

Compliance Assessment Report CAR_NRW0043098

Permit being assessed: BL3986ID.

For: Aberthaw Works EPR/BL3986ID, **held by:** Tarmac Cement and Lime Limited

At: Aberthaw Works , East Aberthaw, Barry, Vale of Glamorgan, CF62 3ZR.

Type of assessment: Report/Data Review,

Reason: Routine.

On: 29/12/2023 between 09:00 and 15:00.

Parts of permit assessed: Emissions, monitoring, noise and waste.

NRW Lead Officer: Antony Leakey.

Report sent to: Daniel Bound, Environmental Coordinator, on 29/12/2023.

1. Summary of our findings (full details in section 4)

Part of permitted activity assessed (compliance criteria)	Assessment result	Permit condition
IR3A - Emissions and monitoring - Emissions to water, air or land	C3 Minor	3.1.2
IR3B - Emissions and monitoring - Emissions of substances not controlled by emission limits	C3 Minor	3.2.1
IR1A - Management - General management	C3 Minor	1.1.1
IR3B - Emissions and monitoring - Emissions of substances not controlled by emission limits	C3 Minor	3.2.1
IR1A - Management - General management	C3 Minor	1.1.1
IR3A - Emissions and monitoring - Emissions to water, air or land	C3 Minor	3.1.2
IR1A - Management - General management	C3 Minor	1.1.1
IR3H - Emissions and monitoring - Monitoring for the purposes of the Industrial Emissions Directive (includes LCP)	C3 Minor	3.3.1
IR3D - Emissions and monitoring - Noise and vibration	Assessed (A)	
IR2C - Operations - Operating techniques	Assessed (A)	

Result types are explained in more detail in the 'Important Information' section below.

Total non-compliances recorded	Total non-compliance score
8	32

How we use the non-compliance score to calculate your annual fee is explained in the 'Important Information' section below.

2. What action is required?

Criteria	Action needed	Complete by
IR3A	Review coal mill emissions during start up and modify monitoring procedures.	Already completed
IR3B	PHT refresher training and updated procedures to be implemented.	Already completed
IR1A	PHT refresher training and updated procedures to be implemented.	Already completed
IR3B	Update emergency procedures and refresher training.	Already completed
IR1A	Update emergency procedures and refresher training.	Already completed
IR3A	Tarmac to confirm and demonstrate implementation of all RCA actions and provide updated monitoring data.	01/04/2024
IR1A	Tarmac to confirm and demonstrate implementation of all RCA actions and provide updated monitoring data.	01/04/2024
IR3H	Tarmac to confirm and demonstrate implementation of all RCA actions and provide updated monitoring data.	01/04/2024

Compliance criteria codes are listed in the 'Important information' section below.

3. What will happen next?

Any non-compliance we have identified and recorded on this form is an offence. It can result in criminal prosecution and/or suspension or revocation of your permit.

You are non-compliant with your permit.

At this time, we are issuing you with a warning for the non-compliance recorded above. Warnings may influence future enforcement response for continued or further non-compliance.

This statement does not stop us from taking additional enforcement action if further relevant information comes to light or offences continue.

4. Details of our assessment

Aberthaw Cement Works
Emissions and reporting review, inspection – 20 April, 11 July and 4 October 2023 and incident update

Summary of previous CAR action status			
Permit condition	Action summary	Due date	Action status
3.5.1	EOP4: Noise and Vibration review and noise action plan improvements.	31/12/22	Complete, but further review required (see action below)
3.2.1	Dust management measures	31/3/24	Ongoing
n/a	Tarmac to identify an appropriate opportunity to vary the new kiln hood release point into the permit.	Ongoing	Ongoing
3.1.2	Review coal mill bag filter inspection and maintenance regime and burst bag detection provision.	31/3/22	Partially complete. Inspection frequency increased. Bag failure detection not investigated. To be reviewed.
3.2.1	Review environmentally critical control functions and provide an update on implementation of improvements to minimise dust releases	30/6/22	Ongoing. Follow up at future site inspection.
3.2.1	Review kiln restart process.	Ongoing	Follow up at future site inspection.

Noise assessment

The follow up noise survey was reviewed and compared to previous surveys on and off site. Some significant reductions in source sound level have been achieved, although there remain potentially significant sources. Of note are tonal sounds associated with the raw mill (400, 631, 594/595 Hz) that may correspond with similar tonal sounds detected at a residence in West Aberthaw (398, 616 Hz).

NRW has not yet undertaken a low frequency noise (LFN) assessment at a local residential property to establish if LFN is a cause of complaints due to delays in arranging a convenient preliminary meeting date.

A check during light east north easterly weather conditions in West Aberthaw on 7/6/23 did identify a significant contribution from the cement works to ambient sound levels, including some tonal sounds. A similar check on 25/5/23 during south westerly winds did not identify a significant contribution from the works indicating the importance of wind focusing on noise impacts off site.

Noise checks at West Aberthaw on 11/7/23, 4/10/23, 9/11/23, 15/11/23, and 23/11/23 did not identify a significant contribution from the works.

However, further improvements are likely to be necessary to demonstrate use of BAT to minimise noise impacts. An updated noise improvement plan is being produced by Tarmac.

While inspecting the dust deposition monitoring locations on 20 April 2023 significant percussive noise was detected off site near to a residence close to West Aberthaw. Wind was east north easterly providing a significant focusing effect at the location. Tarmac confirmed that refractory breaking was taking place at the time. No temporary screening was being employed. There is some doubt whether screening would be effective at reducing such noise due to reverberation throughout the plant and the kiln. Nevertheless, the potential benefits of screening during potentially noisy activities requires consideration to demonstrate use of BAT to minimise noise impacts.

ACTION: Tarmac to consider benefits of screening during potentially noisy activities, including refractory breaking and make proposals for improvements before next shut down requiring refractory breaking.

Dust control

A dust management inspection was undertaken on 20 April 2023. Water bowser deployment was ensuring regular wetting of the main roads inside the site boundary.

The stone road dust suppression system was not operational due to concerns relating to legionella safety because recirculated process water is used in the spray system. Tarmac has investigated installation of filters to address this problem but was unsuccessful. Use of towns water may be necessary during very dry and windy conditions to minimise off site impacts. Biocide dosing of process water to control legionella may be possible.

The stone road wheel wash was examined. A barrier provided to stop vehicles at the wash station before continuing off site was not operational. Presumably because the drivers prefer not to have to stop on the steep incline out of the stone yard and then restart. This arrangement is unlikely to ensure that a moving vehicle is washed effectively due to the small footprint of the unit. Tarmac subsequently made improvements: earlier triggering of wheel washing for longer duration. A further trigger on entry to the site so that vehicle speed control can be more easily managed in the downhill direction is also proposed. If this does not address dust drag out onto the public highway through Burton Hill then other options to improve wheel washing will need to be considered, including reinstating the barrier and installation of a larger wheel wash system. The trigger time of the wheel wash has been modified so that the earlier and longer duration washing is achieved.

Stone stockpile heights were seen to be excessive with increased potential for windblown dust. This was reported to be due to the kiln coming offline and insufficient notice being given to cease stone imports. Stock levels are claimed to be much lower normally.

No significant off-site dust levels were noted during this visit, and this is supported by the deposition rate data for the period, noting that deposition rates increased generally after April due to the prolonged dry weather in June.

The deposition gauge locations were visited and assessed for suitability. The Burton Hill gauge is sheltered to some extent but is considered to still be representative of the area. The

East Aberthaw gauge location is also suitable, although may be influenced by inputs from the power station ash landfill and the railway. There may be scope to modify the Dustscan reference materials to include characterisation of PFA from the landfill and magnetic particles from the railway. The directional gauge at East Aberthaw may not represent the best location and consideration should be given to relocation either at Burton Hill, West Aberthaw (see below) or some other appropriate location that will enable unrestricted air flow from all directions. The West Aberthaw location is suitable but some distance from the works and consideration should be given to relocation to a closer West Aberthaw receptor.

Finally the Dustscan data collected at Aberthaw have been compared to deposition rate guidelines based upon work by Vallack and Shillito [[Suggested guidelines for deposited ambient dust - ScienceDirect](#)] (monthly mean 90th and 95th percentile values of 80 and 100 mg/m²/day respectively), which are derived from BS1747 measurements. For a reliable comparison with these guidelines, it will be necessary to correlate the Dustscan measurements with BS1747 or other measurements already correlated with BS1747, e.g. dry Frisbee foam (DFF) insert gauges.

The 200 mg/m²/day guideline referenced in Environment Agency Technical Guidance Note M17 is from the above work by Vallack and Shillito and relates to residential areas and outskirts of towns for the 95th percentile value representing “complaints likely”. This may not be the most appropriate guideline for rural “open country” settings around Abethaw.

ACTION: Tarmac to consider the above points and make proposals for improvements to the dust management plan by 31 March 2024.

Following a lime release from a flexible hose in July 2022, a review of Tarmac procedures for checking related plant has been undertaken. A “powder silo audit checklist” (June 2021 Rev1) is available to ensure that such systems are suitably protected against loss of containment. A housing keeping audit list is also available that covers dust control measures, including wheel wash and suppression system operation. The frequency of such audits and outcome for the systems at Aberthaw has not been examined and will be checked at a future compliance inspection.

CEMs calibration functions

A revised QAL2 test is planned for the HCl CEMs to address the apparently poor calibration function. The poor correlation between SRM and CEM for HCl, appears to be a sampling line issue with the SRM, rather than an analysis issue. Tarmac has identified that on recent tests the SRM HCl measurements were unresponsive for at least the first half of the test, and this was caused by the sampling lines being cleaned and purged between site assessments (which is good practice) but means that the sampling system has to be conditioned with HCl again, before the measurements are representative and responsive. The issue is compounded with the SRM probe filters being replaced on each sampling campaign, and again these need to condition and absorb HCl before a true reading is obtained.

The revised calibration function for NO_x has been implemented and evidence provided in the form of a screenshot of a completed work order for the job.

Incident and complaints summary

10/2/23 – kiln restarted at 11:31 on 9/2/23 following an unplanned stoppage with no incidences of dust releases reported. Dust was reported on a vehicle parked overnight at Burton Hill.

18-19/2/23 – dust reported at Burton Hill. The kiln was offline briefly Saturday 18/2/23 night shift due to a cyclone 4 blockage. The kiln tripped at 19:17 on 18/02 and was restarted at 23:03. The cyclone doors were opened for access to remove the blockage. Tarmac report that excessive amounts of dust were not released on this occasion, however the wind direction was Westerly at the time.

Several actions were implemented during the shutdown to reduce cyclone blockage frequency, including the addition of extra air canons to reduce build up, and providing access to clean with the high-pressure water jet system (WOMA) which will speed up the process. Air ingress also increases build up and action has been taken to address this including installation of a new kiln backend seal.

Deposition gauge results do not show a significant increase for this period at Burton Hill, although a high proportion of cementitious matter is reported. All deposition rates were less than 80 mg/m²/day 90th percentile guideline, however.

23-25/3/23 - dust reported at Burton Hill. There were high south westerly winds on Saturday 25/3/23 and dust from site road surfaces may have been entrained by the wind. The dust suppression system on site has recently been put back into operation to keep roads damped down. Deposition gauge results do not show a significant increase for this period at Burton Hill.

28/3/23 – coal mill dust emission limited exceeded during scheduled testing. 12.7 mg/Nm³ compared to ELV of 10 mg/Nm³. The first test run began before the coal mill had stabilised following start up and there may have been break-through of the filters before sufficient cake had accumulated. The second test run result was below the ELV. There is no agreed start up period for the coal to achieve compliance and therefore the high emissions constitute a minor category 3 non-compliance with permit condition 3.1.2 due to the short duration of the release which will not result in a significant increase in ambient fine particle ground level concentration compared to the air quality standard.

Tarmac has reviewed coal mill emissions during start up and will modify monitoring procedures if appropriate.

12/4/23 – Burton Hill dust deposit. Plant was operating normally during this period and winds were south westerly but strong. Deposition gauge results do not show a significant increase for this period at Burton Hill.

11/7/23 - Burton Hill dust deposit. Plant was operating normally during this period and winds were south westerly and strong, with associated heavy rain showers.

31/7/23 - Burton Hill dust deposit. Pre-heater tower cleaning undertaken during planned shutdown to balance ID fan without bag filter extraction fan operating allowing escape of dust from cyclone 4 contrary to operating procedures. Westerly winds may have resulted in dust

transmission to Burton Hill. Refresher training and updated procedures have been implemented.

ID fan automatic balancing was also inoperable due to unavailability of spares for the obsolete system. A modern balancing system is due to be procured.

ACTION: Tarmac to provide update on ID fan automatic balancing system replacement by 31 March 2024.

This incident is a category 3 non-compliance with permit condition 3.2.1 (fugitive dust emissions causing off site impact) and 1.1.1 (management system failure for insufficient training/refresher training).

14/8/23 - Burton Hill dust deposit. A cooler tube split was undetected and allowed clinker dust to accumulate during a period of high south westerly winds. Cooler tube replacement programme should minimise risk of failures. The failed tube was last replaced in 2018 and is the second oldest of the 10. The current in-service interval for cooler tubes is 5-7 years depending upon condition and at least one tube is replaced every year. Cooler tube shells are refurbished using new internals, but the individual shell service life is not tracked, and only visual inspection is carried out. Service tracking of shells and periodic metallurgical examination prior to rebuild should enable shells to be retired before risk of structural failure due to thermal cycling becomes too high. The deterioration of the failed tube was not detected over the weekend due to inadequate monitoring. Emergency procedures have been updated and refresher training provided.

This incident is a category 3 non-compliance with permit condition 3.2.1 (fugitive dust emissions causing off site impact) and 1.1.1 (management system failure for insufficient condition monitoring).

ACTION: Tarmac to provide update on cooler tube shell tracking and condition monitoring implementation by 31 March 2024.

21/9/23 – kiln main stack dust emission limited exceeded during scheduled testing. 20.9 mg/Nm³ compared to ELV of 10 mg/Nm³. Concurrently the dust CEM data connection was lost for 10½ hours due to an error by the test house operatives and, significantly, misalignment of the dust CEM due to distortion of the backscatter optical signal tube during removal for maintenance at some prior date that resulted in significant under-reporting of continuous dust emissions.

Investigation revealed that 5 main dust filter bags across 3 compartments had failed due to mechanical damage or seam failure as a result of orientation of the seams towards the air flow. 5 bags is a very small proportion of the total 2500 bags in the dust filter so changes in process conditions were not easily noticed. The increase in dust emissions was also below the level likely to be detected visually at the stack (approximately 50 mg/Nm³, depending upon orientation of the plume).

Retrospective examination of the dust CEM 4-20 mA signal control chart shows a small step change on 31 August 2023, which may represent when bag filter performance started to significantly deteriorate. The earliest known in-compliance date was in March 2023 when the previous extractive dust monitoring was undertaken. The implication is that the elevated dust

emissions occurred for a period of between 5 weeks and 6 months.

Operating at dust emissions of 20 mg/Nm³ for an extended period is unlikely to represent a significant air quality impact because previously the emission limit was 30 mg/Nm³ and this is confirmed by examination of recent air dispersion modelling work for the main stack, the resulting process contribution to ground level concentration is a fraction of the air quality standard. The additional dust mass emissions will have been between 1800 and 8000 kg, depending on the period assumed for the failure, compared to around 4000 kg/year recently but over 19,000 kg/year within the last 8 years. Deposition gauge results at all locations appear elevated for some of this period, and there may be an increase in cementitious matter compared to previous years. However, there is no consistent deterioration that would not be expected by variation in weather conditions. Dust complaint rates were also low during the period. Therefore, the impact is not considered to be significant, and the associated permit condition non-compliances are category 3:

permit condition 3.1.2 – exceedance of emission limit

permit condition 3.3.1 – failure to monitor in accordance with permit requirements

permit condition 1.1.1 – failure to maintain CEM and bag filter in good operating condition

The potential for higher emissions for longer is limited because more significant damage to the bag filter would be noticed by process monitoring or visible stack emissions and the extractive dust monitoring detected the failure limiting an extended period of high emissions.

Tarmac has completed two RCAs in relation to these failings and produced a list of actions to prevent recurrence (see BL3986ID_Schedule 5_Parts A B_Part particulate breach 231004docx and BL3986ID_Schedule 5_Parts A B_D-R320 loss of particulates measurement signal 230921.docx).

The kiln dust CEM data on the public register for some or most of quarter 3 (and possibly earlier quarters) is suspect due to the issues with the CEM alignment in the stack. Tarmac will need to make proposals to address this.

ACTION: Tarmac to confirm and demonstrate implementation of all RCA actions and provide updated monitoring data by 1 April 2024.

16-19/12/23 - dust reported at Burton Hill. There were moderate west-south westerly winds and some rain during the period. A kiln shut down and restart took place during this period, but no abnormal events were reported.

Waste-derived fuel trials

A final report into the July 2022 sludge fuel trial outcome, including summary emissions data, was provided by Tarmac. Combustion problems were evident from the emissions data, but no emission limits were exceeded. Further use of the fuel is not proposed.

An Excel spreadsheet was provided by Tarmac setting out the residence time and temperature compliance basis for tyre “firing” at the kiln back end. After iterations of assessment and revision the following observations are made:

- Residence time (RT) headroom appears to be too low to justify using plug flow calculations alone. Other cement plant operators are using computational fluid dynamic (CFD) modelling for residence time/temperature (T2S) demonstrations.
- The RT estimates do not seem to be particularly conservative, i.e. RT in cyclone 4 is potentially at $<850^{\circ}\text{C}$ and kiln penetration (3.5 metres) is based upon a single thermal imaging measurement.
- The temperature headroom also appears to be optimistic based upon Aberthaw plant data seen and general information on operation of 4-stage pre-heaters.
- CFD modelling of another PHT cement works firing waste derived fuel at the kiln back end presents temperature profiles that suggest the riser temperature falls rapidly before entry into the stage 4 cyclone. This may be due to the simultaneous heat release as the waste fuel is combusted in the riser and thermal quenching provided by the raw mix introduction which buffers the temperature above the fuel injection point at $800\text{--}850^{\circ}\text{C}$ due to the endothermic dissociation of calcium carbonate.
- The fundamental design of pre-heater systems to ensure that exothermic cement reactions don't occur in the riser/stage 4 cyclone to prevent uncontrolled temperature rise and significant blockage issues means that the basic gas path may not provide the necessary residence time above 850°C .

A more detailed study of the post-kiln gas path temperature and residence time and kiln penetration distance may be necessary, because the combustion gases arising from tyres introduced at the bottom of the preheater tower will not have the benefit of residence time in the whole of the kiln gas path volume and will need to be subjected to 2 seconds residence time at 850°C in the gas path volume in the riser and bottom of the PHT, as well as a proportion of the kiln gas path.

Before further work is undertaken on this matter some technical parameters need to be agreed to ensure consistent assessment:

- Definition of the Qualifying Secondary Combustion Zone (QSCZ) for cement kilns when the "fuel" flow direction is counter current to the bulk gas flow direction.
- Use of rigorous CFD demonstration of residence time distribution for the gas path above 850°C , or a plug flow calculation enhanced with CFD modelling if necessary.
- The approach to validation of bulk gas temperature in the QSCZ. The use of suction pyrometers or at least thermocouples or other temperature measurement techniques calibrated against suction pyrometers may not be possible in the dust loadings in the risers and stage 4 cyclones of cement kilns. CFD modelled temperatures may have to be validated against process temperatures measured at the stage 4 cyclone outlet.

Further work is necessary to demonstrate compliance with permit condition 2.3.12 and show that the residence time is sufficient before the gas temperature drops below 850°C in the riser/cyclone 4 gas path, or to establish alternative process conditions. Permit condition 2.3.12 may also need updating to reflect the cut off temperature at cyclone 4 gas exit that represents the bulk gas temperature reducing below 850°C at the end of the QSCZ.

ACTION: Tarmac to review tyre temperature-residence time assessment for further discussion.

Tarmac has proposed use of a waste still bottom residue from terphenyl manufacture as a waste derived fuel for injection into the kiln hot end using the existing Polychip (previously meat and bone meal) fuel handling system.

The waste processor supplying the fuel has claimed waste coding EWC 19 12 11* "other wastes (including mixtures of materials) from mechanical treatment of wastes containing dangerous substances", which is currently permitted for use under the waste code of practice at Aberthaw. However, the only processing required is particle size reduction and classification to provide a consistent granule, suggesting that the original waste code allocated by the waste originator EWC 07 01 08* "other still bottoms and reaction residues" is the most appropriate code because there is no significant change in chemical composition.

Therefore, a permit variation may be necessary to allow continuous use of this fuel, particularly as modifications to the existing handling system or a new handling system may be required.

Nevertheless, the permit allows limited duration and tonnage trials to take place and the suitability of the fuel handling system was assessed during a site inspection on 4/10/23. The key requirements were:

- The existing delivery system has been assessed for suitability to handle the waste without increased risk of fugitive emissions, blockage, fire or explosion (i.e. a suitable and sufficient update to the existing DSEAR risk assessment has been undertaken).
- Automatic shutdown of the delivery system will occur in the event of a blockage.
- Blockage or shutdown of the delivery system will not result in a kiln trip or impact on emissions.
- Clearance of delivery system blockages will not result in a kiln trip, or other impact on emissions, including fugitive emissions of waste residues into the air or surface water system at the cement works.

Inspection of the Polychip offloading system indicated that significant quantities of Polychip can fall through the walking floor and accumulate below. This is potentially a fire hazard if housekeeping standards are not improved during Polychip handling. Such accumulation is unlikely to be acceptable during handling of the still bottom residue if attrition of the granules results in dust generation leading to contamination which may be released into the surface water system or dispersed into the air.

ACTION: Tarmac to provide a trial risk assessment prior to acceptance of the still bottom residue waste to demonstrate how operational hazards associated with the material are to be managed.

Ferrous sulphate substitution

Proposals to utilise a waste ferrous sulphate by product from a production site landfill in Europe have not been progressed.

Clinker storage

Proposals, including detailed procedures for dust management, for temporary external storage of clinker in the run up to the planned works shut down in January and February

2024 were submitted. 1500 tonnes of fresh lump clinker were stored without any reported dust problems at the end of December and will be recovered into the clinker store during the shutdown.

Waste Acceptance Procedures

A brief review of waste acceptance procedures was undertaken.

- A waste acceptance form is completed prior to any waste raw material or fuel is introduced to a works.
- Ten representative samples are taken for analysis, including CV, mineral content, metals, sulphur and TOC.
- MSDS review is undertaken.
- A raw mix design is produced using a business approved methodology.
- The Tarmac quality technical standard defines ongoing waste analysis frequency. Whole tyres are not subject to sampling or analysis. Every delivery of Polymer chip and SRF is sampled and bulked into a weekly sample for analysis.
- Recent issues raised with wastes have related to moisture levels and consequently lower CV. Use of these suppliers has been stopped.

Emissions review

Monitoring data for Q1, Q2 and Q3 2023 have been reviewed and no breach of permit conditions was identified other than those already addressed in previous sections of this report.

END

If you have any queries about this report, or to discuss completion of any actions, please contact the NRW Officer named above.

Important information

Legal status of this report

Your permit is issued to you under the Environmental Permitting Regulations. You have a responsibility to comply with the conditions of your permit and prevent pollution/harm of the environment. You must also ensure that you comply with any other relevant legislation that may apply to your site's operations.

This report explains the findings of our assessment and any action you are required to take. We categorise non-compliance using our guidance for assessing non-compliance at regulated sites.

When we find potential non-compliance/s we will normally give you advice on how to maintain compliance.

To correct non-compliance, we may:

- require you to take specific actions
- issue a notice
- review the conditions of your permit.

Any advice and guidance we give will be without prejudice to any other enforcement response that we consider may be required.

Assessment results and non-compliance categories (used in section 1):

Assessment result	Description
Assessed (A)	Assessed or assessed in part, no evidence of non-compliance found
Action only (X)	Action only relating to the activity assessment
Ongoing (O)	Ongoing non-compliance, not scored

Non-compliance category	Description	Score
C1 Major	Potential to have a major, serious, persistent and/or extensive impact or effect on the environment, people and/or property	60
C2 Significant	Potential to have a significant impact or effect on the environment, people and/or property	31
C3 Minor	Potential to have a minor or minimal impact or effect on the environment, people and/or property	4
C4 No environmental impact	Non-compliance at a regulated site that cannot foreseeably have any impact on the environment, people and/or property	0.1

How we use assessment scores

The number and severity of non-compliances recorded in a year will affect your annual subsistence fee the following year. A non-compliance factor is added to your site's Operator

Performance Risk Appraisal (OPRA) score when we calculate your fee to reflect the additional resource we use to assess permit compliance.

If your assessment result in Section 1 is suspended, what does this mean?

In line with our guidance, we may suspend scores for up to six months to allow time for remedial action to be taken. Suspended scores will be re-instated if the action is not completed.

Full list of Industry compliance criteria (used in section 1 and 2):

1. Management

- IR1A – General management
- IR1B – Finance (only applicable to Landfill)
- IR1C – Energy efficiency
- IR1D - Efficient use of raw materials
- IR1E - Avoidance, recovery and disposal of wastes produced by the activities
- IR1F - Multiple operator installations

2. Operations

- IR2A – Permitted activities
- IR2B – The site
- IR2C – Operating techniques
- IR2D – Technical requirements
- IR2E – Improvement programme
- IR2F – Pre-operational conditions
- IR2G – Landfill engineering (only applicable to Landfill)
- IR2H – Waste acceptance (only applicable to Landfill)
- IR2I – Leachate levels (only applicable to Landfill)
- IR2J – Closure and aftercare (only applicable to Landfill)
- IR2K – Landfill gas management (only applicable to Landfill)

3. Emission and Monitoring

- IR3A – Emissions to water, air or land
- IR3B – Emissions of substances not controlled by emission limits
- IR3C – Odour
- IR3D – Noise and vibration
- IR3E – Monitoring
- IR3F – Pests
- IR3G – Air quality management plans
- IR3H – Monitoring for the purposes of the Industrial Emissions Directive (this heading includes Large Combustion Plants)
- IR3I – Fire

4. Information

- IR4A – Records
- IR4B – Reporting
- IR4C – Notification

Enforcement response

Any non-compliance with a permit condition is an offence and we may take legal action against you. Action we take can include prosecution, serving a notice on you and/or

suspension or revocation of your permit. See our Enforcement and Sanctions Guidance for further information.

Data protection notice

You should make sure that anyone named in this report knows that the information it contains will be processed by Natural Resources Wales to fulfil its regulatory and monitoring functions and to maintain the relevant public register(s).

We may also use and/or disclose the report in connection with:

- offering or providing you with our literature or 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
- assessing customer service satisfaction and improving our service
- Freedom of Information Act or Environmental Information Regulations requests.

We may also pass it on to our agents or representatives to do these things on our behalf.

Disclosure of information – this report will be available to view on-line

If you think this report contains commercially confidential information that should not be placed on our public register, you must contact your local Natural Resources Wales office within **fifteen working days** of receiving this report, using the contact details in the accompanying email or letter. You must give a full explanation of why it should not be added to our public register, including specifying which information is commercially confidential. We will assess your request and respond to you within twenty working days to let you know if we agree to your request.

What do I do if I disagree with the report or have a complaint?

If you disagree with this compliance assessment report, you should contact the lead officer without delay to discuss your concerns.

If you are unable to resolve the issue with the lead officer or their line manager you should contact our Customer Contact team on 0300 065 3000 (Monday to Friday 08:00 to 18:00), or email enquiries@naturalresourceswales.gov.uk for details of how to raise your dispute further through our Complaints and Commendations procedure.

If you are dissatisfied with our response, you can contact the Public Services Ombudsman for Wales by phone on 0300 7900203 or by email at ask@ombudsman.wales

Welsh Language Standards

We are committed to establishing Natural Resources Wales as a naturally bilingual organisation. We will provide compliance reports in your preferred language.