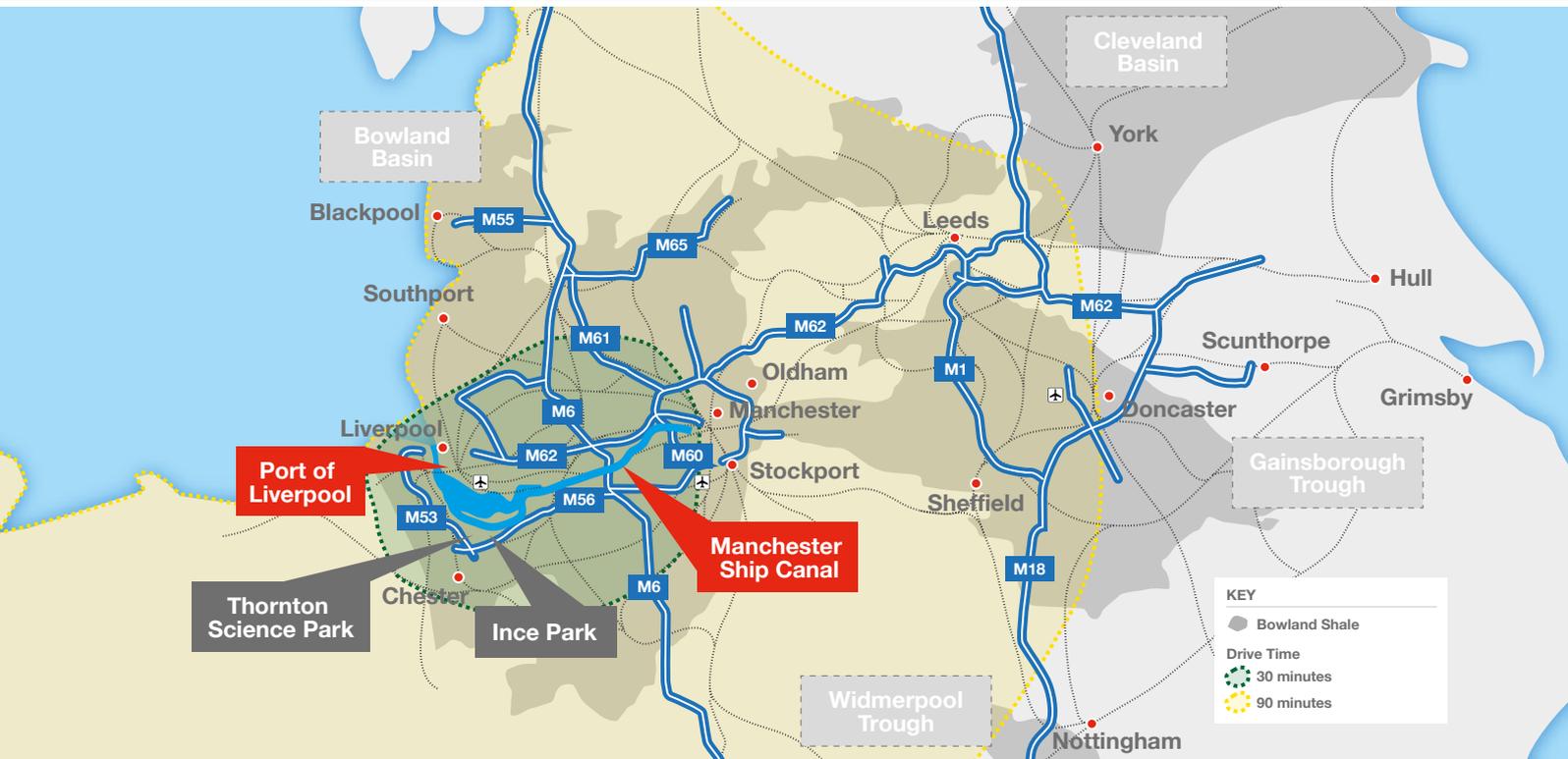


SHALE GAS

April 2015

Creating a supply hub for the Bowland Shale

A summary of a study by economists Amion Consulting



Delivering a thriving industry

Unlocking the North of England's shale gas resource could become a cornerstone of the Northern Powerhouse – supporting the renaissance of Northern communities and tapping into the expansive economic benefits on offer. The report by Amion Consulting demonstrates the economic potential of developing a supply chain hub to serve the Bowland Shale area.

Advancement of the industry presents a major opportunity to create a shale gas supply hub for the Bowland Shale in the Ocean Gateway - an area

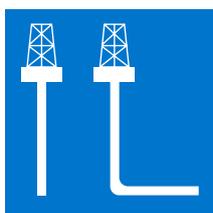
stretching from the port of Liverpool to Manchester. This could see an international 'centre of excellence' created, delivering a strong cluster of industries to support the sector across the Midlands and the North.

A co-located supply chain could more than double the supply chain spend retained in the Bowland Shale area and create over 13,000 local peak year jobs – 7,800 more than without the creation of a supply hub.

Headline figures



100
Wellpad sites



1,000/4,000
Developed wells



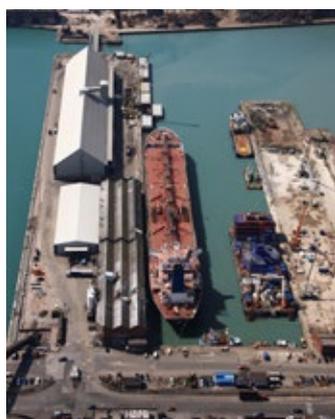
£2.6bn
Peak annual spend



£30.6bn
Cumulative spend (to 2048)



13,000
Peak-year jobs with supply hub



The supply chain opportunities

Evidence shows an array of services and equipment are needed to facilitate shale gas development, from site selection and preparation through to decommissioning, with opportunities in construction; capital goods; logistics; materials and professional services.

The needs of the industry are abundant, with requirements including the provision of steel casing, rig hire, water management, access infrastructure and investment in the logistics chain amongst others.

Collaborating to create a Centre of Excellence

A buoyant industry would rest on establishing a skilled and trained workforce and the North West is poised to become the home of skills development. The University of Chester's Thornton Science Park, based in the Ocean Gateway, is set to play a central educational role. Both direct and supply chain jobs

would be supported by established educational provision, supporting specialist roles as well as supply chain sectors such as manufacturing and construction.

Collaboration between the private and public sector will be essential to unlock the potential. A delivery strategy could:



Attract major suppliers to the hub area



Attract specialist suppliers and Small and Medium Enterprises (SMEs)



Invest in connectivity infrastructure and the logistics chain



Identify mid-stream benefits to regional energy intensive industries



Deliver key infrastructure projects, such as a connection to the National Transmission System (NTS)



Build an independent pipeline to link intensive energy users



Invest in research and skills development, promoting employment opportunities