Cyfoeth Naturiol Cymru
Natural Resources Wales

Compliance Assessment Report CAR_NRW0051925

Permit being assessed: BR9685IX.

For: Barry Silicone Plant, **held by:** Dow Silicones UK Limited

At: Cardiff Road, Barry, Vale of Glamorgan, CF63 2YL.

Type of assessment: Site Inspection,

Reason: Routine.

On: 15/04/2026 between 09:00 and 16:00.

Parts of permit assessed: 1.1.1(a) and 2.3.1(a) and 2.3.3. and 3.1.2 and 4.2.2 and 4.2.3 and 4.3.1(b) and 4.3.2..

NRW Lead Officer: Geraint Harris, accompanied by Regina Simmons.

Report sent to: Environmental Manager, Environmental Manager, on 19/05/2026.

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

Part of permitted activity assessed (compliance criteria)	Assessment result	Permit condition
IR2C - Installations - Operations - Operating techniques	C4 No impact	2.3.3
IR1A - Installations - Management - General Management	Action only (X)	
IR2C - Installations - Operations - Operating techniques	Action only (X)	
IR3A(1) - Installations - Emissions and monitoring - Emissions to water	C3 Minor	3.1.2
IR1A - Installations - Management - General Management	C3 Minor	1.1.1(a)
IR3A(2) - Installations - Emissions and monitoring - Emissions to air	Assessed (A)	
IR4B - Installations - Information - Reporting	C4 No impact	4.2.3
IR1A - Installations - Management - General Management	Action only (X)	
IR1A - Installations - Management - General Management	Action only (X)	
IR4C - Installations - Information - Notification	Assessed (A)	

Part of permitted activity assessed (compliance criteria)	Assessment result	Permit condition
IR1A - Installations - Management - General Management	Action only (X)	

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

Total non-compliances recorded	Total non-compliance score
4	8.2

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
IR2C	Apply the correct EWC code using the WM3 guidance.	Already completed
IR1A	Action 1: Dow are requested to provide further details on their waste classification process, including relevant procedures, training arrangements, and any internal review or audit of waste streams (see main body of text). Response due by the 1st September 2026.	01/09/2026
IR2C	The addition of the screw press must be reflected in the permits Operating Techniques. (Table S1.2 – Operating Techniques). This table should be updated to include the screw press as a sludge dewatering step along with any relevant BAT alignments (sludge minimisation, volume reduction etc). NRW believe the relevant section that needs updating is listed in Table S1.2 operating techniques? Action 2: Dow to review and update their operating techniques and include them in the next permit variation.	01/09/2026
IR3A(1)	Bring the plant back into compliance.	Already completed
IR1A	Action 3: As part of NRW's root cause investigation into the copper emission limit exceedance, and to provide assurance that the management system has been appropriately strengthened, NRW requires further clarification on how agency and third party staff are integrated into Dow's environmental management system. At the next compliance meeting, Dow is requested to explain and provide evidence of: • The induction and site specific environmental training provided to agency and third party staff; • How competency is assessed, verified, and recorded, particularly where activities present a risk of pollution; and • The supervision and management arrangements in place during start up, routine operations, and periods of change.	01/09/2026

Criteria	Action needed	Complete by
IR4B	Amend reporting forms	Already completed
IR1A	Action 4: To determine whether this issue represents a wider management system weakness, Dow should confirm: • What formal data validation and verification procedures are in place for all regulatory reporting (not limited to W1 returns) • Whether independent checks are consistently applied prior to submission of emissions and flow data • If similar spreadsheet tools or manual calculations are used across other reporting streams, and whether these have been reviewed for accuracy • Whether any additional errors have been identified in other historic submissions • What governance or oversight arrangements are in place to ensure ongoing accuracy of emissions reporting Response Due 1st September 2026.	01/09/2026
IR1A	Action 5: Dow's CCRA would benefit from improved clarity around future operational assumptions, stronger alignment with time-based climate projections, clearer prioritisation of high-consequence risks, and the development of a structured and formalised periodic review within the EMS to support ongoing resilience. This is based on the fact that the CCRA is a live document and should be reviewed periodically as part of your EMS and after any significant climate change related events or near misses.	01/09/2026
IR1A	Action 6: Dow are requested to clarify: • The expected volume and duration of HCl generation during any interim period when MeCl production is not operational; • The intended management strategy for this HCl stream (e.g. abatement, storage, off-site transfer, or alternative use); and • How HCl returning from Cabot during processing of residual TCS/STC stocks will be managed, particularly if MeCl production is reduced or temporarily stopped.	01/06/2026

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.

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

Dow Silicones – BR9685IX

Biological Treatment and Sludge Management

Effluent from the bioreactor overflows into two secondary clarifiers, where biomass settles and is returned to the bioreactor as return activated sludge (RAS). Excess biomass is withdrawn as waste activated sludge (WAS).

Historically, wasted sludge from the secondary clarifiers was batch-fed to a small thickening vessel (approximately 40 m^3) and transported off-site for disposal twice per week. On an annual basis, this corresponded to approximately 2,000 m^3 of sludge disposed, containing around 36 tonnes of dry solids (as reported by Dow).

Sludge disposal represented a key constraint on flexible sludge management and was associated with significant operational costs. Dow has since installed a small screw press dewatering unit to improve sludge handling efficiency. The screw press dewaters the sludge to approximately 60% water content (≈40% dry solids), substantially reducing the volume of material requiring off-site disposal. This improvement has the potential to reduce annual disposal volumes and associated costs by up to 90%.

Recent Site Observations

During the site visit on the 15th April, the screw press had recently been commissioned as part of plant improvements aimed at maximising water removal from the biological sludge. The dewatered sludge was observed in a connected waste skip, where it exhibited a high-solids, granular and cohesive texture with an elastic, slightly springy consistency. This indicates effective dewatering and a significantly higher solids content compared to the previously disposed sludge. The dewatered sludge is currently transported off-site for disposal at a third-party landfill facility.

EWC Code Classification

Dow have been disposing of this ‘drier’ bio-sludge at a third-party landfill under EWC code 19 02 06. Following a review of Appendix A of WM3, waste classification should be undertaken by working through the chapters in order of precedence, starting with the industry process and business activity that generates the waste.

As Dow predominantly operates an inorganic chemical manufacturing process, this directs the classification towards Chapter 06. NRW’s understanding is that Chapter 19 applies to wastes arising from standalone or designated waste and wastewater treatment facilities, whereas Dow’s waste is generated as part of on-site treatment of process effluent from an inorganic chemical manufacturing activity. It is therefore NRW’s view that Chapter 06 is more appropriate.

Within Chapter 06, sub-chapter 06 05 – “sludges from on-site effluent treatment from the chemical industry” appears appropriate based on Dow’s description of the bio-sludge. This sub-chapter contains mirror entries (06 05 02* and 06 05 03), meaning that an assessment of hazardous properties,

supported by appropriate testing where necessary, is required to determine whether the waste is hazardous or non-hazardous.

Dow have since confirmed that this assessment has been undertaken and that the waste has been classified as non-hazardous (06 05 03). Copper was identified as the only constituent with potential relevance to hazardous classification; this has been tested off-site at a UKAS-accredited laboratory, and copper content is also monitored on a monthly basis. Dow have further confirmed that they have informed both the haulier and the landfill of the revised EWC code.

Consequently, Dow failed to provide accurate waste classification information to downstream operators, contrary to permit condition 2.3.3(e). This misclassification of waste represents a failure relating to waste documentation associated with off-site transfer and is appropriately assessed under IR2C – Operating techniques. The compliance category has been determined in line with NRW's compliance framework based on the reasonably foreseeable impact of the non-compliance rather than the actual outcome. The incorrect EWC code introduces a foreseeable risk that the waste could be misinterpreted by downstream operators and subject to inappropriate handling or acceptance controls. However, in this instance environmental risk is considered minor. The waste has been confirmed as non-hazardous following WM3 assessment, was consistently disposed of at a regulated landfill, and the receiving landfill is permitted to accept the correctly classified waste (06 05 03). There is no evidence that the incorrect classification resulted in inappropriate handling, misrouting, or environmental impact. **On this basis, a category 4 (minor) non-compliance score has been deemed appropriate.**

The incorrect waste classification indicates a potential deficiency in Dow's management system, specifically in relation to the procedures and controls governing waste classification and application of WM3. In this case, the failure to correctly apply the List of waste hierarchy suggests that the management system may not have ensured accurate classification of certain waste streams. At this stage, further information is required to determine whether this issue represents an isolated error or a broader management system deficiency. In particular, clarification is needed on Dow's waste classification procedures, staff training, and whether other waste streams have been subject to appropriate review.

Action 1: Dow are requested to provide further details on their waste classification process, including relevant procedures, training arrangements, and any internal review or audit of waste streams. **Response due by the 1st September 2026**.

Permit / Site Document Updates Required

The addition of the screw press must be reflected in the permits Operating Techniques. (Table S1.2 – Operating Techniques). This table should be updated to include the screw press as a sludge dewatering step along with any relevant BAT alignments (sludge minimisation, volume reduction etc). NRW believe the relevant section that needs updating is listed in Table S1.2 operating techniques? "Application for variation EPR/BR9685IX/V008: An amended and consolidated Site Document Appendix 4 containing modifications to Sections 1, 2, 9, 10, 13, 14, 15, 16 and 17."

Action 2: Dow to review and update their operating techniques and include them in the next

permit variation. Dow to provide an update at the next compliance meeting.

Silos

Permit variation EPR/BR9685IX/V011, issued on the 15th January 2026, relates to the installation of new silica storage and dust control infrastructure at Dow Silicones Barry Plant. The variation was determined as a normal variation and does not constitute a substantial change. The site's OPRA score remains unchanged.

The variation authorises the installation of four new silica storage silos supplying the W115 production facility. Each silo is fitted with fabric filtration to control particulate emissions, with new authorised emission points A126–A129. The permit also includes the installation of an upgraded local exhaust ventilation (LEV) system at W115, venting via new emission point A130, to control emissions of dust containing crystalline silica.

A new BAT-AEL dust emission limit of 2.5 mg/Nm³ has been applied to emission point A130 due to the potential presence of CMR substances. Annual particulate monitoring at all new emission points is required using BS EN 13284-1. The operating techniques for the site have been updated to reflect the new silos, filtration systems and LEV plant, with NRW confirming alignment with applicable BAT conclusions.

An improvement condition has been included to confirm airflow rates, emission rates and filtration performance assumed in the H1 assessment, alongside a restriction preventing coincident silo filling to ensure emissions remain within assessed limits. NRW concluded that the variation introduces no new emissions to water, sewer, land or groundwater and poses no significant risk to human health or the environment.

During the site visit on the 15th April silos were observed from a distance due to ongoing construction and commissioning works.

Copper Exceedance

On the 13th February 2026, Dow submitted a Schedule 5 incident notification to NRW in relation to a breach of permit condition at emission point W1. The breach related to a statistical exceedance of the copper emission limit. Dow reported that, for Q1 2026, the 95th percentile copper concentration exceeded the permit limit of 0.1 mg/L, with five individual samples above the limit. The dataset provided included daily monitoring results up to the 12th February 2026.

A Review of the Q1 monitoring data shows that copper concentrations during January 2026 were generally stable and compliant, typically ranging between approximately 0.03 and 0.07 mg/L. A clear upward trend is evident in early February, culminating in several exceedances of the 0.1 mg/L limit. The highest recorded concentrations were in the range of approximately 0.10 to 0.13 mg/l, which drove the 95th percentile exceedance for the quarter.

In response to the elevated copper concentrations, Dow implemented and proposed a number of control measures. These included reducing pH in the primary wastewater treatment (PWWT) process to enhance copper removal and increasing pH in the secondary wastewater treatment (SWWT) process

to prevent copper re-absorption from the biomass. Additional measures included increased bio-sludge removal to improve copper removal from the system and a review of effluent streams entering the wastewater treatment plant (WWTP) to identify the source of the increased copper loading.

The incident appeared to reflect a short-term deterioration in wastewater treatment performance, rather than a chronic failure, and Dow's initial response focused on process optimisation and source investigation.

Although a statistical exceedance of the copper ELV occurred, the location of the Alamo area within the site, combined with the presence of large effluent balancing tanks (E-Tanks, approximately 6,000 m^3 capacity), provides significant attenuation and dilution prior to discharge. This infrastructure materially reduces the likelihood of elevated influent concentrations translating into a discharge of sufficient magnitude or duration to result in a Category 2 (significant) level of impact. The copper concentrations measured during this incident are of a similar magnitude to those assessed in 2021. On this basis, it is unlikely that the recent exceedance resulted in an exceedance of the EQS for copper in the receiving water. There is no evidence to suggest acute toxicity, persistent impact, or harm to downstream receptors. Taking into account the temporary nature of the event, the mitigating effect of on-site infrastructure, the absence of observed environmental harm, and the existing evidence demonstrating limited bioavailability of copper in the receiving water, the non-compliance is considered to have a minor or minimal environmental impact.

Accordingly, the copper emission limit exceedance at emission point W1 is assessed as a Category 3 (minor) non-compliance of permit condition 3.1.2, based on the reasonably foreseeable environmental impact.

Root Cause:

During a site visit on the 15th April 2026, NRW discussed the incident with representatives of Dow. The root cause of the exceedance was attributed to the actions of a newly engaged third-party operative working within the Alamo area, Dow's solid waste storage and handling area. During the period in question, this operative was managing stockpiles and, in doing so, pushed residues containing spent bed material and water into a surface water drainage system.

This activity resulted in the introduction of additional suspended solids into the effluent stream, which subsequently entered Dow's effluent treatment plant (ETP). The increased solids loading contributed to elevated copper concentrations in the treated effluent and ultimately led to the 95th percentile emission limit value exceedance.

NRW's investigation identified that, while third-party operatives receive site induction, there was a deficiency in the procedures and work instructions provided to those operatives. In particular, there were insufficient controls and clarity to prevent inappropriate activities such as the pushing of solid residues into drainage infrastructure. Dow acknowledged that management of change arrangements were insufficient for the introduction of third-party personnel into this area of the site, resulting in a lack of awareness of the environmental consequences of such actions.

Effective Management of Change (MoC) is a critical component of environmental management systems when introducing third-party operators, ensuring operational control, regulatory compliance,

and environmental protection. NRW concludes that the exceedance was symptomatic of underlying management and operational deficiencies, rather than a treatment process failure alone.

Dow failed to manage activities in accordance with a written management system that adequately identified and minimised the risk of pollution arising from third-party operations and management of change. Although third-party operatives were inducted onto site, procedures and work instructions were insufficient to prevent inappropriate activities that resulted in solids entering the drainage system. This represents a deficiency in Dow's management system rather than a lack of competent persons or resources. Given that the activity was foreseeable, undertaken routinely, and involved third-party personnel, the absence of effective procedural controls constitutes a failure to adequately identify and minimise pollution risk, as required by permit condition 1.1.1(a). **Therefore the non-compliance is assessed as Category 3 against permit condition 1.1.1(a).**

Action 3: As part of NRW's root cause investigation into the copper emission limit exceedance, and to provide assurance that the management system has been appropriately strengthened, NRW requires further clarification on how agency and third-party staff are integrated into Dow's environmental management system.

At the next compliance meeting, Dow is requested to explain and provide evidence of:

- The induction and site-specific environmental training provided to agency and third-party staff;
- How competency is assessed, verified, and recorded, particularly where activities present a risk of pollution; and
- The supervision and management arrangements in place during start-up, routine operations, and periods of change.

This discussion is intended to demonstrate that Dow's management system adequately identifies and controls environmental risks arising from third-party activities and management of change, in accordance with permit condition 1.1.1(a).

EH&S Bad Actors

As part of NRW's ongoing regulation of the HCl release incident and associated management system findings, further assurance was required that Dow had addressed the underlying causes identified in CAR_NRW0050816. While engineering modifications to the HCl cylinder system have been completed and materially reduce the likelihood of a recurrence, the incident also highlighted deficiencies in Dow's management arrangements for identifying and escalating lower-impact but repetitive EH&S issues ("bad actors").

Prior to a site visit on the 15th April, Dow confirmed that, at the time of the incident, there was no functioning management system in place to systematically identify, track, and escalate lower-impact EH&S bad actors via OPDs, work orders, or trend analysis. This contributed to a failure to recognise and intervene in a pattern of minor leaks and degradation that ultimately culminated in a significant loss of containment.

Dow has since advised that enhancements have been made, including the use of existing programmes such as SAP in conjunction with data-driven AI review tools to analyse historical leaks and EH&S records, and the development of revised inspection and escalation arrangements. These arrangements have now been embedded within Dow's environmental management system, including how issues are identified, escalated, governed, and actioned in practice.

HCL Spare Cylinders

NRW reviewed an update from Dow regarding the location of stored spare HCl cylinders and associated risk controls. A separate concern had previously been raised regarding the fire protection and siting of spare cylinders located close to the main distillation plant. While the in-service cylinders benefit from firewall protection due to their proximity to a chlorosilane pump set, the stored spare cylinders are also positioned within an area where a contained pool-fire scenario could occur. Foam pourers are present to protect the main plant, which has pressure-relief provisions, whereas the stored spare cylinders do not have equivalent inherent protection.

During the site visit on the 15th April, Dow presented the findings of a review of alternative locations for the spare cylinders. Dow concluded that alternative locations were not reasonably practicable due to increased operational risks, primarily associated with heavy vehicle movements such as forklift truck traffic. On this basis, Dow elected to retain the spare cylinders in their current location adjacent to the bay, which is fitted with east and west HCl monitors providing early detection capability. Dow also advised that the use of these HCl cylinders is planned to be decommissioned within approximately one month, significantly limiting the duration of any residual risk associated with their continued storage and use.

Dow demonstrated that the engineering modifications previously agreed have been completed and are now recorded as "Already completed". In addition, Dow outlined a new routine inspection regime for HCl cylinder valves and associated pipework and confirmed that this regime is being implemented. Dow advised that, under the revised inspection arrangements, no evidence of valve degradation or similar failure indicators has been observed to date. Taking into account the enhanced inspection controls, existing monitoring arrangements, and the planned near-term decommissioning of HCl cylinder use, NRW considers the current risk to be adequately controlled in the interim.

Bondstrand Sewer Update

NRW requested an update on the recent ATEC work request to clean and re-survey the affected section of the Bondstrand chemical sewer pipework. Dow advised that the work has been scheduled but cannot currently be undertaken due to ongoing operational activities in the area, which restrict access for cleaning and CCTV survey. Dow explained that, with the imminent closure and cessation of operations of the Basics train, there will be sufficient opportunity to safely undertake the cleaning and re-survey works. Dow anticipates that these works will be completed in just over one month, once operational constraints have been removed. NRW will follow up on completion of the survey and review the findings at the next compliance meeting.

A50 – BOC Hydrogen Plant Vent

Nitrogen is supplied to the site from an on-site cryogenic air separation plant owned and operated by

BOC, located at W954. The nitrogen plant is not continuously manned and is monitored and controlled via telemetry from the BOC Margam plant. Key operating parameters, including nitrogen flow, pressure, storage levels, and plant status, are displayed in the Dow W910 control room. In addition to Dow, Cabot Carbon and Navigator Terminals also receive nitrogen supplies from this BOC facility.

NRW noted that the A50 emission point is associated with the BOC-operated plant. NRW discussed monitoring data from the A50 emission point, which show a gradual upward trend in emissions over the past five years, while remaining within permitted limits. Dow advised that, due to the planned closure of the Basics train, there is a possibility that this facility may no longer be required in the near future. NRW expects Dow to continue monitoring the emission trend in the interim and to consider whether any reasonably practicable operational, maintenance, or process adjustments could arrest or reverse the gradual increase should the plant remain operational.

This matter will be kept under review and revisited at future compliance meetings, particularly if the upward trend continues, approaches permit thresholds, or if there are changes to the operational status of the BOC plant.

Q1 2026 Monitoring Returns

NRW received Dow's Q1 monitoring returns within the required reporting timescales. With the exception of the copper exceedance at W1, which has already been addressed separately, there were no exceedances of the permitted emission limit values.

Annual reporting Form

NRW has reviewed Dow Silicones' 2025 Annual Performance and Monitoring Report, submitted in accordance with permit condition 4.2.2. The report demonstrates that emissions to air and water from designated point sources remained compliant with permitted emission limit values throughout 2025. One Schedule 5 notification, and the associated non-compliance scores, relating to a hydrogen chloride release were submitted in late 2025 and were appropriately reported. Some air emission parameters showed increased variability following plant changes; however, all monitoring results remained compliant. Dow has identified ongoing improvement actions, which will be discussed at the next compliance meeting.

Flow Monitoring

Inaccurate flow data was identified in historical W1 returns (Q1 2025, Q2 2025 and Q1 2026) during an MCERTS audit. The issue arose from a spreadsheet error in summing reporting days.

All corrected values remain well within the permit flow limits. Review of historic emissions data indicates that Dow consistently operates significantly below these limits, demonstrating that there was no reasonably foreseeable risk of a permit exceedance or associated environmental impact. The non-compliance is therefore administrative in nature.

Dow has corrected the error, resubmitted the affected returns, and implemented additional quality assurance checks within their reporting process to prevent recurrence, with further improvements planned through automation. **Non-compliance recorded under IR4B – Reporting (C4).**

Root cause: The reporting error was caused by inadequate data validation and checking procedures

within Dow's management system. The spreadsheet calculation error was not identified prior to submission, indicating insufficient quality assurance controls over regulatory reporting. Further enquiries are required to determine whether this represents an isolated failure or a wider systemic weakness.

Action 4: To determine whether this issue represents a wider management system weakness, Dow should confirm:

- What formal data validation and verification procedures are in place for all regulatory reporting (not limited to W1 returns)
- Whether independent checks are consistently applied prior to submission of emissions and flow data
- If similar spreadsheet tools or manual calculations are used across other reporting streams, and whether these have been reviewed for accuracy
- Whether any additional errors have been identified in other historic submissions
- What governance or oversight arrangements are in place to ensure ongoing accuracy of emissions reporting

Response Due 1st September 2026.

Groundwater monitoring

Landfill Licence No. 38 requires Dow to maintain off-site groundwater monitoring boreholes in good order and to sample groundwater from each monitoring borehole at a minimum frequency of once every three months. The Q1 2026 Landfill Groundwater Sampling Results Report demonstrates that quarterly groundwater monitoring has been undertaken in accordance with these requirements.

NRW notes that several groundwater monitoring boreholes were not sampled due to access, blockage or condition issues. Although this does not constitute non-compliance with the licence requirements for the current reporting period, the integrity and long-term availability of the monitoring network are important in demonstrating ongoing groundwater protection. Dow should therefore consider appropriate remedial action, replacement or alternative arrangements for non-functional boreholes, as necessary, to ensure the monitoring network remains representative and capable of supporting any future permit surrender assessment.

Climate Change Risk Assessment (CCRA)

Type of assessment: **Report/Data review**

Event type/reason: **Routine**

Parts of permit assessed: **General Management – Climate change risk assessment**

Compliance criteria: **IR1A Installations – Management – General Management**

Assessment result: **Assessed with no evidence of non-compliance**

Recommended enforcement action: **No further action**

Enforcement response: **No further action**

Comments and Action 5: NRW have carried out a basic review of Dow's risk assessment (see attached) and is satisfied it meets our current climate change risk assessment requirements. Overall, Dow's assessment is strongly aligned with the UK Government chemical sector guidance. The assessment demonstrates a good understanding of site-specific climate risks and includes generally appropriate mitigation measures. However, it would benefit from improved clarity around future operational assumptions, stronger alignment with time-based climate projections, clearer prioritisation of high-consequence risks, and the development of a structured and formalised periodic review within the EMS to support ongoing resilience. This is based on the fact that the CCRA is a live document and should be reviewed periodically as part of your EMS and after any significant climate change related events or near misses. **Dow to provide an update by the 1st September 2026.**

Dow COMAH/EPR Joint Visit 27th April 2026

The purpose of the meeting was for Dow to provide an update on their decommissioning strategy and the proposed new projects, which are expected to lead to a future permit variation application. A detailed discussion was held regarding the approach to decommissioning, with a particular focus on the strategy for the basics train. Dow outlined the overall structure that has been established to manage the decommissioning process, including the allocation of roles and responsibilities and the governance arrangements in place. It was confirmed that additional specialist personnel have been brought into the organisation specifically to oversee and manage the decommissioning activities. Dow also explained that they have sufficient internal resource to deliver the decommissioning programme and, where necessary, can draw upon experienced global staff to provide additional expertise and support.

Dow also described the management of change (MoC) procedures that will be applied during the transition from operational activities to decommissioning. Formal processes are in place to assess and manage any modifications associated with this phase, and the introduction of dedicated personnel has strengthened the implementation of these arrangements.

In addition to decommissioning, Dow presented early-stage information on proposed new projects that are anticipated to require a future variation application. The discussion covered the scope and intent of these developments, along with initial consideration of potential environmental impacts and regulatory requirements. Continued engagement at this stage is encouraged to ensure that the eventual application is supported by sufficient detail and can be assessed efficiently.

At the meeting, Dow were encouraged to continue providing regular updates as the site progresses through the decommissioning of key infrastructure, and it is noted that this is already being undertaken. On the 14th of May Dow confirmed that the site is now well into a run-down phase, with remaining purchased raw materials being consumed and a phased shutdown of process units underway. Several key activities have already been completed or are in progress. The Phoenix process has been shut down, with bulk inventory removed and no further operation anticipated, although full clean-out is yet to be undertaken. The W424 Grinder process has completed its final silicon metal grinding campaign, with remaining silicon powder to be utilised; however, the W940 Grinder remains

operational. In addition, feeds have been removed from the W348 TCS Plant , and bulk material removal has commenced, including the transfer of remaining TCS/STC product to Cabot. Other plant areas continue to operate under a managed, phased shutdown plan. Management of Change (MoC) reviews are ongoing, particularly in relation to de-inventory activities and the preparation of cleaning procedures, demonstrating a structured and controlled approach to this transition phase.

The MeCl plants are currently still operating and therefore continue to consume HCl arising from hydrolysis. However, it is anticipated that there may be a transition period during which residual chlorosilane stocks are processed but MeCl production is not taking place. During such a period, HCl generation may continue without a corresponding on-site consumption route.

At present, the scale of this potential HCl stream and the proposed management arrangements are unclear, introducing uncertainty regarding both operational control and environmental risk.

There is also a related consideration regarding the recovery of HCl returning from Cabot as they process remaining TCS and STC stocks. If MeCl plants continue operating, it is assumed that this recovered HCl could still be utilised via the existing consumption route. However, if there is any misalignment between chlorosilane processing/recovery activities and MeCl operations, this could result in additional surplus HCl requiring management.

Action 6: Dow are requested to clarify:

- The expected volume and duration of HCl generation during any interim period when MeCl production is not operational;
- The intended management strategy for this HCl stream (e.g. abatement, storage, off-site transfer, or alternative use); and
- How HCl returning from Cabot during processing of residual TCS/STC stocks will be managed, particularly if MeCl production is reduced or temporarily stopped.

Action response due 1st June 2026.

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 required for the permit condition assessed to avoid non-compliance. No non-compliance scored at this time
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(1) – Emissions to water
- IR3A(2) – Emissions to air
- IR3A(3) – Emissions to 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.

Disputing the Content of this Compliance Assessment Report Form
If you disagree with the content of this Compliance Assessment Report form, you should submit your concerns, in writing, to the regulating officer who issued it within **15 working days** of its issue. This will be treated as a **Stage 1 review**.

If you are not satisfied with the outcome of the stage 1 review, you may request a **Stage 2 appeal**. This request must be submitted **within 21 working days** of receiving the response from the stage 1 review.

Further details on our review and appeal process are available at: Natural Resources Wales / Appeal a regulatory decision from Natural Resources Wales

Concerns Not Related to the Content of this Compliance Assessment Report Form
If your concerns do not relate to the content of the Compliance Assessment Report form, you should first attempt to resolve the issue with the regulating officer or their line manager.

If the issue remains unresolved, please contact our **Customer Contact Team**:

- **Telephone**: 0300 065 3000 (Monday to Friday, 09:00–17:00)
- **Email**: enquiries@naturalresourceswales.gov.uk

They will provide details on how to escalate your concerns through our **Complaints and Commendations procedure**.

If you are dissatisfied with our response, you may contact the **Public Services Ombudsman for Wales**:

- **Telephone**: 0300 790 0203
- **Email**: 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.