

Compliance Assessment Report CAR_NRW0043736

Permit being assessed: BW9999IG.

For: Chirk Particleboard Factory, **held by:** Kronospan Ltd

At: Chirk Particleboard Holyhead Road , Chirk, Wrexham, Clwyd, LL14 5NT.

Type of assessment: Report/Data Review,

Reason: Routine.

On: 11/03/2024.

Parts of permit assessed: Surface water improvement conditions IC42, IC50, IC52 and IC53.

NRW Lead Officer: Ian Oakes.

Report sent to: Chris Emery, Director, on 15/03/2024.

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

Part of permitted activity assessed (compliance criteria)	Assessment result	Permit condition
IR2E - Operations - Improvement programme	Assessed (A)	

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

Total non-compliances recorded	Total non-compliance score
0	0

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?

No action required.

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.

At this time, we do not intend to take any further action.

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

Surface water related improvement conditions IC42 Water usage, IC50 Discharge W1 risk assessment H1, IC52 Segregation from process and IC53 Discharge W1 and MCERTs (precursors to IC51 Discharge W1 to Afon Bradley BAT assessment due April 2024).

1. NRW IC42: *"The Operator shall carry out a BAT assessment of water usage, paying attention to the potential for minimising potable water use and effluent flow, through optimisation of recycling and the considerations outlined in improvement conditions 4 and 17 of this document. The assessment shall identify the areas where water usage can be minimised through improved management and process control, or supplemented with recycled water (e. g. operation of the lagoons, or the resin plant). The assessment shall also include a single sheet schematic detailing an overall plant water balance, which shall include normal and design flowrates. A summary of the assessment shall be sent to Natural Resources Wales in writing together with a timetable to implement any necessary changes identified."*

Comments:

Action Plan 1 & 2 The under 'consideration' hard surfacing of the two remaining soft standing areas (by 31/12/2024) potentially lowering total suspended solids, biological oxygen demand and ammonia in collected water; leading to a feasibility study into lagoon water recycling as process water (by 28/02/2025) are positive developments that should be progressed.

Action Plan 3 & 4 The feasibility of rainwater harvesting for new developments (e. g. in place for new finished board warehousing) is noted as is the improvement in Towns water metering (31/10/2023).

NRW IC42 is complete.

2. NRW IC50: *"The operator shall carry a risk assessment of the discharge to the Afon Bradley (emission point W1 in this permit). The risk assessment shall include:*

- an assessment of hazardous chemicals and elements which shall be carried out inline with the methodology outlined in gov.uk guidance entitled "Surface water pollution risk assessment for your environmental permit";*
- an assessment of sanitary and other pollutants which shall be carried out inline with the methodology outlined in H1 Annex D2 guidance 'Assessment of sanitary and other pollutants within Surface Water Discharges.*

The risk assessment shall be submitted to Natural Resources Wales for review.

Comments:

The main chemical species identified include e. g. ammonium sulphate solution (board hardener, ammonia, sulphate), formaldehyde, road salt (chloride), total metals (boiler ash residues) and phenol (lignin breakdown).

All parameters were screened out at Test 2, no further Tests required under H1 risk assessment.

Biphenyl has not been included (Gov.uk / Freshwater Specific Pollutants and operational quality standards (EQS)) and is a component of the Heat Transfer Fluid (27% biphenyl / 73% diphenyl ether) used in the formaldehyde plants (contained in bunded process plant). The mixture has a combined environmental hazard classification of H400/410/411 'very toxic to aquatic life with long lasting effects', and as such needs to be added to the screening exercise.

Action: Sample and analyse for biphenyl and diphenyl ether, update the screening exercise accordingly and resubmit the improvement condition by 30 June 2024.

3. NRW IC52: *"The Operator shall carry out a BAT assessment of the current drainage systems in place at the site, paying particular attention to segregation of site drainage water from formaldehyde plant effluent. The Operator shall ensure all relevant BAT conclusions have been considered including but not limited to:*

- *BAT Conclusion 8 of the Common Waste Water and Waste Gas Treatment / Management Systems in the Chemical Sector BRef*

A summary of the assessment shall be sent to Natural Resources Wales in writing together with a timetable to implement any necessary changes identified."

Comments:

NRW IC52 is complete.

4. NRW IC53: *"The Operator shall review their emissions to water monitoring at emission point W1 in this permit with the intent to achieve MCERTS certification or MCERTS accreditation (as appropriate) or an equivalent standard that is acceptable to Natural Resources Wales, where confirmation has been agreed in writing beforehand. Measurement methods shall be to appropriate standards (examples in BAT Conclusions for Large Volume Organic Chemicals and Common Waste Water and Waste Gas Treatment / Management Systems in the Chemical Sector), particularly with intent to implement continuous or at very least proportional composite sampling. Techniques should be in accordance with Technical Guidance Note M18 'Monitoring of discharges to water and sewer'. Proposals for a revised emissions monitoring programme shall be sent to Natural Resources Wales together with an implementation date."*

Comments:

4.1 Monitoring standards

With respect to updating monitoring standards for discharges to water, I refer to Gov.UK / EA guidance 'Monitoring discharges to water: CEN and ISO monitoring methods', updated 18 January 2023.

The suggested 'Replacement' standards match across to the guidance. The permit will require updating in due course to reflect the most appropriate standards at that time.

Currently, the following standards listed in the guidance are considered appropriate:

- pH - BS ISO10523,
- Biological Oxygen Demand - BS EN ISO5815-1,
- Total Suspended Solids - BS EN872, and
- Ammonia - BS 6068-2.11 ISO7150-1

4.2 MCERTS automatic sampler

It is noted that Kronospan will commit to the implementation of an MCERTS automatic sampler at emission point W1 to surface water (Afon Bradley), qualified as follows:

"We believe the most appropriate composite sampling methodology to be flow proportional and that in order to ensure the validity of composite samples for a number of the determinands the unit procured must also be refrigerated. As BOD [biological oxygen demand], pH, formaldehyde and ammonia are known to be unstable, any composite samples over 24 hours old will be discarded and not tested for compliance samples."

It is proposed that a composite sample is tested each day by site personnel and that one sample is sent for external testing per week at an MCERTS accredited laboratory."

4.3 MCERTS

MCERTS on-line analysers are only available for pH, turbidity, dissolved oxygen (DO) and total organic carbon (TOC) and therefore Kronospan propose the following approach:

- an MCERTS on-line analyser at W1 for continuous turbidity measurement due to the strong correlation to total suspended solids (TSS) based on laboratory test results. Should the sample water be suitable and a correlation arrived at then the TSS emission limit values (ELV) can be maintained as required by the Wood-Based Panel BAT Conclusions,
- an MCERTS on-line analyser at W1 for continuous pH measurement,
- either an MCERTS on-line analyser at W1 for continuous DO or TOC measurement as a surrogate for BOD, which should significantly improve response time as BOD is a 5 day test. It is suggested that a surrogate ELV be determined with a weekly BOD test as verification,
- as there are no on-line analysers for ammonia, formaldehyde and oil / grease it is proposed to maintain the current system of batch fill / release at W1 to Afon Bradley testing spot samples (including pH and TSS) for compliance, and
- with the on-line analysers for pH, turbidity and TOC providing the continuous assurance of the water quality as the lagoon discharges, with the
- flow proportionate samples for daily site and weekly external MCERTS analysis (ref 4.2).

The following actions / timescales were provided by Kronospan:

- *Installation of a refrigerated, MCERTS flow proportional composite sampler W1 01/06/2024,*
- *Composite sample to be analysed daily by site personnel for ammonia,*

formaldehyde, TSS, oil / grease. Immediately after installation,

- *Composite sample to be sent to MCERTS accredited laboratory on a weekly basis for ammonia, formaldehyde, TSS, pH and oil / grease. Immediately after installation,*
- *Installation of on-line MCERTS certified pH, turbidity, TOC or DO analysers W1 01/06/2024,*
- *Confirmation of surrogate ELVs for turbidity and / or TOC / DO. 3 months after installation.*

Acceptance of IC53 (reference NRW IC53 - MCERTS W1.pdf, Email dated 8 February 2024) by way of this CAR form links the MCERTS techniques being introduced to the existing permit, which will require updating in due course. The existing emission limit values remain in force.

Action: Provide a written summary of progress with MCERTS proposals by 30 Sept 2024.

NRW IC53 is complete.

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.