Non-technical Summary

Introduction

Southern Gas Networks (SGN) is applying for development consent to replace the existing gas pipelines crossing the Western Solent from Lepe in Hampshire to Gurnard on the Isle of Wight (Figure 1.1 Proposed Scheme'). As a licensed Gas Transporter, SGN has a statutory duty to ensure a safe and secure supply of gas to all of its customers. Due to ground instability issues and increasing vulnerability of the existing pipelines to exposure and scour on the seabed, the pipelines need to be replaced and the existing Pressure Reduction Station (PRS) at Egypt Point on the Isle of Wight moved to a more stable location to maintain the security of supply.

The proposed scheme will comprise the replacement of three existing high pressure gas pipelines, a new PRS at Gurnard, connections to the existing Gas Distribution Network and removal of the existing PRS at Egypt Point.

An Environmental Statement (ES) has been prepared to document the statutory Environmental Impact Assessment (EIA) process and to report the likely environmental effects associated with the scheme. The ES will be submitted with the consent applications. This document is the summary of the key issues raised in the ES in non-technical language, and is available as a standalone document.

An application for development consent will be made to the Secretary of State for Energy and Climate Change (DECC) under The Public Gas Transporter Pipe-line Works (EIA) Regulations 1999 and to the Marine and Fisheries Agency (acting on behalf of the Secretary of State for the Department of Food and Rural Affairs) under The Marine Works (EIA) Regulations 2007 for the replacement of the pipelines. Planning consent for the proposed PRS off Rew Street in Gurnard, will be sought from the Isle of Wight Council. Applications will also be submitted to the Marine and Fisheries Agency, under the Food and Environment Protection Act 1985 for consent for the pipeline construction works including temporary installation of marine guidance systems on the seabed, and under the Coast Protection Act 1949, for any works below mean high water springs that might affect navigational issues.

Alternative Options

Four alternative options for maintaining the supply of gas to the Isle of Wight were considered as follows:

- Option 0: Do Nothing: no intervention to maintain the gas supply to the island.
- Option 1: Replacement of the Existing Gas Pipelines and Relocation of the PRS: installation of replacement gas pipelines across a distance of 3.9km from Lepe to Gurnard with and a number of different construction techniques were considered including trenching, tunnelling and drilling beneath the seabed. Option 1 was chosen as the preferred option with the preferred solution to drill all the way beneath the seabed.
- Option 2: Works to stabilise the ground at Egypt Point comprising construction of a rock bund to
 prevent further coastal erosion. This option does not address the risk of failure of the existing subsea pipelines.
- Option 3: Providing Gas Supply to the IoW with Liquid Natural Gas, possibly between Gurnard Head and Thorness Bay.

Three types of pipeline material were reviewed, but only welded carbon steel with suitable protective coating and cathodic protection, has regulatory approval for high pressure gas transmission and is deemed suitable for use. Alternative drilling methods and working areas in Hampshire and the IoW were also considered. To ascertain ground conditions in the proposed working area from Lepe in Hampshire, SGN undertook a trial drill during winter 2008/2009. This comprised a 1.3km drill from the same site as currently proposed and has provided vital information and given increased confidence in the viability of a long Solent crossing by directional drilling.

Description of Scheme

The proposed scheme involves directional drilling at a typical depth of 50m beneath the seabed to replace the three existing gas pipelines, a new PRS, removal of the existing PRS and connections to the existing gas network. In summary, the scheme involves the following works (see Figure 1.1 and the engineering drawings in Annex A):

Marine Works

- Installing two 324mm steel pipelines beneath the seabed by drilling from either side of the Solent (Lepe and Gurnard) and steered using temporary guidance systems to meet in the middle of the Solent; and
- Decommissioning the existing three steel pipelines.

Works in New Forest, Hampshire

- Setting up of a temporary working site for a drill-rig in a large agricultural field to the south of the existing gas station and north of Lepe Country Park (see Plate 1). Access will be via a private lane off Stanswood Road, Lepe;
- Pipe storage and stringing area (see Plate 2), whereby the pipes will be welded together before being pulled into the drilled hole (bore) by means of the drill rig site on the Isle of Wight;
- Connecting into the existing gas supply at a valve station adjacent to the drill-rig site, with 150m of open cut trenching across agricultural land; and
- Upgrading the existing pipework at the existing valve station.

Plate 1: Drill rig site at Lepe

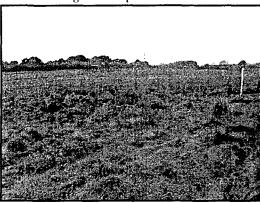


Plate 2: Proposed stringing area, Lepe



Works on the Isle of Wight

- Setting up of a temporary working site for a drill-rig (in a large agricultural field south of Hornhill
 Copse, Gurnard, accessible off Rew Street (see Plate 3). A 354m stringing area will also be required
 within this site.
- Connection and upgrades to the existing gas network. This will be via a single steel pipeline
 carrying gas at intermediate pressure, installed by a 500m length directional drill extending beneath
 Rew Street and the Gurnard Luck Valley, and then by open cut trenching across Cockleton Lane
 and agricultural land to connect to the existing gas network east of Gurnard village at Tuttons Hill.
- Construction of a new permanent PRS compound and infrastructure (within the same agricultural field as the temporary working site, to include construction of three single storey pre-fabricated buildings with flat roofs, additional installations/equipment within the new compound and a permanent concrete access road 4m wide, with a vehicle turning tee. The site will be surrounded by a 3m high mesh security fencing to contain the buildings and installations, which will be surrounded by a post and rail fence running from the entrance to Rew Street, with low shrubs planted around the fencing. Native trees will be planted to provide landscaping and screening.
- Decommissioning the existing PRS at Egypt Point (see Plate 4) in late 2011 involving the removal of the PRS building, and 'making safe' associated infrastructure.

The proposed works will commence in Summer 2010, subject to the necessary consents being in place. The drilling of the pipes will require 24 hour working 7 days a week for an estimated period of 6 months with the entire construction period extending over approximately 12 months.

The proposed scheme is to be constructed within or adjacent to areas of significant nature conservation, landscape and recreational importance, with some elements of the works located within the New Forest National Park and the IoW Area of Outstanding Natural Beauty (AONB).

Consultation

Effective consultation was central to the development and design of the scheme in order to arrive at a scheme that is acceptable to as many parties as possible and to engage those parties in the process. During the development of the scheme, consultation was undertaken with statutory consultees (Natural England, Environment Agency and English Heritage) and key organisations including Hampshire County Council, the IoW Council and the New Forest National Park Authority.

Comments received at all stages in consultation have been taken into account in the finalisation of the preferred scheme, leading to the preparation of this ES.

Consultation will be continued with statutory consultees, key organisations, landowners, residents and the general public as follows:

- 25 February 2010 a public meeting at Gurnard to introduce the scheme to residents and interested consultees, and to provide an opportunity to discuss the proposals.
- Late Spring/Early Summer 2010 if necessary, a further public meeting will be held at Gurnard
 and a public meeting held at Lepe to provide an update on the progress of the scheme and to
 discuss any concerns. Information on the proposed scheme and its construction will also be
 made available on signs within Lepe Country Park and at Gurnard.

The Existing Environment, Impacts and Mitigation

Figures 17.1 to 17.5 show the environmental constraints and opportunities associated with the proposed scheme.

Water

The accidental spillage of materials during construction has the potential to result in deterioration in water quality of ponds and standing water adjacent to the stringing area at Lepe. However, following standard best practice methods to minimise the risk of pollution, a pollution event is highly unlikely and the overall impact on water is negligible.

Flora and Fauna

The proposed pipeline will be drilled at an approximate depth of 50m beneath the seabed and will therefore avoid impacting upon the interest features of the internationally designated conservation sites. The proposed scheme is therefore not anticipated to affect any marine wildlife or fisheries and therefore this has not been considered within the environmental assessment. In addition, there is no potential for drilling lubricant to leak through into the marine environment due to the depth of the drill.

The terrestrial components of the proposed scheme will be constructed predominantly in areas of agricultural land but also adjacent to woodland, standing water, meadows and pasture. The scheme will involve the felling of an estimated 10 trees on the IoW and 2 trees (in addition to a small group of young trees) in the New Forest and the removal of some hedgerows.

As the works have the potential for disturbance to and loss of habitats (notably grassland, trees, hedgerows and scrub) and species (e.g. badgers, otters, dormice, bats, red squirrels, Great crested newts, reptiles, birds and flora) during the construction works, mitigation measures will be implemented. These will include:

- felling trees and clearing vegetation outside of the bird breeding season where possible. Where this
 is not possible, ensuring an ecologist is present during any vegetation clearance, and at times
 chosen to minimise risk to bats (and also red squirrels and dormice on the Island);
- avoiding the root zones of adjacent trees to be retained;
- minimising the footprint of the works;
- selecting access routes and routes for stringing of the pipeline to avoid sensitive wildlife features;
 and
- erecting an noise/visual barrier to act as a screen for red squirrels and dormice present in the woodland area (Hornhill Copse) adjacent to the drill rig site at Gurnard.

Plans showing measures to protect affected trees have been prepared and will be adhered to in order to minimise the number of trees affected by the scheme. The proposals include planting of native trees to compensate for the felled trees and to provide landscaping for certain elements of the scheme. An aftercare management plan, documenting the proposed replanting and replacement of trees and hedgerows, will be implemented upon completion of the scheme. Where possible, new habitats will be created for invertebrates using surplus materials e.g. felled trees turned into log piles.

Further survey work for reptiles and Great crested newts is proposed in April 2010 to assess the impact of the scheme on these species. If present, appropriate mitigation will be implemented to ensure that

these species are not disturbed. An addendum to the ES will be prepared and submitted to DECC and MFA in Spring 2010 to present the results of these additional surveys.

Landscape and Visual Amenity

The entire study area on the Hampshire side lies within the New Forest National Park and part of the short stringing area at Gurnard will extend into the IoW AONB.

The presence of construction plant, heavy goods vehicles, personnel, stored materials and site compounds at both drill rig sites, along the pipe storage and stringing yard between Lepe and Langley, along the stringing area in the IoW AONB and in the footprint of the construction works will temporarily impact on the existing landscape character of the area. A tidy site policy will be employed by the contractor and the works will seek to maintain any existing natural screening around the site boundary, where possible. However, the felling of approximately 12 trees (and a small group of young trees) will be necessary during the construction works, which will be replanted on completion of the scheme.

During construction of the proposed scheme (notably the erection of drill-rig sites, stringing areas and the new PRS), there will be temporary changes of view for residents, vehicle travellers, pedestrians, and recreational users. The impact on these receptors will vary dependent on the location, existing view and establishment of vegetation on completion of the scheme.

At Gurnard, some residential properties on Rew Street opposite the entrance into the site (see Plate 3) will have a direct but partial view of the new PRS (Plate 4) on completion of the scheme.

The new PRS and associated infrastructure including low-level lighting will be located outside of the AONB and all buildings will be erected on the lower north-western part of the field to reduce their visibility from residential properties on Rew Street. The site will be landscaped with the planting of native trees and shrubs.



Plate 3: Existing landscape character at proposed rig and PRS site at Gurnard



Plate 4: Photomontage of Proposed PRS site at Gurnard i.e. indicative picture of what the PRS will look like approximately 5 — 10 years after completion of the scheme.

Land Use

There will be a temporary loss of moderate to good quality agricultural land for a temporary drill-rig site at Lepe, and temporary loss of agricultural land for compound and working areas at Lepe and Gurnard, and in the footprint of the pipe storage and stringing yard between Lepe and Langley (see Plates 1 to 3). Following reinstatement of all private and public areas affected by the construction works, there will be no significant residual impacts.

The works will also necessitate the permanent loss of 2000m² of poor quality agricultural land for the construction of a PRS and associated infrastructure at Gurnard. This will result in the reduced agricultural productivity of the land. The impacts on agriculture will be mitigated by retaining agricultural use of the remaining field and by compensating landowners for the loss of productivity.

Geology, Soils and Geomorphology

Approximately 800m³ of soil arisings will be disposed of in Hampshire, and 1300m³ of arisings on the Island. However, no impacts on geology, soils and geomorphology are anticipated as a result of constructing the scheme.

Noise and Vibration

It is inevitable that the level and nature of noise generated by construction activities will be greater than the pre-existing background noise levels and is therefore likely to cause disturbance and disruption to local residents. Disruption due to construction is generally localised and temporary in nature. Predictions indicate that noise levels generated by certain phases of the scheme have the potential to disturb residents and some recreational users during the construction works. Affected areas include Stone Farm, Lepe Country Park and residential properties adjacent to the stringing yard in the New Forest, and residential properties along Rew Street at Gurnard.

Several safeguards exist to minimise the effects of construction noise and these will operate during the works. Consent for certain noise generating activities (a Section 61 application) will be discussed with the local authorities and plant items will be properly maintained and operated to minimise noise disturbance. The local community will also be fully informed about the nature and timing of activities. A noise barrier will be temporarily erected around the drill rig site at Lepe and on the northern and eastern boundary of the drill rig site at Gurnard to minimise noise impacts.

If vibration is a nuisance to residents, and complaints arise, surveys will be undertaken to assess whether vibration is ground-borne or airborne and measures adopted to reduce vibration, if necessary.

Cultural and Archaeological Heritage

No designated sites of known archaeological interest will be affected by the footprint of the proposed works. Similarly, the installation of pipelines beneath the seabed will have no significant impacts on maritime archaeology. Any ground disturbance such as the removal of soils and shallow stripping and excavating works for open cut trenching and in the footprint of new infrastructure may disturb known (e.g. Neolithic and WWII finds at the drill-rig site at Lepe and post-medieval features extending southwards from Gurnard Farm) and unknown buried archaeological remains in the footprint of the proposed works. An archaeological watching brief will be provided during all excavation works. Any finds or features will be appropriately recorded and reported upon.

Traffic and Transport

There will be increased traffic flows on the local road network at Lepe and Gurnard during the construction works (notably during site set up, drilling and decommissioning), with the greatest impact on recreational users at Lepe Country Park and residents at Rew Street. The use of all roads leading to the site will require sensitivity to avoid disturbance to residents and other road users. At Gurnard, to minimise the disturbance to local residents in terms of inappropriate or unsafe parking, car parking facilities will be provided for site personnel at the drill rig site to prevent on-street parking occurring.

Temporary closure of Stanswood Road for testing of the pipes and a section of Cockleton Lane for pipeline installation will have a short-term impact on vehicle users. On the IoW, at the request of Gurnard residents, the open cut trenching in this area will be programmed outside of school holidays and access to Gurnard Pines holiday village will be maintained.

The Highways Authorities will continue to be consulted regarding access and diversion routes and timings of construction traffic to minimise the risk of disruption on the local road network.

There is potential for damage or spread of construction debris to local road access routes during construction. All vehicle access routes will be inspected following construction and any attributable damage to the works will be re-instated by the contractors. To prevent the spread of construction debris, a wheel wash will be provided for all heavy goods vehicles leaving the site at Gurnard, at Lepe the private concrete access road will be swept periodically, and any arisings that need to be transported off site will be in covered load carriers.

Human Beings

The proposed scheme will have a major benefit by maintaining a secure gas supply to those living, working and visiting the IoW. There will also be a small increase in labour associated with the construction works, which may have a minor beneficial effect on the local economy.

However, the proposed construction works lie adjacent to residential properties on Rew Street and Cockleton Lane in Gurnard and adjacent to Stone Farm and properties along the route of the stringing area at Lepe. During construction, there will be temporary elevated levels of noise, visual intrusion and disruption to access, which will cause disruption for local residents.

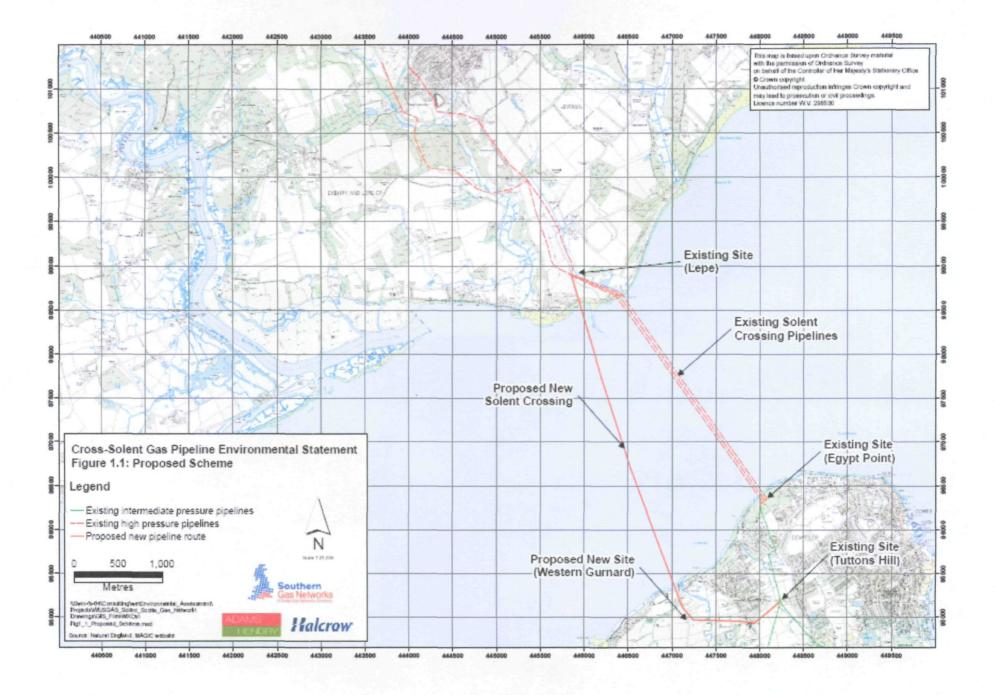
Two Public Rights of Ways will need to be temporally diverted at Lepe during construction. The temporary closure of the footpaths will be mitigated by providing a clearly signed diversion route agreed with Hampshire County Council and obtaining the necessary consents.

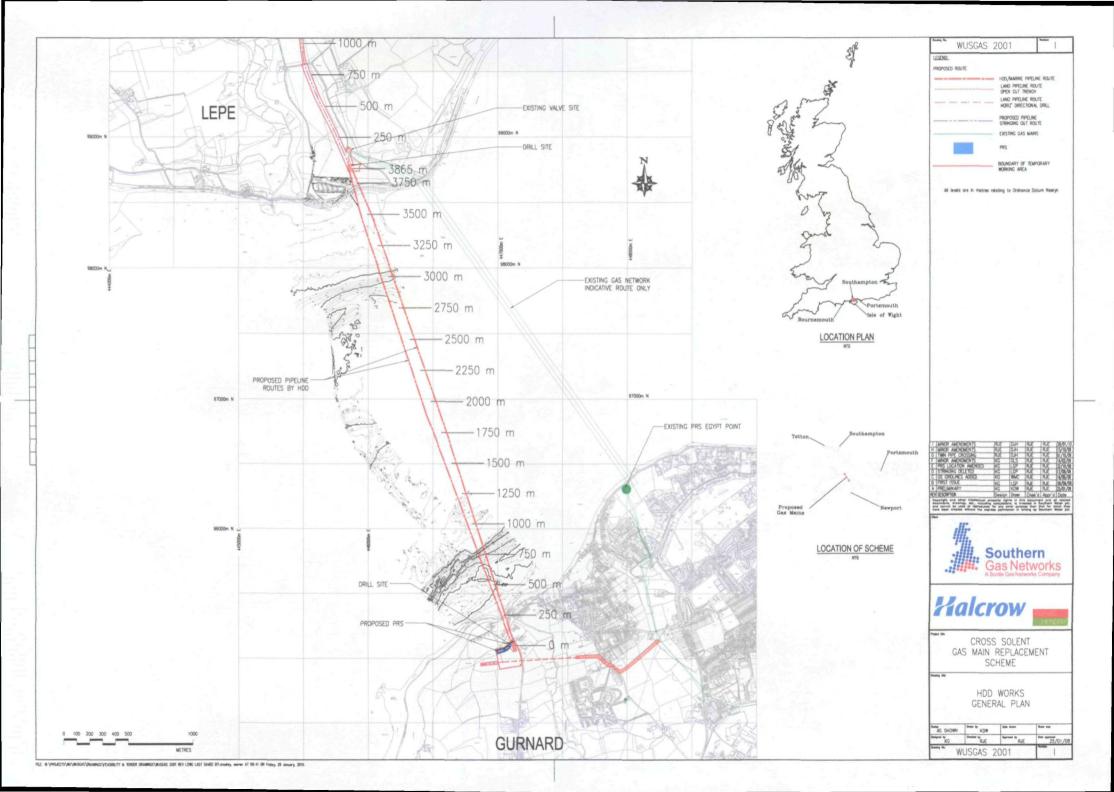
Information will be made available to local residents and the public in relation to the nature, timing and duration of particular construction activities and occupants and owners of affected properties will continue to be consulted over the construction programme.

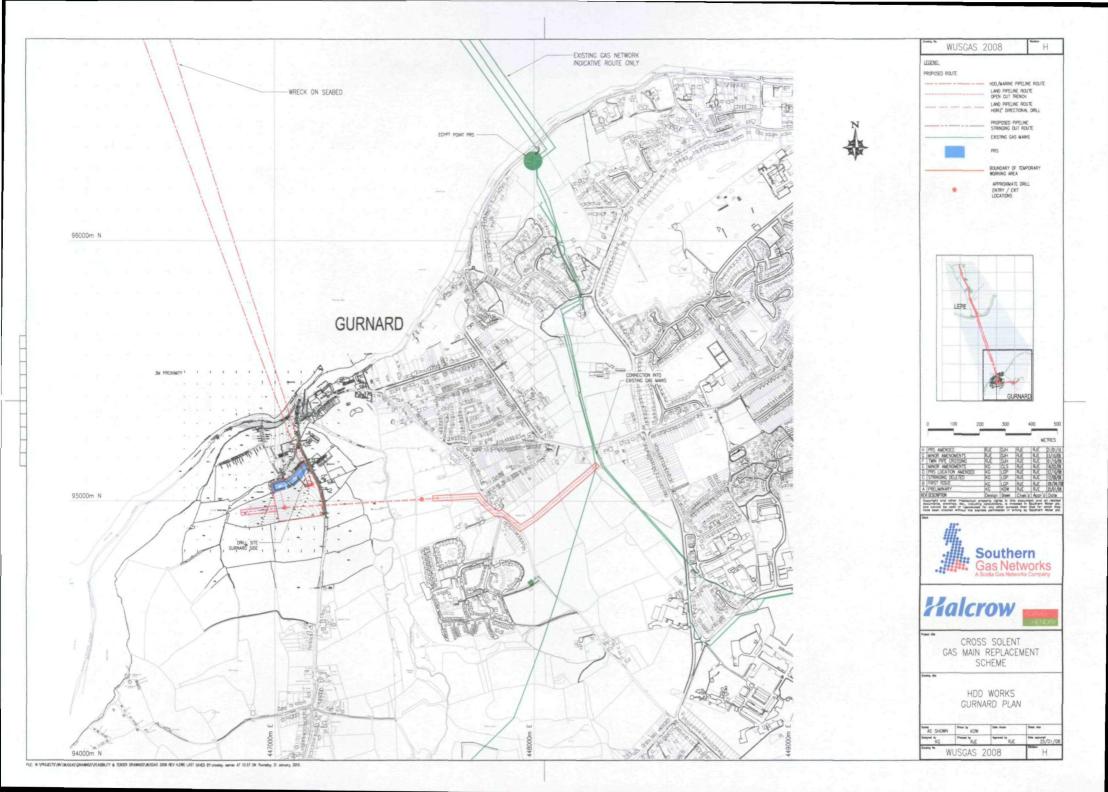
Environmental Action Plan

An Environmental Action Plan (EAP) has been prepared and is a tool by which we manage the environmental impacts set out in the ES. The objectives, actions and targets set out in the EAP will be monitored throughout the detailed design, construction and post-construction stages of the project to ensure that the mitigation/compensation measures outlined in the ES are carried out.

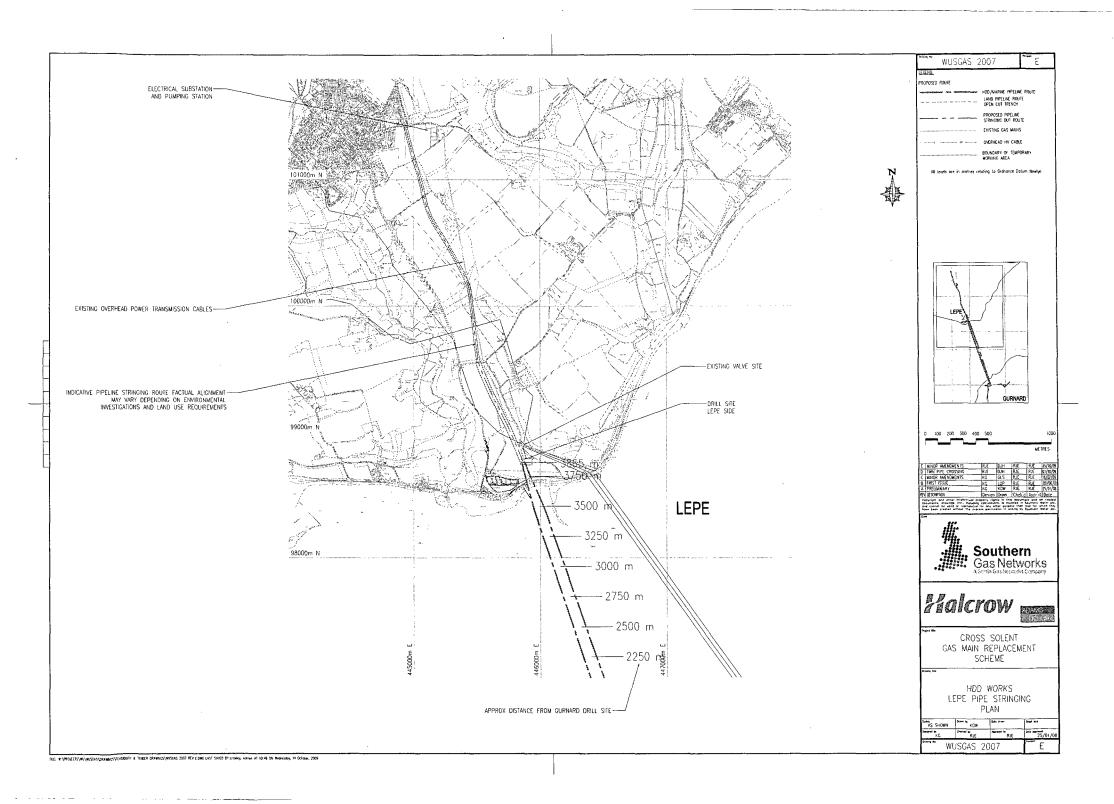
ANNEX A: ENGINEERING DRAWINGS

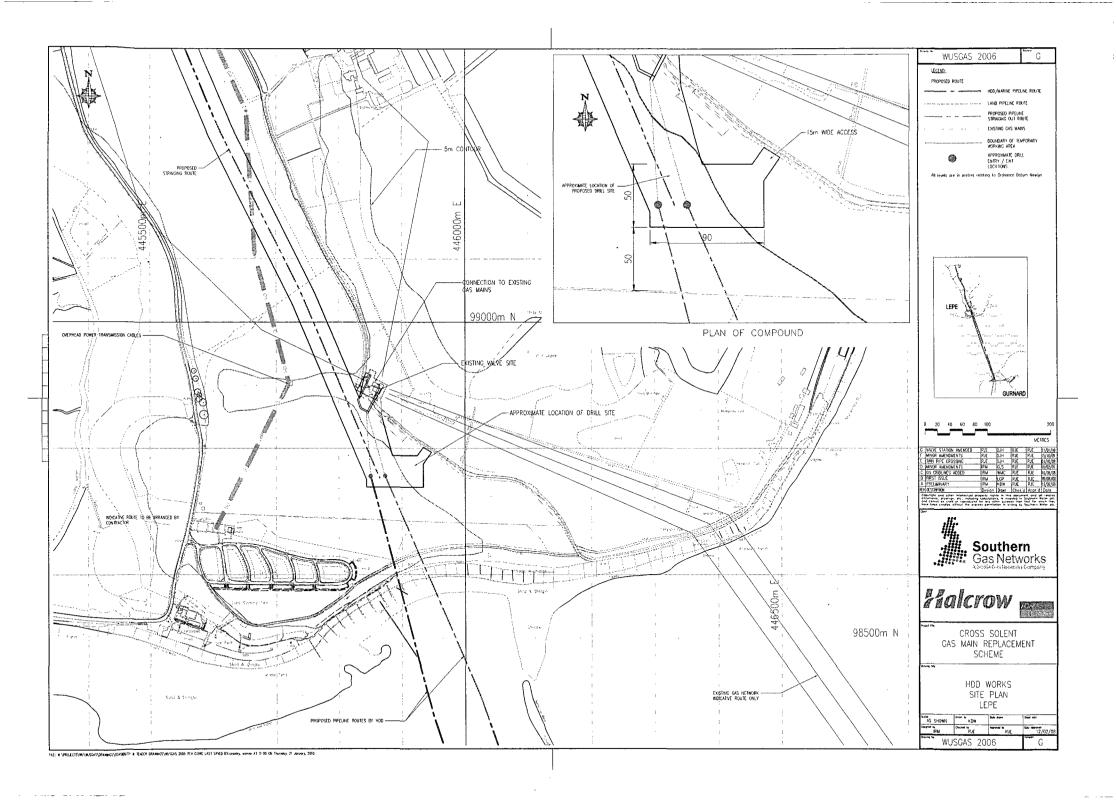


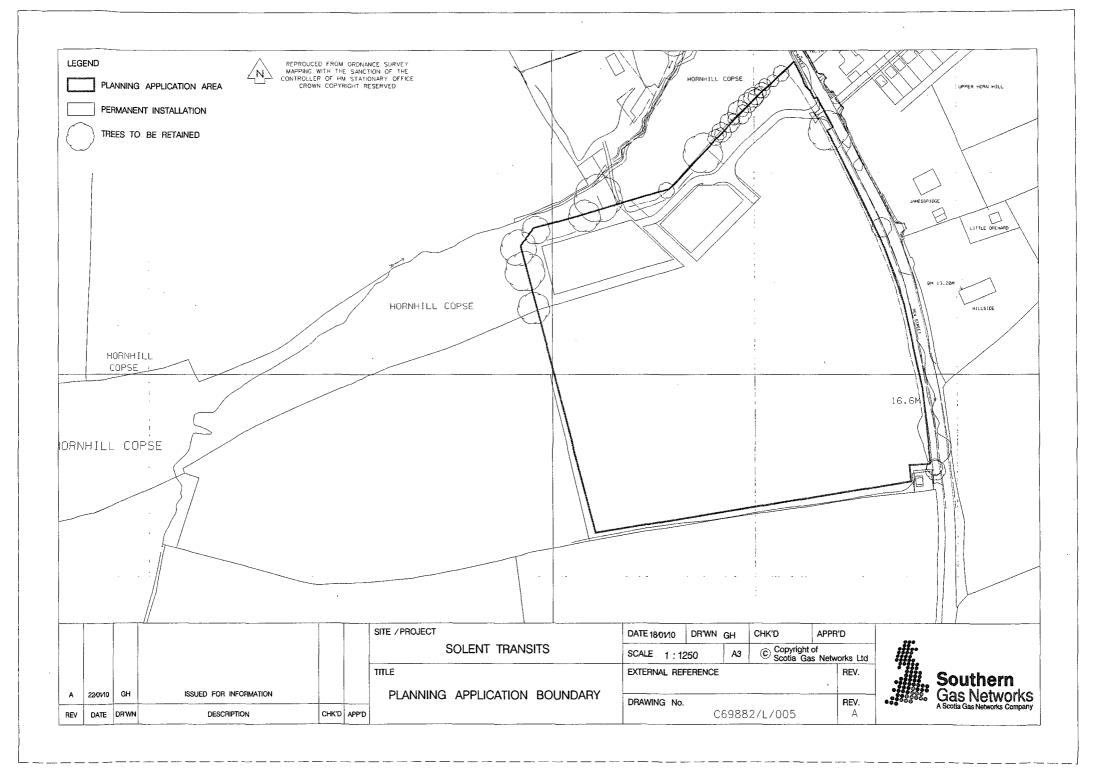


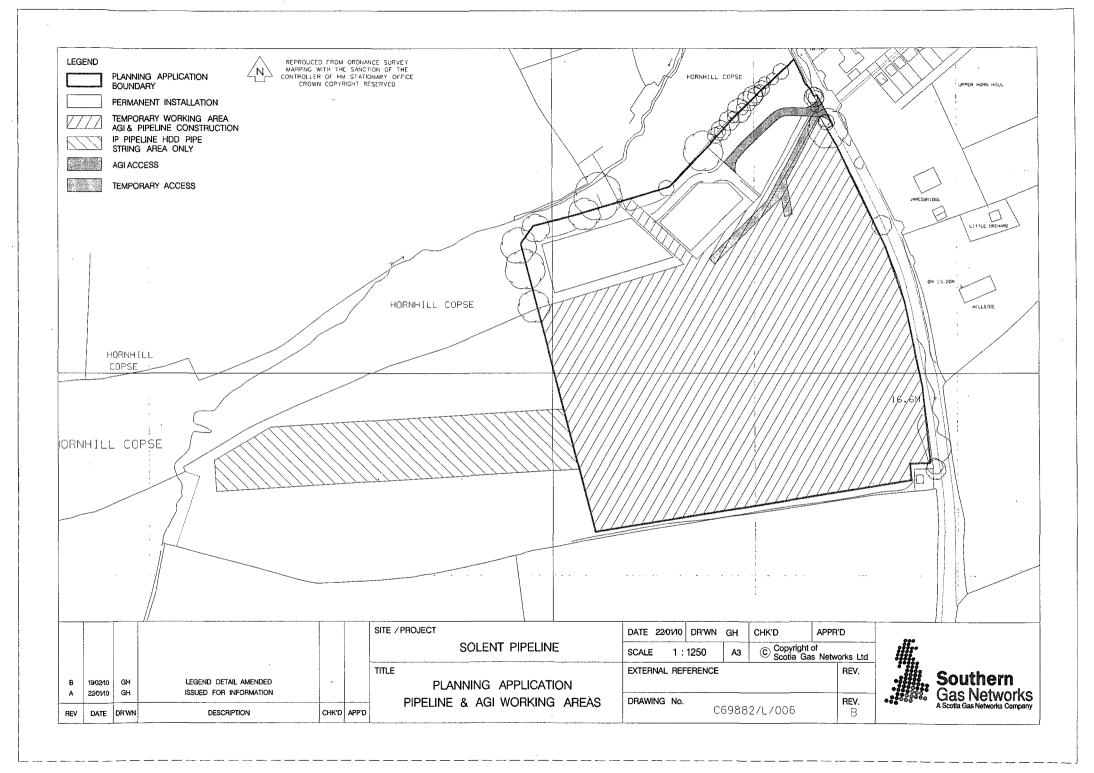


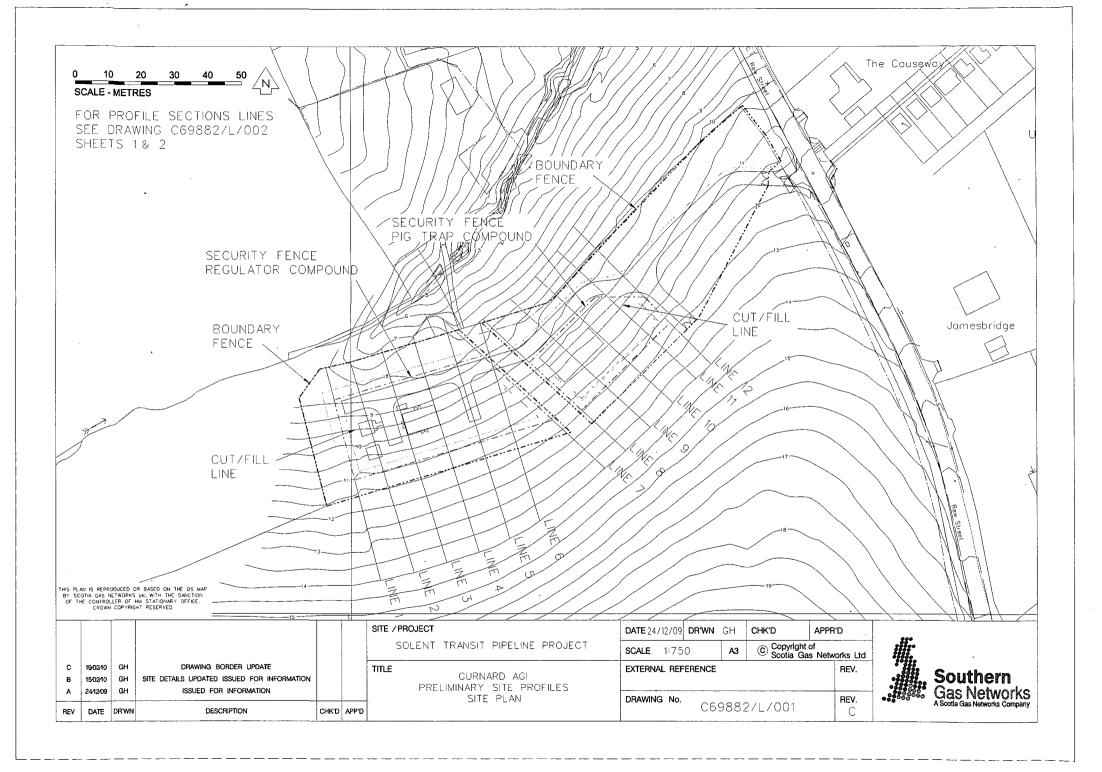


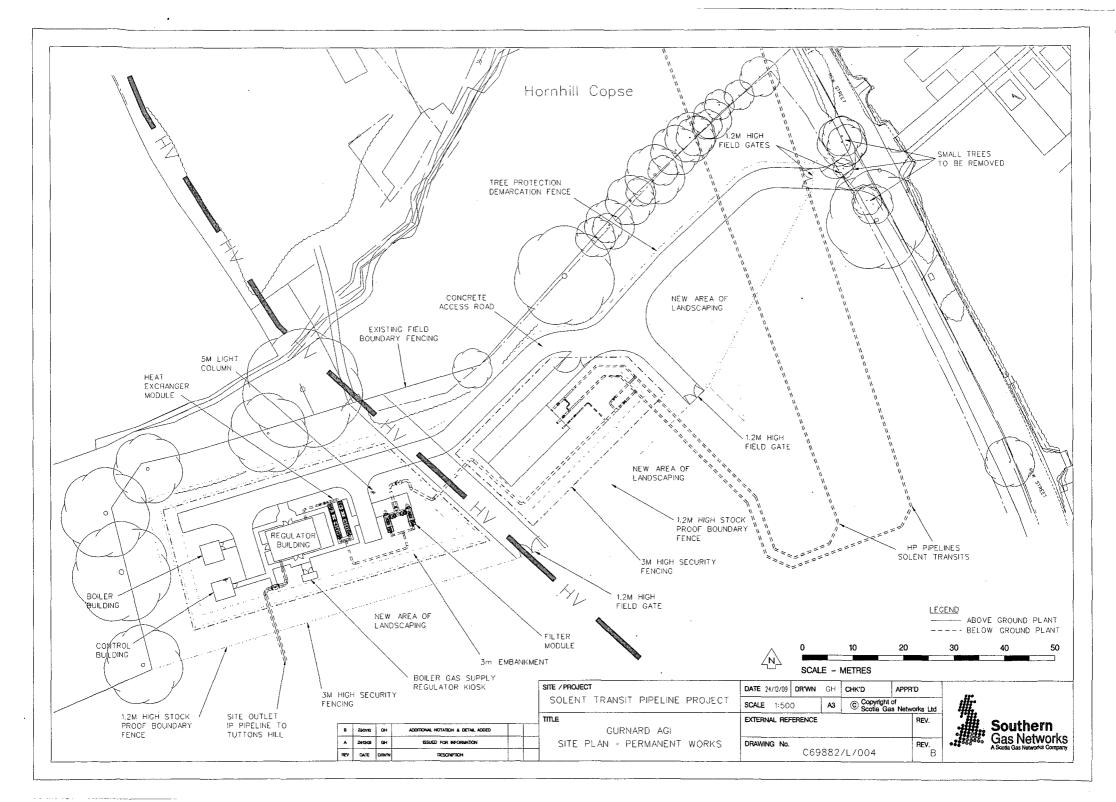


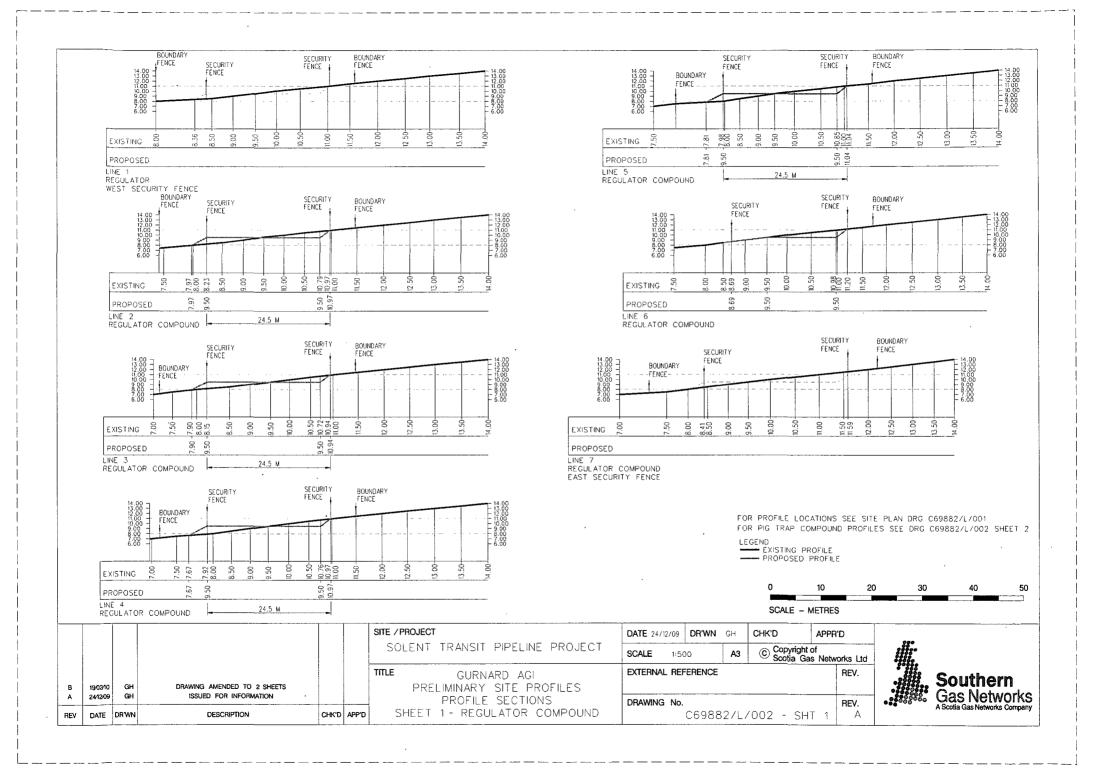


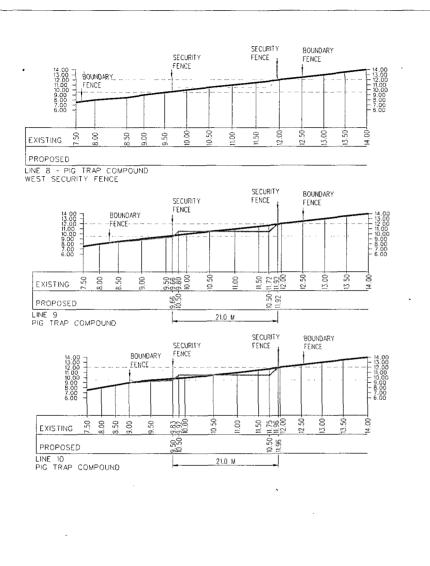


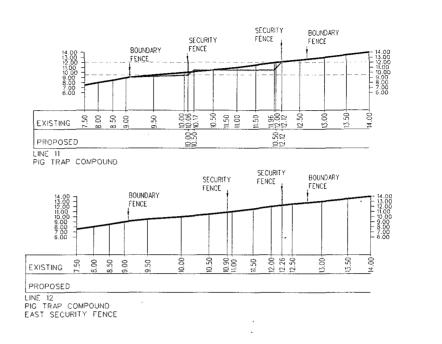












FOR PROFILE LOCATIONS SEE SITE PLAN DRG. C69882/L/001 FOR PIG TRAP COMPOUND PROFILES SEE DRG. C69882/L/002 SHEET 1

EXISTING PROFILE
PROPOSED PROFILE

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A	24/12/09	GH	ISSUED FOR INFORMATION		PROFILE SECTIONS	DRAWING No.		REV.	Gas Networks A Scotia Gas Networks Company
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