

Compliance Assessment Report CAR_NRW0039488

Permit being assessed: AP3433ES.

For: Dowlais Slaughterhouse EPR/AP3433ES, held by Kepak Group Limited

At: Pengarnddu Industrial Estate Dowlais Top , Merthyr Tydfil, South Wales, CF48 2TA.

Type of assessment carried out: Audit, Reason: Other.

On 07/12/2021 between 10:00 and 13:00.

Parts of permit assessed: Activities and Reporting

NRW Lead Officer: Mostyn Wall, accompanied by Andi Kemp.

Report sent to: Steve Davies, Technical Services Manager, Meat Division on 02/03/2022.

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

Part of permitted activity assessed (criteria)	Assessment result	Permit condition
B5 - Infrastructure - Plant and equipment	Action only (X)	
B5 - Infrastructure - Plant and equipment	Action only (X)	
C2 - General Management - Management system and operating procedures	Action only (X)	
B5 - Infrastructure - Plant and equipment	Action only (X)	
B5 - Infrastructure - Plant and equipment	Action only (X)	
C1 - General Management - Staff competency/training	Action only (X)	
C2 - General Management - Management system and operating procedures	Action only (X)	
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Result types are explained in more detail in the 'Important Information' section below.

Total number of 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?

Criteria	Action needed	Complete by
B5	Report back to NRW results of any feasibility studies on the automation of the ETP	11/04/2022
B5	Investigate protection barriers or ways to stop forklift damage to the ETP building in the future. Site to report back findings	11/04/2022
C2	Update the process control schematic in the control room to represent the current ETP operation.	11/04/2022
B5	Site to report back the results of the sludge centrifuge and	11/04/2022

Criteria	Action needed	Complete by
	dewatering trial	
B5	Site to report back the plans and options for installing bunds around the EQ and sludge tanks.	11/04/2022
C1	Site to send details of the induction plan and training plan for new staff	04/04/2022
C2	The site to develop details SOPs for the ETP monitoring, control, and dosing so that knowledge from the more experienced staff is recorded and passed to the ETP operators. The site must report back to NRW their proposals for further SOP's and make them part of the environmental management system.	11/04/2022
C2	site to send Environmental Target Plan (EP 331)	11/04/2022

Action 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

ETP Audit

Present, Mostyn Wall and Andi Kemp from NRW
Kepak, Steve Davies, Paul Williams, Andrew Rees and Nathan Williams

The aim of the visit was to audit the effluent treatment plant (ETP) and processes at the installation. The reason for the audit was to assess if the ETP followed the best available technology (BAT) as outlined in the Bref guidance documents and to inspect the new ETP building.

The Audit was undertaken on the morning of the 7th December. The weather as atrocious with heavy rain, hail, and strong winds.

The abattoir has a current operational capacity of approx. 3000 sheep and 300 cows a day. This is significantly less than recent history at the installation. The present-day slaughter numbers reflect Kepak's business model where sales are agreed before slaughter.

The Kepak's group environmental targets were discussed. Each site has its own environmental group. Kepak has environmental targets for the entire company and individual targets for each site. These include, fewer odour complaints, breaches of permit conditions and fewer schedule notifications to the regulator (NRW, EA or SPA). The environmental targets are laid out in the annual EMS improvements report submitted to NRW.

Changes made to the ETP operation

The ETP now has 24/7 coverage by operators rather than remedial cover over night and at weekends. This

has allowed the site to monitor the ETP and react to changes in the ETP monitoring parameters 24 hours a day. As the ETP relies on manual operation and control this is a positive step to achieving a consistent ETP performance.

The management of the ETP has also been adjusted in Q4 2021 with the introduction of Andrew Rees being brought back to manage the ETP operation and ETP operators. Andrew Rees has vast experience of the site operational processes and the ETP. Andrew's role is to review the present-day operation of the ETP and the site processes that can affect ETP performance. Andrew is looking at both equipment and operator practices to make improvements.

The site has optimised the temperature of the steam in one of pre-processes which is preventing excessive amounts of fatty materials from entering the ETP to begin with. The lowering of the steam temperature results in less fat being dissolved into the effluent stream. This was implemented on 16th November 2021 – the site has reported a reduction in the fats, oils and grease levels found within our composite water samples.

The site has also increased the cleaning frequency on our pumping pits, with the aim of minimising the potential of excessive settled solids from being discharged. The change in cleaning regime was implemented week commencing 15th November 2021 and saw the cleaning frequency move from 4 weekly to a fortnightly regime.

Future plans

The site discussed the future automation of the ETP process. The site is undertaking a feasibility study for the automatic dosing system to control PH through relative dosing of ferric and caustic chemicals. Automation will allow real time adjustment and dosing, eliminating ETP operator error and allowing more control. The site also discussed plans for automatic flow control from the balance tanks to the DAF unit.

Action. Report back to NRW results of any feasibility studies on the automation of the ETP.

Site tour

From the Kepak site office we walked around to see the ETP new building at the eastern side of the permit. We walked past the lairage and slaughter building to the ETP building. No odours were identified outside the building and there were no signs of pests.

The ETP building looked solid and well built. The ETP building had newly installed external walls, roof and had new external lighting.

The new roof was weather tight and held back the most extreme rain and hail while we were inside.

The sides of the external wall did not have a barrier to protect the building from forklift truck damage, the previous wall had a hole from forklift damage due to driver error while collect waste from the roller screen.

Action: Investigate protection barriers or ways to stop forklift damage to the ETP building in the future. Site to report back findings.

The ETP building had good roller doors. Doors help to contain any odour within the ETP room and follows BAT. No overwhelming or abnormal odours were identified inside the ETP building. An odour suppressant gas is used above the dissolved air flotation unit (DAF).

The ETP building will have a new floor installed, either resin or a polymer floor.

Some of the metal supports for the internal tanks and building looked rusty and corroded.

Action: Ensure that these supports are checked for structural integrity and are painted/ treated to prevent further corrosion. Site to send maintenance record for the inspection of the ETP room internal structure.

The valve controlling the flow from the Equalization tanks into the DAF is manually controlled. The manual control leaves the ETP in the hands of the operator. The site is investigating installing an automatic control valve that will ensure that the flow is within the hourly limit specified by the permit.

The pH probe is located in the DAF unit. The site is looking to install an automatic PH probe to automate the dosing of the chemicals into the DAF and PH control. PH is important to get the coagulation process to work.

The polymer and ferric oxide are stored in tanks adjacent to the DAF.

Control room

The control room has an overview of the process on the wall. The process control schematic is out of date and would benefit to be updated to show the current configuration of the ETP.

Action: Update the process control schematic in the control room to represent the current ETP operation.

The ETP room has level controls and alarms on all tanks. Pressure of the DAF system is also monitored in the control room. Hourly process controls are logged and recorded on the computer system in the control room.

The DAF tank has windows along its profile to allow a visual inspection of the DAF process and treatment. The white water and flocculation process can be observed. As you move down the DAF the turbidity decreases and more sludge is amalgamated at the top of the tank.

Sludge is collected in the sludge tank at the end of the DAF. The tank is not bunded and is stored outside. The tank has a yearly inspection.

The site is trialling a centrifuge to dewater the sludge. This would reduce this amount of sludge collected (therefore reducing costs). Water would then be re-introduced into the DAF.

Action: Site to report back the results of the sludge centrifuge and dewatering trial.

Equalization tanks. Two large Equalization tanks are present at the site and provide an important function controlling and mixing the waste stream prior to entering the DAF. The tanks are mixed by aeration and are inspected yearly.

The tanks are located outside the ETP building and are not bunded. Potential leaks could result in raw effluent entering the blue drains downslope to the east of the tanks.

Bunding is required for the tank to comply with the permit and best practice outlined in CIRA 736. Kepak is getting an external consultation to assess the tank bunding.

Action: Site to report back the plans and options for installing bunds around the EQ and sludge tanks.

Odour logger. The odour logger has now been moved to within the site boundary. This now allows odour monitoring of the Kepak effluent stream and not the mix of the DCWW sewer network

Training and experience transfer.

Training is done on the job and via courses run by Aquatreat. A lot training is based on experience transfer learnt on the job. It is unclear if the ETP operators have knowledge of the site's operations, sources of the effluent stream and cleaning activities.

Action: Site to send details of the induction plan and training plan for new staff.

Andrew Rees and the senior ETP operators have a very good understanding of the ETP process, the operations within the installation and the incoming effluent stream. The majority of the ETP process is controlled and monitored manually. For example, the windows on the side of the DAF unit allow for a visual inspection of the floc formation, sludge collection and operation of the DAF. The visual inspection of the DAF needs to be recorded and to be part of a standard operating procedure (SOPs) so that new or less experienced operators can follow the correct procedures and refer to examples of correct operation. Record the correct actions to take with different scenarios for the DAF controls and process parameters.

Action: The site to develop detailed SOPs for the ETP monitoring, control, and dosing so that knowledge from the more experienced staff is recorded and passed to the ETP operators. The site must report back to NRW their proposals for further SOP's and make them part of the environmental management system.

Sampling

The composite sampler is located adjacent to pit number PP8 where the treated effluent enters the external sewer system before reaching the DCWW network. The composite sampler is housed in a locked weather-proof building that is kept in a constant temp. The building was in good condition. The composite sampler takes a sample every hour to compile a 24-hour representative sample of the treated effluent. 1 bottle is filled every day at the sampler. Both the site and DCWW use the composite sampler for compliance. DCWW also take monthly spot samples from PP8.

The ETP building improvements have brought the structure of the ETP building up to the standards required and the ETP is meets the BAT requirements. Any automation of the process is encouraged as it would remove operator error from the procedure. The staff have the knowledge and experience to run the ETP, but the site must ensure that the knowledge and experience is transferred to training and standard operating procedure documents for future refence and guidance.

Kepak Annual Returns and Fugitive emissions report 2021

Kepak reported 1 fugitive release to air in 2021, the release of 312 kg of refrigerant R404AR was recorded in CAR NRW0038821. The release was detected as part of routine leak detection tests.

In 2021 the site has carried out refrigeration upgrades and have more upgrades planned and awaiting approval to take place in 2022. The site has also been changing out the gas from R404a and upgrading it to R448. R448 has a much lower global warming potential (GWP) 68% less than R404a.

A refrigeration project which will include the addition of the installation of automatic gas leak detection is undergoing CAPEX and is scheduled for early 2022. The automation will hopefully lead to lower losses of refrigerant at the site.

Table 6.4.3b, Annual monitoring of Organophosphorus Compounds (24hr composite) was sent in and is compliant with the permit.

Odour, the site recorded 17 odour complaints in 2021, NRW received 22 complaints about odour in the

Dowlais Top area during 2021. NRW's inspection of the effluent treatment plant (ETP) was to ensure that best available techniques are used in the ETP. During both of NRW's visits to the site in 2021 no odours could be identified within the permitted area or outside the boundary. The site implements several actions to reduce odour at the site and this is recorded in their odour management plan.

To reduce odour a dosing system has been installed on a permanent basis at PP11, this pumps Hydrogen Peroxide into effluent leaving site to neutralise Hydrogen Sulphide gas, and therefore, reduce odour issues from Welsh Water's sewers downstream of the Kepak Merthyr site. Pumping pits have also been bypassed or filled in, to reduce odours by smoothing out effluent flow.

Environmental Targets and reporting

The site has environmental targets for reducing waste, energy reduction, incidents, complaints, and environmental permit banding. The site has increased the use of energy and water per tonne of product compared to 2020.

Action: site to send Environmental Target Plan (EP 331)

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.

What are suspended scores?

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 and Waste action criteria (used in section 1 and 2):**A: Permitted activities**

- A1 Specified by permit

B: Infrastructure

- B1 Infrastructure – Engineering for prevention and control of emissions
- B2 Infrastructure – Closure and decommissioning
- B3 Infrastructure – Site drainage engineering (clean and foul)
- B4 Infrastructure – Containment of stored materials
- B5 Infrastructure – Plant and equipment

C: General management

- C1 General management – Staff competency/training
- C2 General management – Management system and operating procedures
- C3 General management – Materials acceptance
- C4 General management – Storage, handling, labelling and segregation

D: Incident management

- D1 Incident management – Site security
- D2 Incident management – Accidents, emergency and incident planning

E: Emissions

- E1 Emissions – Air
- E2 Emissions – Land and groundwater
- E3 Emissions – Surface water
- E4 Emissions – Sewer
- E5 Emissions – Waste

F: Amenity

- F1 Amenity – Odour
- F2 Amenity – Noise
- F3 Amenity – Dust/fibres/particulates and litter
- F4 Amenity – Pests/birds and scavengers
- F5 Amenity – Deposits on road

G: Monitoring and records, maintenance and reporting

- G1 Monitoring and records, maintenance and reporting – Monitoring of emissions and environment
- G2 Monitoring and records, maintenance and reporting – Records of activity, site diary/journal/events
- G3 Monitoring and records, maintenance and reporting – Maintenance records
- G4 Monitoring and records, maintenance and reporting – Reporting and notification to Natural Resources Wales

H: Resources efficiency

- H1 Resource efficiency – Efficient use of raw materials
- H2 Resource efficiency – Energy efficiency

Enforcement response

Any permit condition non-compliance 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 20 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 – 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.