Carbon Capture and Storage: the project

The Peak Cluster is an innovative collaboration to capture, transport and permanently store carbon dioxide (CO_2) emissions from the cement and lime industry in Derbyshire and Staffordshire, as well as neighbouring industries in Cheshire.

Five cement and lime plants across Derbyshire, Staffordshire and Cheshire, owned by Tarmac, Breedon, Lhoist and Aggregate Industries, together with Lostock Sustainable Energy Plant in Cheshire, known locally as LSEP, have come together with Progressive Energy to form Peak Cluster.

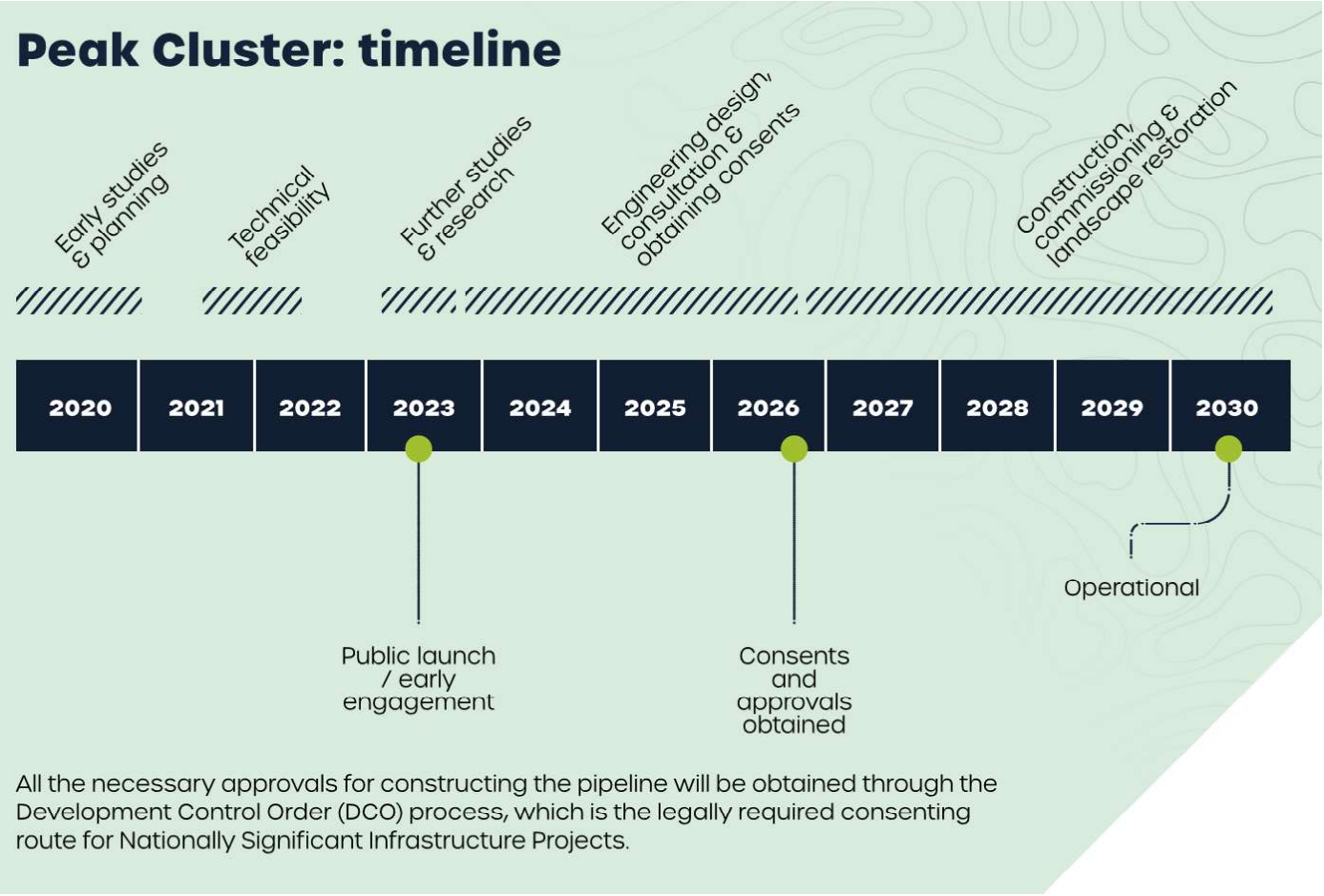
To tackle the climate emergency, we must reduce our CO_2 emissions. Industrial processes, such as the production of cement and lime and energy from waste release a significant amount of CO_2 into the atmosphere. In order to tackle climate change, we need to significantly reduce these emissions.

The project will capture and transport carbon dioxide emissions from industry across the region, before permanently locking it away beneath the eastern Irish Sea. From 2030, the project will remove over three million tonnes of CO_2 emissions each year.

In addition to enabling the continuation of these industries in a sustainable manner, Peak Cluster will help support around 1000 skilled jobs.

Timetable

A pioneering major infrastructure project, such as Peak Cluster, is complex to design, develop and build. There are many stages to make it a reality which we have broken down into a timeline:



What we are doing

Peak Cluster will use a technology called Carbon Capture and Storage – also known as CCS. This process captures carbon dioxide emissions before transporting them to secure storage sites where they will be permanently locked away. To transport the CO_2, we considered all options: trucks, trains and a pipeline. To minimise further transport emissions and traffic on the road, a pipeline was found to be the best solution.

The pipeline will transport the captured CO_2 emissions from the industrial sites to storage in the eastern Irish sea. The pipeline will be buried underneath the ground.

We are currently undertaking initial studies to determine where the pipeline could be routed. These studies are identifying what are known as potential ‘pipeline route corridors’ in which a pipeline of a diameter of 24-36 inches could be constructed.

The studies taking into account existing infrastructure, such as built-up areas, and environmental factors such as sensitive landscapes and protected habitats.

In addition, we anticipate that we will need a number of above ground installations spaced along the route to allow inspection and maintenance of the pipeline.

In order to determine the best route within these corridors, and potential locations for the above ground installations, we will be undertaking detailed environmental studies and asking for input from local communities and stakeholders.

Have a read of our ‘consenting’ fact sheet for more information.

Who we are

Progressive Energy is leading the development of the project alongside the Peak Cluster partners, Breedon, Lhoist, Tarmac, Aggregate Industries and Lostock Sustainable Energy Plant.

We want to hear from you

If you have any questions, queries or comments on Peak Cluster, please do chat to us. You can find the ways to contact us on our website: www.peakcluster.co.uk.