2 comprises 5 engineered cells with cells 1 and 2 built and active with cell 3a recently accepting asbestos waste. The stabilisation work is to provide sufficient strength to allow the construction of an appropriate engineered barrier. The objective of the works is to improve the strength of the upper parts of the Alluvium and retain the permeability.

### **Clay lining**

CQA report was submitted in August 2016 for the clay lining in Area 2 cell 3a following the work undertaken for the base stabilisation. Cell 3a is the Stable Non-Reactive Hazardous Waste (SNRHW) where asbestos has begun to be accepted at site.

### **Gas wells**

Following the site inspection on the 13th June 2016 a number of issues were detected in area 2 cell 1 with regard to gas extraction. The submitted report from Infinis, (*Infinis Energy Services Ltd., Docks Way Landfill Site, Retro Drilling of Gas Wells, Construction Quality Assurance Plan, September 2016*), provides details of the gas extraction wells to be drilled to ensure better extraction and mitigate fugitive releases and the potential for odour impact off site.

### **Capping**

The document '2016 Capping Program CQA Plan' Project ref: 2511 dated September 2016 was submitted to NRW and detailed the specification of the materials to be used and the associated procedures to be followed.

## **5. Monitoring returns**

### **Surface water**

Round 144 – no comments

Round 145 – SW25 and SW26 were dry. TSS was not monitored for SW1a, SW23 or SW24.

Round 146 – SW25 and SW26 were dry. TSS was not monitored for SW1a, SW23 or SW24.

Round 147 – SW25 and SW26 were dry. TSS was not monitored for SW1a, SW23 or SW24.

Round 148 - SW25 and SW26 were dry. TSS was not monitored for SW1a, SW23 or SW24.

Round 149 - SW25 and SW26 were dry. TSS was not monitored for SW1a, SW23 or SW24.

**Note:** At SW23 for Julys monitoring (Round 149) the ammonical nitrogen reading was 41.1mg/l (below the 50mg/l limit) but twice as much as Junes (Round 148) reading and Augusts (Round 150) reading reduced to 2.3mg/l.

Round 150 - SW25 and SW26 were dry. TSS was not monitored for SW1a, SW23 or SW24.

**Note:** BOD reading was 56.8mg/l in August, substantially higher than previous readings at SW23 for Round 150.

**ACTION:** Please could NCC confirm why TSS was not monitored in round 145 to 150?

## **Groundwater**

### **Round 145**

None of the hazardous substances agreed as priority contaminants exceeded the well specific Compliance Limits in this round.

There were two exceedances during Round 145 of non-hazardous contaminants. One at GW07\_40 for Potassium, 52.9mg/l exceeding the compliance limit of 45mg/l, and the other at GW06\_37 for ammonical nitrogen where the value of 33.2mg/l exceeded the control level of 30mg/l but the compliance level of 35mg/l.

Breach of condition 3.6.1 and subsequent limits in Table S3.3. **Considered a Category 4 breach as the levels have reduced from 162mg/l record during round 142**

### **Round 149**

None of the hazardous substances agreed as priority contaminants exceeded the well specific Compliance Limits in this round.

There were no exceedances of any of the non-hazardous substances during round 149

Compliance limits not yet set for GW12\_30, GW12\_33 or GW12\_38.

## **Leachate**

Leachate levels were submitted for rounds 143, 144 and 145. Results obtained for all monitoring wells exceeded the limit of 2 metres in all cases. **Considered to be a category 3 breach of permit condition 2.7.1 and the associated limits in Table S3.1.** Improvement condition 1 of the permit and an action from the CAR Form on 24th February 2016 refers to ongoing investigations on the leachate level investigations.

There was no leachate level monitoring in Area 2 during Round 146 to 149 due to access problems at the monitoring locations. Therefore there are no details of the leachate removed during this period.

**ACTION:** NCC to supply details of the leachate removed obtained through the log of tankers used to remove the leachate during this period

## **Gas monitoring**

Gas monitoring results for rounds 143 to 145 have been received with the following comments. In round 145 at GP06\_24 the results for methane was 0.6% volume were the results for previous rounds are usually 80 to 90%. At the same time the value for carbon dioxide dropped to 0.3 % volume where previous results are between 5 and 6 % volume.

**ACTION:** NCC to provide NRW with an explanation of why these results have differed and what may have led to the varying results.

Gas monitoring undertaken for rounds 146 to 149 was received with the following comments.

Round 146, 147, 148 and 149 exceeded both the methane limit % volume at GP09\_18.

Breaches of condition 3.6.1 and the associated limits in table S3.4 of the methane and carbon dioxide limits. **Considered to be a category 4 breach of the permit.**

#### **6. Litter picks**

NCC continue to undertake litter picks at the site where a dedicated team have been put in place. Whilst on site it was noticeable that the litter picks have improved the cleanliness of the site.

#### **7. Waste returns**

The April – June 2016 waste return has been received by NRW.

#### **8. Asbestos cell**

The new asbestos cell is now active with asbestos waste being accepted at the site. NRW witnessed waste being accepted to site and subsequently disposed and covered.

**Photo 7: Asbestos waste accepted to site prior to being covered**



**Photo 8: View of asbestos cell from concrete pad where waste arrives**



NCC are looking at the possibility of utilising cell 3b as an additional asbestos cell. This cell already has a tyre drainage layer in place and would require a variation to their permit to accept asbestos waste in cell 3b. The variation application and resulting assessments will have to consider the separation wall and revisit the SRA. The application would be assessed to the same level as the previous variation application for the new asbestos cell.

NRW strongly encourage pre application discussions ahead of any permit variation to ensure the appropriate risk assessments are undertaken. NCC need to consider a revised chamber design for the next cell if the intention is for biodegradable wastes.

**END**

## EPR Compliance Assessment Report

**Report ID:  
CAR\_NRW0026549**

This form will report compliance with your permit as determined by an NRW officer

Site	Docksway Landfill	Permit Ref	DP3733BK
Operator/Permit holder	Newport City Council	Date	07/10/2016

### Section 3 – Enforcement Response

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.

### Section 4 – Action(s)

This section summarises the actions identified during the assessment along with the timescales for when they will need to be completed.

Criteria Ref.	CCS Category	Action required/advised	Due Date
See Section 1 above			
B1	C4	Bring back into compliance.	31/01/2017
B1	C3	Bring back into compliance. Improvement condition in place.	31/01/2017
E2	C4	Ensure compliance.	31/10/2016
B1	C4	NCC to ensure no equipment is stored on the membrane.	31/10/2016

## 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 verbally or 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 that 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 fulfil 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 (eg. 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
- Assessing customer service satisfaction and improving its service
- Freedom of Information Act/Environmental 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 fifteen 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 officer's line managers using the informal appeals procedure. 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](mailto: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.

#### Welsh Language

If you would like this form in Welsh please contact your Regulatory Officer.