



NON-TECHNICAL SUMMARY

INTRODUCTION

National Grid Transco (NGT) propose to construct a new buried pipeline for the transportation of natural gas, between the existing Above Ground Installation (AGI) at Pannal and the existing AGI at Nether Kellet. A new block valve will be constructed and located to the North of Skipton. The proposed pipeline will have an external diameter of 1220 mm (48"), will be approximately 94 km in length and will be designed for pressures up to 85 barg.

The development of the existing natural gas importation terminal at Easington, East Riding of Yorkshire, to facilitate the import of greatly increased supplies of natural gas from new offshore gas fields in the North Sea, has necessitated the reinforcement of the National Transmission System (NTS). This can also be allied to load growth across North Yorkshire, Lancashire and the surrounding area. The new pipeline will facilitate greater efficiency in the distribution of natural gas between the Eastern and Western networks of the UK and provide security of supply within the NTS.

Construction is scheduled over two construction seasons, 2006 and 2007. Design, installation and operation of the pipeline will meet the requirements of NGT standards and specifications and the requirements of the Institute of Gas Engineers, the recognised national standard for high pressure gas pipelines.

The pipeline is subject to the Public Gas Transporter Pipeline Works (Environmental Impact Assessment) Regulations 1999. Under these regulations, an Environmental Statement is required for pipelines with a diameter of more than 800 mm and a length of more than 40 km.

As this pipeline will have both a diameter of more than 800 mm and a length of more than 40 km then an Environmental Statement is required to be submitted for approval by the Secretary of State for Trade and Industry, in consultation with the local planning authorities, the Environment Agency (EA) and other statutory consultees.

The content and conclusions of the Environmental Impact Assessment are summarised in this non-technical summary.

ALTERNATIVES AND ROUTE SELECTION

In order to find an acceptable route for the pipeline four route corridors were considered and assessed taking into account environmental and planning constraints, including archaeology and ecology.

Four options were reviewed: -

- from the existing AGI at Pannal to the existing AGI at Nether Kellet.
- as the above option but with an alternative diversion to the immediate south of Denton Moor.
- as the first option but with an alternative diversion to the south of Skipton across Skipton Moor.

- as the first option but with an alternative diversion from the West of Giggleswick to the Western plain of the River Lune.

The main environmental constraints for potential pipeline routes within the area were identified as: -

- Centres of population including the towns of Ilkley, Skipton and Earby, and the various smaller towns and villages;
- Sites of Special Scientific Interest (SSSI) and Special Protection Areas (SPA).
- Areas of Outstanding Natural Beauty (AONB);
- Yorkshire Dales National Park;
- Scheduled Ancient Monuments and Ancient Woodlands;
- Engineering considerations (such as major roads, overhead cables, rivers, railways, other utility pipelines, side slopes and difficult ground conditions);
- Crossing points for the Leeds and Liverpool Canal, the River Ribble, the River Lune and other named watercourses;
- Crossing points for operational railways;
- Areas of engineering difficulty, such as severely undulating terrain and associated steep side slopes;
- Landfill and mineral extraction sites; and
- Areas of flood risk.

The route chosen was the second listed option from Pannal to Nether Kellet due to the potential impacts and engineering issues.

PIPELINE CONSTRUCTION

Entrepose Industrial Services (EIS) have been appointed to undertake the design for the pipeline and also to construct the pipeline. Construction of the pipeline is planned to commence in May 2006, with main construction activities taking place over two construction seasons between May and October, in 2006 and 2007 to minimise the effects on the land and enable successful restoration.

Pipeline construction comprises of a number of operations, the main ones are outlined below: -

Pre-construction works

Pre-construction works will include surveying and pegging out the route, borehole surveys and undertaking meetings with landowners and farmers.

Working Width Preparation

All construction activities will be contained within a fenced strip of land known as the working width. For the majority of the route this will be 43 m wide although this may be narrowed in particular areas to reduce the potential impact upon features such as hedgerows

and walls. A wider working width will be required at road, watercourse and service crossings to facilitate safe working, storage and manoeuvring.

The topsoil will be stripped from the working width and stored to one side in a bund. Warning posts and barriers will be erected for overhead cables, and temporary crossing points indicated. Vehicle movements will be confined to the 'running track' on underlying subsoil.

Pipe Laying

The pipe is securely stored at the storage yard and will be delivered by road in 18m lengths, to designated access points along the working width. The pipe is pre-coated internally and externally with an epoxy resin protective coating. Once on-site the sections will be welded together and each weld tested and coated. Once the trench has been dug and the excavated material stored separately to the topsoil, the pipe will be carefully lowered into the trench and backfilled with subsoil. In rocky ground sand may be imported and used to bed the pipe to protect the coating from damage.

Reinstatement

The trench will be backfilled in layers, with soil matching the original profile, and suitable surplus subsoil will be spread on a field by field basis, and ripped to relieve compaction. Agricultural areas will be returned to their former land use as soon as possible. Topsoil will be spread over the working width to its former depth, stone picked and cultivated as required. The replacement of field boundaries is important to reduce the visual impact of the pipeline. Fences and walls will be reinstated to meet the landowner's / occupier's requirement using materials to match the existing and hedgerow sections that have been removed will be replanted using a suitable mix of native species.

Markers will be used to indicate the route for monitoring from the ground and by air.

Road Crossings

All public roads will be crossed using a non open cut technique where practicable. Traffic controls, if required, will allow normal traffic operation to be maintained during construction. Extra land will be required and pits may be excavated either side of the road to accommodate the necessary machinery.

Watercourse Crossings

The Rivers Wharfe, Aire, Ribble, Wigglesworth Beck, Austwick Beck, Clapham Beck / River Wenning, and the two crossings of the Leeds and Liverpool Canal will be crossed using a trenchless method whilst the Rivers Washburn, Lune and ordinary watercourse crossings will be performed using open cut operations. After laying the pipe any trenches will be backfilled and normal water flow will be restored. The banks of the watercourse will be reinstated to their original form. All works within or adjacent to watercourses will be carried out subject to EA consent.

Pipeline Operation and Maintenance

Once construction is complete, the pipeline will be internally cleaned, inspected, tested and commissioned for full operation. It is anticipated that testing and commissioning of the entire pipeline and facilities will be completed by November 2007. EIS will construct the

pipeline in accordance with health and safety legislation, applicable standards and design codes.

The pipeline will be owned by NGT who will also be responsible for its operation, maintenance and condition monitoring. Pressures and flows will be closely monitored by NGT through their Pipeline Integrity Monitoring System (PIMS).

A comprehensive corrosion protection system will be used to ensure the integrity of the pipeline and will keep maintenance requirements to a minimum. The internal condition of the pipe will be monitored periodically using automated internal inspections. Above ground, the pipeline will be regularly inspected by helicopter and by walking the route, with any disturbances to the ground reported immediately and investigated.

POTENTIAL IMPACTS AND PROPOSED MITIGATION MEASURES

Planning Issues

The routing of the pipeline has taken into account the relevant policies contained within the North Yorkshire Joint Structure Plan, the Joint Lancashire Structure Plan and the local plans for Harrogate, Bradford, Craven, Lancaster and Yorkshire Dales National Park.

The route avoids all current planning consents and there are no planned major future developments in the near vicinity. The impacts of the pipeline will be primarily from the construction phase and thus of a temporary nature – therefore the development will not prejudice the policy objectives of the approved plans.

Physical Environment

The proposed pipeline route traverses the Southern edge of the upland moors of Yorkshire and in particular the Yorkshire Dales National Park and a variety of undulating glaciated topography, before crossing some open river valleys as the route continues into East Lancashire. Variations in geomorphology exist along the route, which are related to changes in the solid and superficial geological sequence encountered. Such variations are dominated by the processes and deposits associated with the Glacial Period and the subsequent development of the drainage and river systems during the Post Glacial Period. A number of environmental and geotechnical surveys have been carried out to identify geological and hydrological features along the route.

The route crosses the floodplains of the Rivers Washburn, Wharfe, Aire, Ribble, Wenning and Lune and one groundwater source protection zone.

No landfills exist along or within close proximity of the pipeline route. Five potential sources of ground and groundwater contamination do exist in proximity to the pipeline route but all pose only a medium to low or low risk to construction. Should areas of contamination be found then appropriate mitigation measures will be adopted in consultation with the EA.

Agriculture

There are approximately 225 farms along the proposed pipeline route. Farms are generally stock grazing including sheep and beef cattle, with a smaller proportion being for arable or a mixture of both. Many of the fields possess characteristic ridge and furrow features. 74%

and 24.5% of agricultural land along the pipeline route is classified as Grades 4 (poor) and 3 (moderate to good) respectively under the MAFF (former Ministry of Agriculture, Fisheries and Food) Agricultural Land Classification system.

The main impacts on farming operations will be confined to the construction phase and the working width will be fully reinstated after construction. In order to minimise disruption, mitigation measures such as temporary water supplies, temporary drainage systems and access provision will be agreed with landowners and occupiers affected.

In the long-term, during pipeline operation, NGT will have right of access over the land within a 24 m permanent easement above the pipeline to maintain, repair and inspect the pipeline. The only restrictions will be to activities that could damage the pipeline for example, mineral extraction or the erection of buildings.

Landscape and Visual assessment

The proposed pipeline route runs within the following three areas of nationally important landscape designated by the Countryside Agency: -

- Yorkshire Dales National Park for 4.6 km on the Southern margins of the National Park, to the North of Skipton;
- the Southern fringes of the Nidderdale Area of Outstanding Natural Beauty (AONB) for approximately 16.2 km along the upper Northern slopes of the Wharfe Valley; and
- for approximately 14.1 km within the Forest of Bowland AONB as it crosses the drumlin fields and Lune Valley.

In addition to the nationally designated landscapes there are areas of local landscape value designated by the County Councils and District Councils.

The majority of the pipeline route crosses undulating topography, over occasional ridges and across wide river valleys. It is a rural landscape made up of small to large sized fields of arable and pasture with dry stone walls, fence or hedged boundaries. One of the most notable landscape features to be affected by the proposed pipeline route are the hedgerows and associated hedgerow trees. Such linear features are impossible to avoid. However, it is not anticipated that any trees protected by Tree Preservation Orders will be directly affected by the construction of the proposed pipeline. Additionally, no 'Important' Hedgerows as defined by the Hedgerow Regulations 1997 have been identified within the pipeline corridor during consultations. Pipeline construction will require the removal of short sections of hedgerows at field boundaries and road crossings for access but NGT and EIS will seek to minimise adverse effects on existing trees, woodlands and hedgerows.

The main visual impacts of the pipeline will occur during the construction works. These will be temporary as once the pipeline is constructed the land and other landscape features such as boundary fences, hedges and walls will be reinstated.

NGT and EIS are aware of the quality of the landscapes along the pipeline route and are committed to mitigating any adverse impacts upon landscape features.

The key to mitigating landscape and visual impacts is to ensure the reinstatement is carried out promptly and to a high standard as soon as practicable after construction. Mitigation measures to minimise the visual and landscape impacts include making use of existing gaps and where possible routing the pipeline through less dense areas of hedge, careful reinstatement of boundaries, and through the careful design of the AGI sites and associated

landscape proposals. Reinstatement will be subject to landowner requirements and the need to retain a 24 m wide permanent easement.

The visual impact of the proposed pipeline route will reduce over time as the replacement hedge plants become fully established and new sections of dry stone wall weather. As a result the residual visual impact of the pipeline within the landscape will become negligible.

Water Resources

The proposed pipeline route crosses the Leeds and Liverpool Canal and eight main rivers; R.Washburn, R.Wharfe, R.Aire, R.Ribble, Wigglesworth Beck, Austwick Beck, Clapham Beck / R.Wenning and R.Lune. All these rivers except the River Washburn and the River Lune will be crossed using trenchless techniques thereby significantly reducing the potential for environmental impacts. Appropriate mitigative measures will also be implemented for the open-cut crossing of the River Washburn and the River Lune.

The appropriate consents will be obtained from the EA and other relevant authorities prior to construction across watercourses. Watercourses will be reinstated to match the existing conditions, as far as possible, after construction.

Mitigation measures will also be developed and agreed with the EA to minimise sediment discharge to groundwater and surface watercourses. Pollution prevention and control measures will also be implemented. There will be ongoing consultation with the EA and all necessary consents and licences will be obtained prior to works.

Ecology

Ecological survey work was undertaken from December 2004 to July 2005. The survey corridor was generally defined as a maximum of 100 m either side of the proposed route alignment. All surveys were undertaken using standard methodologies agreed in advance with English Nature and the EA.

There are no Sites of Special Scientific Interest (SSSIs) which are directly impacted by the proposed pipeline route. With regard to non-statutory sites the proposed pipeline route crosses eight Sites of Importance for Nature Conservation (SINCs) and two Biological Heritage Sites (BHSs). Additionally, the River Wharfe is crossed by the proposed pipeline route and is designated as a Site of Ecological / Geological Importance (SEGI).

The majority of the route line (in excess of 96%) crosses improved permanent grasslands used predominantly as sheep pastures. In strict botanical terms, these habitats are of little value and it is the remaining 4% of the route line that is of most relevance to the project. The relevant areas include a number of local areas which are potentially of higher ecological value such as rivers / streams and associated habitats.

The pipeline route generally traverses a poor habitat for both wintering birds and breeding birds. However, a number of species were recorded that are both rare in terms of their general occurrence and / or are significant in that they have suffered significant declines and are becoming increasingly rare, including red kite, kingfisher, fieldfare and redwing. The surveys have revealed that quite significant sections of the proposed pipeline route provide important breeding habitat for ground nesting species such as lapwing, curlew, skylark and meadow pipit.

It is not envisaged that there will be any permanent impacts on wintering birds or long-term adverse impacts upon breeding birds. Additionally, checks will be made for ground nesting prior to construction, and trees and hedges will be checked for nesting birds prior to removal.

Of the protected species, badgers were found to be rare within the study area. No evidence of water voles has been found during the survey. Otter is known to occur on each of the four major river systems (R.Wharfe, R.Aire, R.Ribble and R.Lune) although surveys of these rivers in the vicinity of the proposed pipeline yielded negative results.

A large meta-population of great crested newts (GCNs) appears to be present to the south of Burton-in-Lonsdale and there are several small ponds containing GCNs close to Nether Kellet.

Both the River Lune and the River Ribble are important rivers for Atlantic Salmon and Sea Trout.

[On Hold – please note the above sections may change as new survey results come in. Other Survey Results: Bats, Reptiles, Crayfish, Invertebrates, are also awaited.]

For most species of fauna on the route the temporary loss of habitat will be the key potential impact. Appropriate restoration is therefore the best mitigation.

A number of key ecological impacts have been identified where mitigation will be required. These include river / stream and associated habitat crossings, hedgerow crossings, impacts on badger, otter and amphibians. Mitigation measures include using appropriate construction techniques, removing vegetation, and surveying again prior to construction. Advance mitigation requirements require the erection of amphibian exclusion fencing on both sides of the construction corridor within 500 m of any identified great crested newt breeding pond.

Appropriate licenses (e.g. hedgerow removal) will be applied for where necessary.

Archaeology and Cultural Heritage

The proposed pipeline route does not affect any World Heritage Sites. There are five Scheduled Ancient Monuments within 1 km of the proposed pipeline route. There are Conservation Areas within the study corridor at Clifton, Halton East, Eastby, Embsay, Melling and Gressingham. There are three Listed Structures within 1 km of the pipeline, none of which are currently anticipated to be directly affected.

The assessment identified 1493 archaeological sites within the 1 km study corridor, though less than 17 % of these are of greater than local significance and only for two of these is the significance of impact above medium.

196 locally important sites were located within the working width during the field reconnaissance survey and will be directly affected by the proposed pipeline.

52 % of all boundaries are dry stone walls and are thus an important and striking landscape feature of the region.

Most impacts will occur during the construction phase, topsoil stripping, soil storage, movement of heavy machinery, excavation of the pipe trench and easement reinstatement. All of which can have a permanent damaging effect on the archaeological reserve.

Where areas of potential are identified one of the following mitigation measures will be applied. Avoidance, by minor alteration to the proposed route; minimisation of impact by trial trenching or advanced stripping; and archaeological evaluation in advance of construction to confirm the presence, date, condition and extent of archaeological deposits.

Minor alterations to the proposed route and the engineering design will be considered to avoid impacts upon nationally important archaeological remains should any come to light during subsequent archaeological investigations.

Minimisation of impact is not necessary for sites in any of the regions at this stage. However, where feasible, the impact upon unavoidable archaeological sites having an impact significance of medium or high will be minimised through the reduction of the working width to the minimum practical level and / or the laying of geotextile matting or bog mats, and / or careful reinstatement procedures.

Additionally, where the route crosses a boundary incorporating a dry stone wall and / or an earthwork (bank and / or ditch), the length removed for access will be kept to a minimum. Dismantled sections of dry stone wall will be re-built by a suitably experienced dry stone walling contractor.

A watching brief will be maintained during all ground disturbing activities of the construction phase of the project, to record unexpected discoveries and known sites which did not merit investigation in advance of construction.

Traffic and Transportation

The pipeline will cross fifty-eight roads and ninety-eight footpaths (designated Rights of Way).

Traffic levels on main trunk roads will experience little or no significant impact from vehicle movements associated with pipeline construction. Careful planning of routes and timing of movements will minimise the impacts. It is anticipated that the potential traffic impacts within the area due to the pipeline proposal will be minimal and localised.

Any disruption to the local road network will be reduced through the implementation of a number of mitigation measures. The working width will be used, wherever possible, to transport material and equipment.

To control traffic movements a Traffic Management Plan (TMP) has been produced and will be approved by the County Highways Authorities.

Noise and Vibration

Noise impacts will arise during the construction period, which may temporarily affect people living close to the pipeline.

Noise will be controlled as far as reasonably practicable, in compliance with BS 5228 (Noise Control on Construction and Open Sites). Careful siting, silencing and screening of equipment will help minimise noise during construction and nearby residents will be kept informed of proposed activities.

Emissions

All equipment used on site will be correctly adjusted and maintained to control air emissions. Most plant will be powered by diesel engine. In dry weather, any mud and dust generated by vehicle movements along the working width will be controlled by damping down using water spraying equipment, road brushes and imposing speed restrictions on vehicles.

An integral component of the Project Environmental Management Plan (PEMP) will be a waste management plan, which will be produced by EIS and will identify potential wastes as well as appropriate handling and disposal methods.

Fuels and oil containers will be stored within bunded areas or within secondary containment in an approved manner. All plant will be inspected for fuel and oil leaks before being accepted for delivery onto the working width. Pollution control and emergency response plans will be developed in conjunction with the EA to minimise risks from spillage of oils or fuels.

Socio-Economic

The socio-economic impact of the project will be minimal but positive to the local economy through the use of local services and accommodation and through the provision of local employment. Due to the duration of the project, there will not be any significant negative impacts upon the local community, only temporary disturbance.

Tourism and Recreation

It is anticipated that the impacts to tourism and recreation as a result of the pipeline construction and operation will be temporary and of a localised nature.

Particular areas of importance for tourism and recreation that are crossed by the alignment include: -

- the Forest of Bowland Area of Outstanding Natural Beauty (AONB);
- the Yorkshire Dales National Park; and
- Nidderdale AONB.

Representatives of the above three 'areas' will remain in consultation with EIS during the implementation of this project and their guidance on environmental issues has been reviewed and utilised throughout.

A significant impact will be to those people using the public rights of way and cycle routes, which the pipeline is routed to cross. Seven recreational routes are crossed by the pipeline route as listed below: -

- The Dales Way - crossed by the pipeline route to the East of the B6160;
- The Pennine Way National Trail - crossed to the Southwest of Gargrave;
- The Pennine Bridleway National Trail - crossed to the South of Ingleton;

- The Ribble Way - crossed first to the Southwest of Hellifield and then twice to the West of Long Preston;
- The Pennine Cycleway (National Route 68) - crossed to the Southwest of Gargrave;
- The Cumbria Cycleway (Regional Route 30) - crossed by the pipeline route to the North of Wennington; and
- The Lancashire Cycleway (Regional Route 90) - crosses the pipeline route to the East of Gressingham.

Where these recreation / cycle routes are to be crossed meetings will take place with the local council. EIS will seek to keep access to definitive rights of way and cycle routes open as far as is practicable but temporary closures may be necessary in the interest of public safety. Any necessary period of closure will be kept to a minimum, the appropriate closure notices will be applied for and where necessary diversion routes put in place.

The Embsay to Bolton Abbey Steam Railway and some of the larger watercourses are the only major tourist facilities that may be affected by the proposed pipeline route, although impacts will be minimal and of a visual nature.

Environmental Management

The pipeline will be managed in accordance with an approved Project Environmental Management Plan (PEMP) during design, construction and commissioning. This is vital in ensuring the competent implementation of mitigation measures identified during the planning stages of the project.

All site management will have received relevant training on both the general and site specific environmental matters prior to the commencement of any activities. As a minimum an environmental manager and officer will be employed during the duration of the construction phase.

An important part of the environmental management of this project will be ongoing liaison with both statutory authorities and non-statutory groups. By maintaining communications with these bodies EIS intend to avoid conflict of interests and facilitate the smooth running of the project by addressing any contentious issues promptly.

Residents likely to be affected by the pipeline construction activities will be contacted prior to the commencement of works. Members of the public will be able to contact EIS for more information or to discuss areas of concern.

The production of this Environmental Statement forms only one part of EIS's continuing environmental management of the pipeline throughout the design and construction process through to reinstatement, commissioning and operation. The PEMP will be continuously reviewed in order to incorporate additional environmental information and lessons learnt during the works.

For further information please contact: -

NGT / Entrepose Industrial Services
Site Offices
Whitegate
Whitelund Industrial Estate
Morecambe
Lancashire
LA3 3BS
Tel: