# **Basic Details**

**Publish Date** 

28 October 2025

Case ID#

3342

Title

**Nation** 

**Owner Type** 

Public body

# Wales Regulator Reference No. 80 **Legal Status** Statutory **Reservoir Type** Impounding **Reservoir Capacity** 10 - 24,999m3 **Year of Construction** 1800 - 1849 **Main Construction Type** Earth fill embankment **Dam Height** 2 - 4.99 metres **Dam Flood Category** В **Hazard Class** High-risk reservoir Reservoir Use • Flood risk management

Scour damage to spillway channel following storms and resulting reservoir impoundments

# **Incident Details**

#### **Date & Time of Incident**

14 January 2025 - 12:00

#### **Date Incident Closed**

12 September 2025

#### Observations that Caused the Incident to be Declared

• Water flowing outside of engineered channels

#### **Describe the Incident**

Following routine surveillance, the Supervising Engineer was alerted of scour dam to the old narrow masonry spillway channel following storms in early January 2025 and resulting in reservoir impoundments. The hole in the spillway started at around 4pm from the upstream entrance of the spillway, which was approximately 4.5m in length / 1.5m in width and around 1m deep. SE attended site and initiated telephone discussions with the QCE. Remedial works were agreed on later that day, including MIOS improvement works to replace the existing spillway.

## **Supporting Photos**



Scour damage to spillway channel following storms and resulting reservoir impoundments

# **Causes and Impacts**

## Natural Processes which Initiated or Contributed to the Incident

• Heavy/persistent rain (no flood)

## Main Contributing Factors to the Incident Occurring

#### **Dam Factors**

· Deterioration of materials

#### **External Factors**

None

## **Shortcomings**

· Construction shortcoming

#### **Root Cause of the Incident**

Old narrow and inadequate masonry spillway channel deteriorating following storm / flood events, leading to scour damage. Effectiveness of permanent measures: the new spillway facilities and channel were successfully tested during a heavy rainfall event (albeit at a very low water level compared to the safety check flood level) in September 2025, with a water depth of 140mm observed flowing through the new main spillway structure and channel.

#### Impacts on the Reservoir

• Spillway or overflow - failure or instability

# **Supporting Photos**



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# **Supporting Contributions and Studies**

#### **Human Factors which Influenced the Incident**

None - MIOS improvement works to replace the old spillway structure and channel were already programmed to be carried out in Spring / Summer 2025 (ahead of the MIOS deadline), to take advantage of more favourable weather conditions for the construction works).

#### Instrumentation at the Reservoir

N/A with regards to instrumentation. The routine and reactive surveillance visits to the site proved to be very effective in detecting the issue and promptly alerting the SE and Undertaker.

#### Was Instrumentation Effective?

Not Applicable

## Assistance by External Parties and Impacts on Downstream Population

N/A

#### **Summary of Studies or Investigations Undertaken**

None following incident: - the new main spillway structure and channel, including the new auxiliary spillway facility, which were built in Summer 2025, have been designed to reservoir category B standards in terms of capacity and construction material (i.e. design flood 1 in 1000 year and safety check flood 1 in 10,000 year), and subsequently signed off and certified by the QCE – the new spillway facilities are therefore a vast improvement in terms of capacity and robustness. The reservoir freeboard was also improved during the Summer 2025 works.

# **Lessons Learnt**

#### Lesson 1

Lessons learned: Continued routine and reactive (following storm / impoundment events) surveillance of the dam is essential. The system the Undertaker has in place worked well, with the incident being immediaely escalated to the SE, who in turn immediately made contact with ARPE / QCE. On the same day as the initial call from the Undertaker from site, an MS Teams meeting had been held between the SE, Undertaker and QCE, and appointed contactor, to agree the required remedial works and timescale. By the 21st January 2025, the temporary repairs to the spillway were complete

Lesson 2

Lesson 3

Lesson 4

**Closing Comments** 

# **Supporting Photos**





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Information provided has been sent from reservoir owners and engineers, and cleansed of personal information by the enforcement authority. We cannot guarantee the accuracy of the data, but if you find an error please contact the relevant enforcement authority.