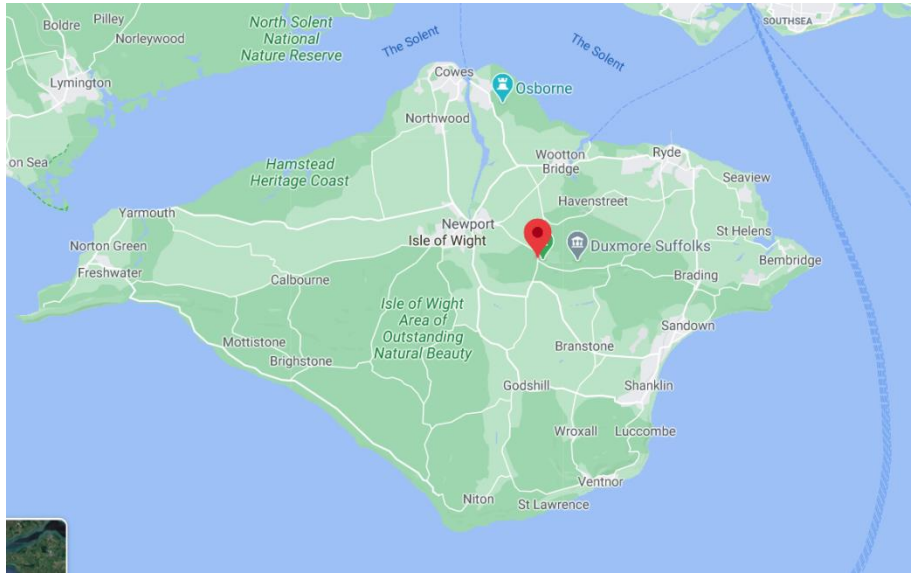
A substation is an integral part of electrical generation. Substations transform voltage from high to low to make the power safe for day-to-day use. Without substations, electricity would be dangerous to use!

The location of a substation is key as it needs to connect to the wider electricity network and supply power to homes/businesses.

The new Queen Victoria housing estate on the Isle of Wight needs a new substation constructed to supply power to the thousands of new residents.

Out of the four locations listed below, which one would you choose and why?

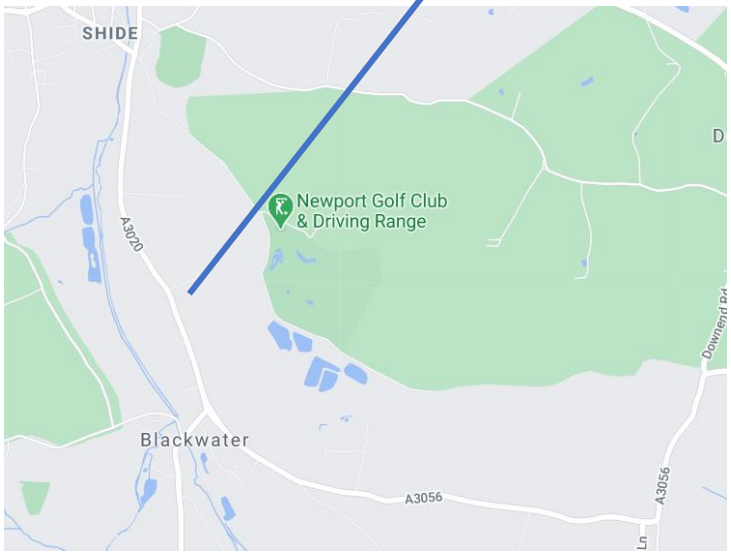


Location of the Queen Victoria Housing Estate

The new housing development is located near the town of Newport on the Isle of Wight (8.5 miles outside the town centre). The housing development is being bult in a rural location which has been purchased to provide new affordable housing.

Currently, there is little infrastructure, and the substation would need to be built to supply low voltage power to homes. SSE are currently building the new pylons and cables to connect this town to the electricity grid.

Location 1



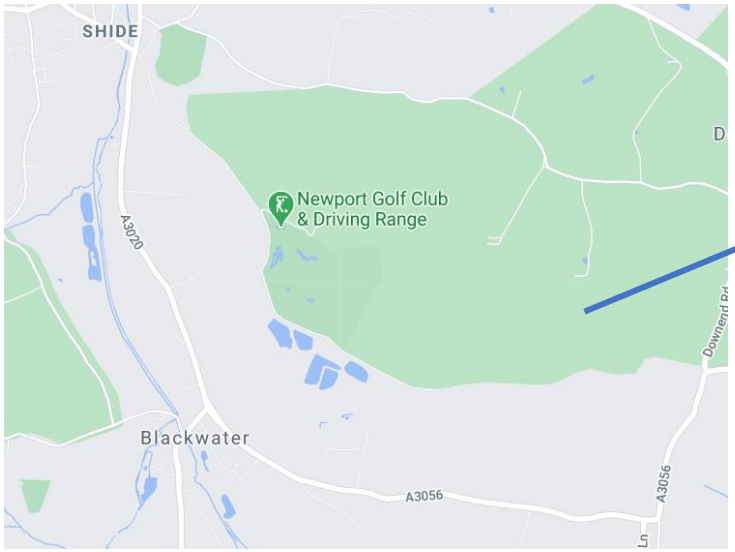
Location 1: Proposed site next to a busy A road (A3020).

Access: Next to a main road so favourable for contractors to access the site and help with construction of the substation

Terrain: Flat terrain

Points of interest: 0.5 miles away from a golf club and near a popular walking route

Hazards: Near a series of large ponds/streams that have had a history of flooding. New flood defences have been built around the ponds to mitigate the risk.



Location 2

Location 2: Proposed site within large parkland

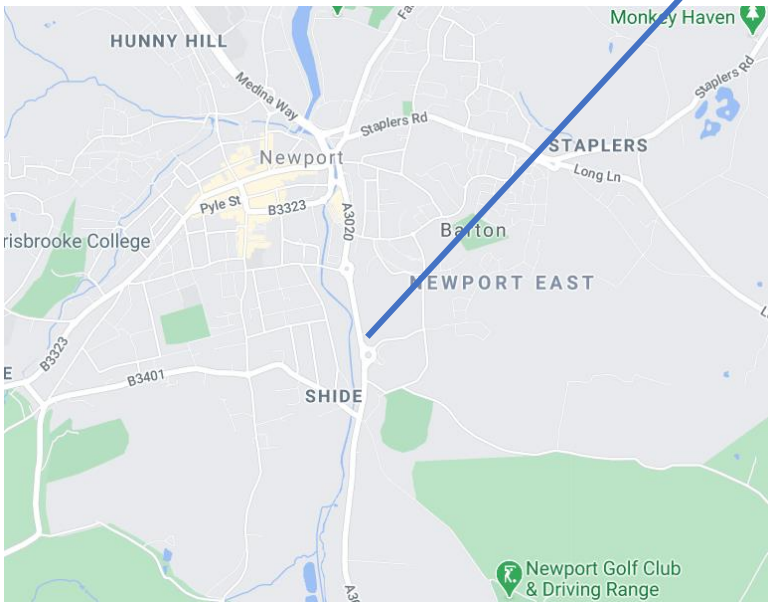
Access: Challenging access as no large A-roads nearby. Smaller country lanes could be challenging for large vehicles.

Terrain: Flat terrain

Points of interest: Popular walking spots for residents and near a very small village.

Hazards: Residents could protest this location getting selected as it could impact enjoying the local environment. A previous application to build here 15 years ago was denied.

Location 3



Location 3: Proposed site in Newport

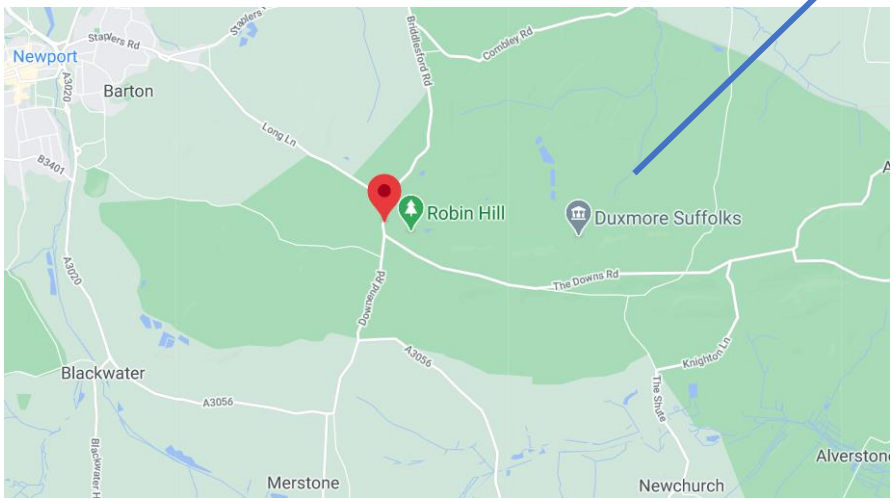
Access: Next to the A320 road on a busy route in/out of the town of Newport.

Terrain: Flat terrain near to a large stream that runs alongside the main road.

Points of interest: 400m away from a large secondary school and near playing fields where school students play a range of sports.

Hazards: Pose a risk to children. In addition, the stream has flooded previously, and local residents are campaigning to improve flood defences.

Location 4



Location 4: Rural location

Access: No major access for construction, smaller roads. Near a large car park used by walkers.

Terrain: Partially hilly

Points of interest: Near a large country house that is popular to visit. 500m from a countryside pub.

Hazards: Popular location for people visiting the country house. Ground prone to getting drenched after heavy rainfall.