

Introduction to Ground Investigation (GI) work at Shanklin Esplanade, January & February 2023

To help us assess the possible options for sea wall and groyne refurbishment, we need to deepen our understanding of the ground conditions and underground structures, including the foundations of the existing sea defences. To do this, we will need to undertake a series of below ground explorations ranging from the digging of excavation pits to the use of drilling rigs for taking boreholes.

Where will the investigations take place?

These investigations will be undertaken in various locations along the Esplanade, through the sea wall and on the beach adjacent to the groynes. These locations are shown on the map. These are being undertaken by contractors that are fully qualified and experienced at carrying out this work. It will be more intrusive than our previous survey work along the Esplanade this year – you may notice things like welfare cabins for the workers, and large machinery.



Why do we need to do the investigations?

A GI survey determines the condition of the ground. They differ from the visual and radar surveys already completed as they require digging into the ground using various methods and types of equipment. These more intrusive surveys will help to determine:

- How much water is present in the ground, how deep it is and how it flows
- Detailed information about soil type and how 'strong' the ground is
- If there are any voids under the ground
- How the existing sea wall and groynes have been built, and how deep the foundations are

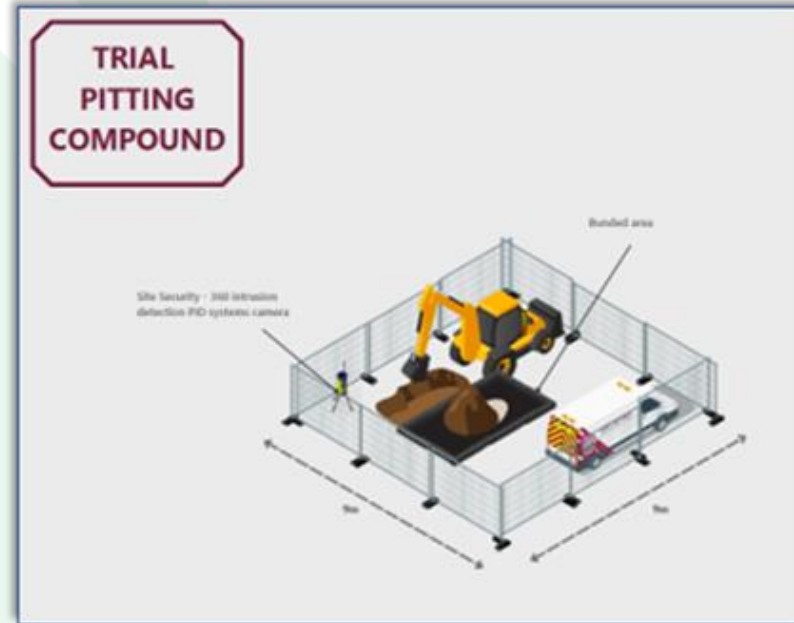
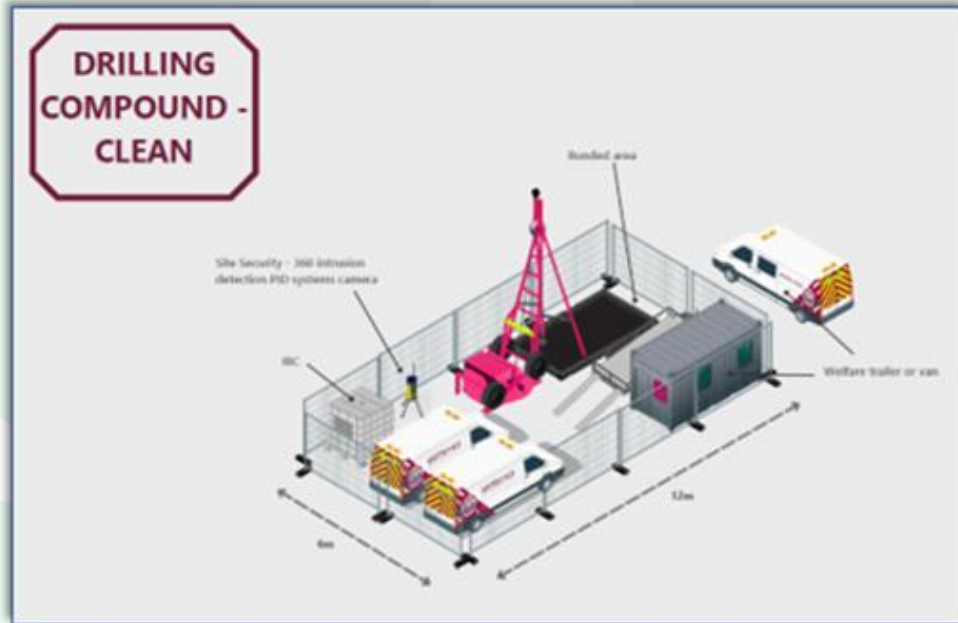
Ground investigations are extremely important as they help to minimise risk by better understanding potential ground hazards that may otherwise cause delays and additional cost during the construction phase.

When will the investigations take place?

Work will commence on 23 January 2023 and are expected to take 5 weeks. Working hours will be 8am-5pm Monday to Friday.

What equipment will be used?

The types of equipment used to undertake the investigations will depend upon what information and data we need to collect in each location. Some will use lower impact techniques, whilst some will require more sophisticated machinery as we dig down to greater depths. Barriers will be erected around each exploratory location so that the work can be completed safely. These are expected to be in place for between 1 and 4 days as we progress along the Esplanade. Indicative compounds can be seen below.



Will the work be noisy?

As with any work of this nature, there will be some noise. We will be using acoustic barriers to minimise the disruption.

Will there be any road closures?

We don't anticipate that any road closures will be needed in Shanklin. There will, however, be some footpath closures for which appropriate diversions will be put in place. There will be also be some parking suspensions to ensure safety, including to accommodate a temporary compound for equipment and welfare facilities within an area of the Spa car park. This has been agreed with Isle of Wight Council.

Access permissions

Most of the work will take place on land owned by Isle of Wight Council. We are working in partnership with the Council on the Shanklin Coastal Defence Scheme and have agreed access permissions. Where access is required on land that is not owned by the Council, we have contacted the relevant landowner.

How will machinery access the beach?

Access to the beach will be via existing slipways where suitable width is available. This will require temporary closure of slipways for a very short period of time whilst machinery movements are taking place.

What measures will be in place to protect the environment during the work?

An Environmental Action Plan for the GI work has been prepared. This sets out the way in which environmental risks need to be addressed. Our contractor will implement the action plan during the construction work, applying industry pollution prevention guidelines.

What will happen once the investigations are complete?

Once the investigations are complete, the pits will be reinstated on a like-for-like basis, based on the original ground surfacing. Some of the boreholes will have monitoring equipment left within a chamber beneath the ground. This will allow us to monitor groundwater levels until the construction phase of the project. A manhole cover will be installed at these locations to enable us to safely access the monitoring equipment.

Name
Job title
Date

If you have a question which you cannot find the answer to, please contact us at IOW_FDschemes@environment-agency.gov.uk