

How we would construct the project

Cadent is an experienced and trusted operator of pipelines. We will make sure we bring our knowledge of constructing and maintaining the existing gas network to this project.

Constructing an underground hydrogen pipeline

To build our underground pipeline we will have to cross roads, railways, waterways and other sensitive areas. To do so we may need to use a number of different construction techniques. These include:

Open trenching

Open trench excavation is the most common method for installing underground pipelines. Open trenching begins by marking out the total area within which construction work will take place. Topsoil is then carefully stripped and stored next to the pipeline route. Meanwhile, the pipeline is delivered in short lengths and placed on supports. These short lengths of pipeline are welded together into longer sections called 'strings'.

The pipeline trench is then dug, with excavated material stored separately from the already stripped topsoil. The pipeline 'strings' are then lowered into the trench using special vehicles called 'side booms' (pictured) and welded to the pipeline that's already been laid.

The trench is then backfilled using the previously excavated material and the topsoil is replaced. Once the land above the pipeline has been fully reinstated, it can be returned to its previous use.

We anticipate that open trenching will be the predominant technique we use to construct our underground pipeline.

Trenchless methods

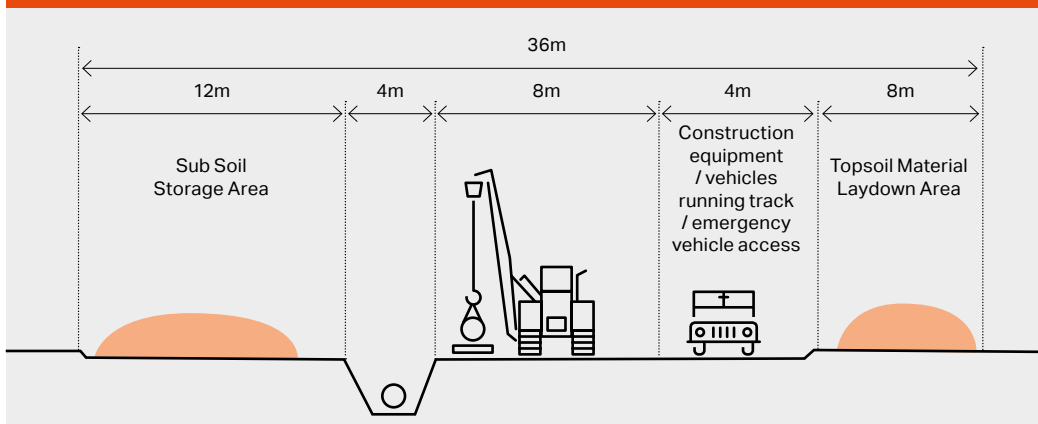
In some cases, for engineering and environmental reasons, open cut methods are not viable so trenchless methods will be considered.

Possible trenchless techniques that will be assessed as part of the design could include:

- Auger boring
- Horizontal directional drilling
- Microtunneling

We will provide more information on our construction methods as the project develops.

Diagram of open trench excavation



Typical working width – may vary depending on size of pipe or ground conditions.