Factsheet

Flood Management

We're undertaking detailed modelling to look at potential flood risk and flood management

Managing flooding

We're aware of the existing flooding issues in and around the proposed location of the new reservoir.

We have lots more work to do, but this factsheet provides information about our current understanding of the situation and how we're developing our proposals to manage flooding.

There are three main categories of flooding issues currently impacting the local area:

- **Fluvial flooding**, caused by rivers and streams overtopping their banks
- **Surface water flooding**, caused by rainfall running over or ponding on the ground
- **Groundwater flooding**, caused by groundwater rising up to the surface

We are working on our plans to ensure that the proposed new reservoir won't worsen these issues.

Fluvial flood risk

Several tributaries to the River Ock cross the site of the proposed new reservoir, converging with the Ock south of Marcham, which then flows into the River Thames at Abingdon.

To avoid displacing the water that flows in these tributaries, we're proposing to divert them into new watercourses flowing around the perimeter of the new reservoir site towards the River Ock. These are marked B on the diagram below.

New floodplain storage areas (marked A on the diagram) would be created to replace existing floodplain areas currently present on the proposed reservoir site. This would mitigate a reduction in floodplain capacity on the reservoir site, which otherwise could create additional flooding issues in other places.

The flow of water through these channels would be regulated by meandering embankments and vegetation (see indicative visualisation on next page).

Indicative replacement floodplain storage areas and watercourse diversions

↗ Indicates direction of water from watercourses

Managing flood risk

- Replacement floodplain storage areas (A)
- Watercourse diversions (B)

Surface water flooding

Rain falling on the reservoir embankments would be captured by drainage systems within the embankment structures. Our early modelling suggests that capturing, storing and channelling this potentially significant volume of water, in conjunction with the replacement flood storage areas that we're proposing, could reduce the risk of flooding elsewhere.

We'll continue to work closely with stakeholders, including the Environment Agency, local planning authorities, catchment groups and local communities, to explore local and wider flood resilience opportunities.

The new waterways and floodplain storage areas would need to be created before major works on the reservoir site could be carried out, to avoid creating flooding impacts during the construction of the proposed new reservoir.

Groundwater flooding

The flood modelling and assessment work that we've carried out so far shows that the introduction of the reservoir could cause groundwater levels to rise in areas to the south and east of the site.

To mitigate this, new surface water channels to the west and east of the reservoir site would be used to intercept this groundwater.

In addition, we're proposing to install a groundwater interceptor drain beneath the perimeter of the reservoir site. This would likely consist of permeable stone material within a deep trench following the entire boundary of the reservoir. This method is often used to help manage groundwater around impermeable structures.

Indicative visualisation of new wetlands at the western edge of the proposed new reservoir site

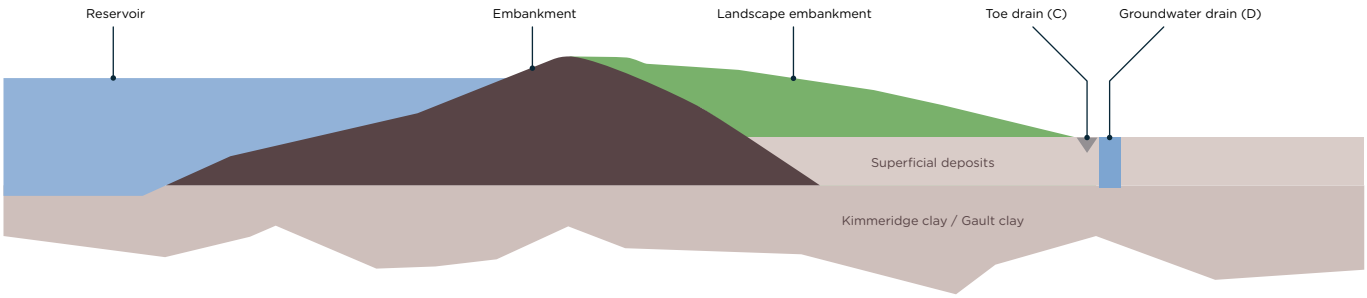

Illustration of reservoir embankment with toe drain and groundwater interceptor drain

What about seepage from the reservoir into the ground?

Based on our early assessments and modelling, we don't expect any significant seepage of water through the bedrock clays that would form the reservoir basin and core embankment structures. Residual seepage could be collected through a filtered internal drainage system in the embankments.

To prevent seepage through the Lower Greensand layer present in the underlying geology, a 'plug' of non-porous Kimmeridge or Gault clay would be used to seal any channels.

Next steps

We'll continue engaging with stakeholders to inform our modelling and proposals for managing flooding on the site.

We'll develop a Flood Risk Assessment, which will be an important part of our Environmental Impact Assessment process. This will be scrutinised by the Environmental Agency and reported in the Environment Statement that we'll submit as part of our application for development consent in 2026.