### Key Issues
Installing a gas pipeline across the tidal channel of the Solent presents a broad range of challenges (and opportunities) during EIA development. Particular challenges that were addressed included the need to avoid adversely impacting on the international nature conservation status of the Solent and the high landscape value of the New Forest National Park and Isle of Wight AONB, while designing a technically viable scheme that overcame difficulties associated with variable ground conditions.

In order to protect the sensitive marine environment and fulfil the challenging consenting requirements, the pipelines were installed by horizontal directional drilling (HDD) at a depth of approximately 50m below the seabed with an underground intersect. The innovative design of the scheme set a new world record in the field of HDD, delivering a scheme that maintains a continual supply of gas to everyone living on the island, in the least disruptive manner to residents, and with minimal impacts on the landscape, recreation and nature conservation.

### Purpose of the project
As a licensed Gas Transporter, SGN has a statutory duty to ensure a safe and secure supply of gas to its customers. Due to ground instability issues and increasing vulnerability of the existing Solent pipelines to scour on the seabed, a need was identified to replace the pipelines and move the existing Pressure Reduction Station (PRS) on the Isle of Wight to a more stable location to maintain the security of supply.

### Description of the project
The scheme comprised the replacement of three high pressure gas pipelines, crossing the Solent from Lepe in Hampshire to Gurnard on the Isle of Wight, the construction of a new PRS, and connections to the existing Gas Distribution Network. Following consenting of the scheme, construction began in Summer 2010 and the sub-marine pipelines were successfully commissioned in Winter 2011.
Lessons learnt

Early and extensive consultation involving stakeholder meetings, public exhibitions, presentations to the parish council and meetings with consenting authorities identified issues at an early stage, thus avoiding programme delays, promoted good public relations and achieved support from a large majority of the local community.

The scheme was designed to minimise emissions and avoid excessive traffic movements associated with the import of materials and disposal of waste. Local stone was used over geotextile sheeting for working surfaces at the drill rig sites, timber was recycled, a recycling lubricant plant was erected at the drill rig sites through which all the drilling arisings were processed and the arisings were spread on local fields where possible and in agreement with farmers.

Lessons learnt cont. –

The scheme delivered ecological improvements such as the replanting of a greater number of trees than those felled, the translocation of floral species, the creation of log refuges for invertebrates and the use of a felled tree as a sculptured timber bench for an affected landowner.

The provision of consistent EIA team members to input to the project from the start through to construction proved invaluable in the early identification of environmental and social risks, thus avoiding delays during the construction phase and enabling the construction team to understand fully the environmental constraints and opportunities.

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