

Ground investigations and clay compaction trial

Ground investigations and a clay compaction trial are a key part of our early survey work for the proposed new reservoir

Background

We are carrying out a range of surveys and investigations, including a clay compaction trial, to build a thorough understanding of the geology in the local area and to inform our design work.

Clay compaction trial

Our plan

As part of our assessment work, we've received planning permission to undertake a clay compaction trial on land we own to the south of the Hanney Road. Using land within the proposed reservoir site, we plan to create a test embankment to assess how the strength and water content of the clay changes when it's compacted. We'll see how the properties of the clay change with depth and if the bedrock clay is suitable or not to use as structural fill. We'll also be able to assess how easy the clay is to extract and move, and we will test what clay layer thickness performs best to form the full-size embankment. The trial will inform our design and planning for the construction of the proposed reservoir, including supporting our Environmental Impact Assessment.

What is involved?

First, we'll need to remove the topsoil, which will be stored on site. Then we'll excavate the clay and layer it into three mounds, each around 50 metres long, 20 metres wide and up to 2 metres high. Regular measurements will be taken to monitor how the clay behaves. We'll also carry out noise monitoring whilst we're excavating the clay and constructing the mounds.



How long will the clay compaction trial take?

The trial will take place between Summer and Autumn 2024, but the period of work may extend to 12 months, depending on factors such as adverse weather conditions. Once the trial is complete, all the excavated material and topsoil will be replaced, and the field returned to its existing condition.

So that we can carry out the trial safely there are some associated works that have to be carried out at the same time:

- Setting up a secure site compound which will include office and site welfare facilities, equipment, and materials
- Stripping the topsoil and storing safely
- Setting up a drainage system for the site
- Building a temporary access road within the site for construction vehicles

Land take at the trial site will be kept to the minimum necessary to limit landscape and visual impacts. Plans are being put in place to carefully manage and monitor our activity on site. This will include a Construction Environmental Management Plan and a Traffic Management Plan. Due to the location of the works, we don't anticipate any noise disruption for local residents.

Ground investigations

Our plan

Part of our survey work includes ground investigations on fields within the proposed reservoir site. Samples taken will help us to better understand local ground conditions to support the reservoir design and forms an important part of our assessment work.

What is involved?

This work involves measuring and extracting soil and rock samples from boreholes, small pits, and trenches. We'll access the fields from the local highway network, placing tracking mats down to enable our vehicles to enter the locations where the boreholes, pits, and trenches will be dug. The temporary erection of a small rig will be required to drill the boreholes and extract the samples. Once our survey work has been completed then the land will be restored back to its original condition.

Whilst we carry out the ground investigations, we will have an archaeological specialist on site checking for the presence of archaeology. The specialist will preserve and record any important archaeological findings.

We have also started carrying out surveys of the local ecology, habitats, watercourses, and many other environmental features, and these will continue over the next two years. These surveys are important to inform our Environmental Impact Assessment. You can find out more information about this process in our Environmental Impact Assessment Factsheet.

How long will the ground investigations take?

The work in each field will take place over an approximate four-week period. This work will run through the course of 2024 and 2025.

