

Introduction to Ground Investigation (GI) work at Culver Parade, Yaverland 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 Culver Parade and Yaverland Road, 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 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

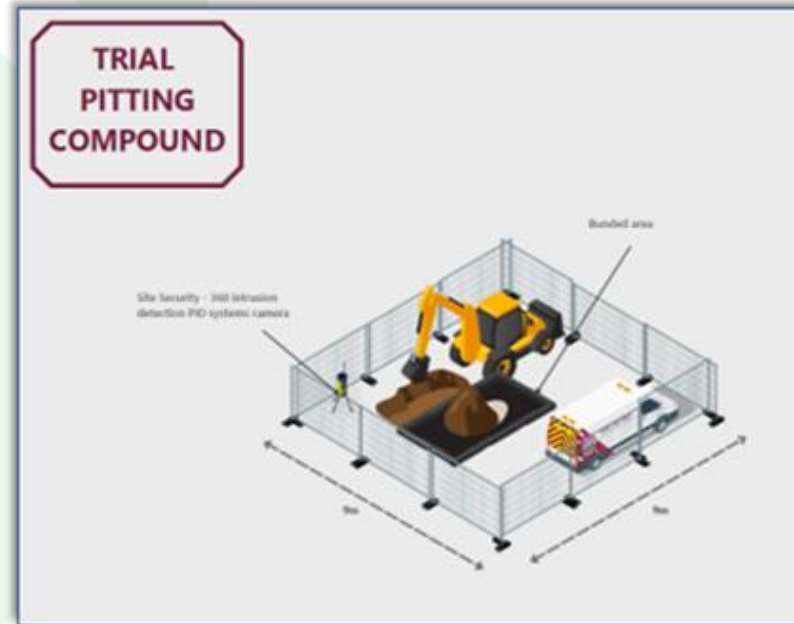
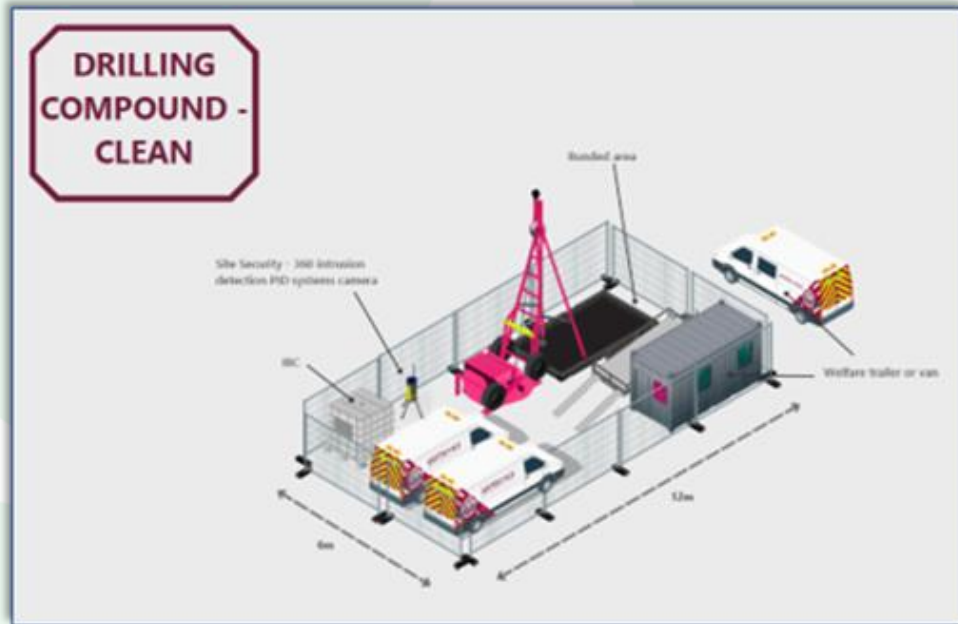
Ground investigations are extremely important as they help to minimise risk by better understanding potential ground hazards that may otherwise cause delays and additional cost during the construction phase.

When will the investigations take place?

Work will commence on 16 January 2023 and is expected to be completed by 24 February 2023. Working hours will be 7am-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 seafront. 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.

How will machinery access the beach?

Access to the beach will be via existing slipways where suitable width is available. Access across the beach front is restricted by the existing timber and concrete groynes, therefore, to gain access to all required areas there will be a need to make amendment to the groynes and temporarily remove a selection of horizontal timbers. The timber groynes will be reinstated immediately following works completion within each bay area. Some GI works at Yaverland will be hand dug due to access restrictions on larger machinery on the beachfronts.

What measures are in place to protect the environment during the work?

An Environmental Action Plan for the GI has been prepared. This sets out the way in which environmental risks needs to be addressed. Our contractor will implement this action plan during the construction works.

A condition survey (including photos) of the site compound and works area will be completed prior to any works starting. The compound at Yaverland will be located away from the seafront and industry pollution prevention guidelines will apply. Staff from Dinosaur Isle will be available during the works to provide advice on any palaeontological remains uncovered. The contractor will monitor the tide times to ensure work I undertaken in dry conditions where possible.

The Check-Clean-Dry approach will be followed, ensuring that all PPE and equipment is cleaned before leaving site.

Will there be any road closures?

We don't anticipate that any road closures will be needed in Yaverland or Sandown. 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 and to accommodate footpath diversions. A temporary compound for equipment and welfare facilities will be set up within an area of Dinosaur Isle car park. This has been agreed with Isle of Wight Council.

Access permissions

The work will take place on land owned by the Environment Agency and Isle of Wight Council. We are working in partnership with the Council on the Yaverland Coastal Defence Scheme and have agreed access permissions.

What will happen once the investigations are complete?

Once the investigations are complete, the pits will be reinstated on a like-for-like basis to match 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.

**If you cannot find the answer to your question, please contact us at
IOW_FDschemas@environment-agency.gov.uk**