Draft Construction Traffic Management Plan for Water and Gas Pipelines

Document Reference: KPL/Ex/18
Project Reference: EN10050
Date: 23/05/2014
Author: Knottingley Power Limited
KNOTTINGLEY POWER PROJECT
CONSTRUCTION TRAFFIC
MANAGEMENT PLAN
WATER AND GAS PIPELINES
CONSTRUCTION

Knottingley Power Limited

PINS Reference EN010050

[287005A]

Draft
Knottingley Power Project

CONSTRUCTION TRAFFIC MANAGEMENT PLAN

WATER AND GAS PIPELINES CONSTRUCTION

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**Report Title:** Knottingley Power Project  
**PIMS Number:**  
**Report Status:** Draft  
**Job No:** [287005A]  
**Date:** April 2014

## DOCUMENT HISTORY AND STATUS

<table>
<thead>
<tr>
<th>Document control</th>
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<table>
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<th>Revision details</th>
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<tbody>
<tr>
<td><strong>Version</strong></td>
<td><strong>Date</strong></td>
</tr>
<tr>
<td>1.0</td>
<td>April 2014</td>
</tr>
<tr>
<td>1.1</td>
<td>April 2014</td>
</tr>
</tbody>
</table>
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1 INTRODUCTION

1.1 Overview

1.1.1 Knottingley Power Limited (KPL) has submitted an application for a DCO for the construction and operation of a natural gas fired electricity generating station (CCGT Power Plant), a gas pipeline and Above Ground Installation (AGI), an electrical grid connection, cooling water infrastructure and associated developments.

1.1.2 Parsons Brinckerhoff has been commissioned by KPL to produce a draft Construction Traffic Management Plan (CTMP) for construction of the gas pipeline to support the application for a Development Consent Order (DCO) for the Knottingley Power Project (KPP). The final version of this report will be issued following the appointment of the contractor for the water and gas pipeline.

1.1.3 This CTMP specifically assesses the impact of constructing the gas pipeline and AGI only and does not take account of the construction of the CCGT Power Plant itself.

1.2 Proposed Development

1.2.1 The KPP will be capable of generating up to 1,500MW and consists of the following elements:

- **The CCGT Power Plant:** This comprises a natural gas fired Combined Cycle Gas Turbine power plant consisting of 3 x 500MW units or 2x 600 MW units. The 3 x 500MW option has been assessed in the environmental statement as this is expected to have the larger impact.

- **The Grid Connection:** The Grid Connection will include an overhead power line (OHL) connection from the electricity substation at the CCGT power plant to the National Grid 400kV Transmission System. It also includes the diversion of the existing OHL requiring the replacement of two existing transmission towers adjacent to the current tower locations.

- **The Cooling Water Infrastructure:** It is proposed that cooling water will be supplied from the River Aire, or from the Aire and Calder Navigation Canal for use in the hybrid cooling tower system. This will require Cooling Water Pipelines for abstraction and purge flows, and associated pumping station.

- **The Gas Pipeline:** A Gas Pipeline, together with associated infrastructure (principally an AGI), connecting the CCGT power plant to the National Transmission System.

1.2.2 The CCGT Power Plant site is located to the east of Knottingley town centre and is located within the boundary of Wakefield Council. The CCGT Power Plant is located on the former Oxiris Chemical Works and adjoining agricultural land. The former Oxiris Chemical Works was demolished in 2009.

1.2.3 The cooling water pipeline, gas pipeline and associated pump house all fall within Selby District Council’s boundary and run from the power plant in a north-easterly direction. The gas pipeline corridor lies within the vicinity of a number of small villages including Kellingley, Kellington, Beal, West Haddlesey and Gateforth. The pipelines cross Weeland Road, Common Lane, New Lane, Beal Lane, Marsh Lane, Birkin Road and Pale Lane. The gas and water pipelines will cross agricultural fields and will cross under the River Aire.
1.2.4 The Gas Pipeline crosses the public highway at a number of locations. The highways along the route of the gas and water pipelines are under the jurisdiction of North Yorkshire County Council (NYCC).

1.2.5 Feasible locations for two Temporary Construction Compounds / Pipe Storage Yards have been identified. At this stage, one or both of these may be used for the laydown of materials and equipment and for construction worker parking. The two options for the sites are as follows:

- **Option 1:** CCGT Power Plant Site; or
- **Option 2:** Euro Auctions Yard, near Eggborough.

Further reference to these two potential sites is made in Section 3 of this report.

1.3 Purpose of the Report

1.3.1 The purpose of this report is to assess the impacts of construction traffic generated by the construction of the water and gas pipelines and to propose measures to mitigate the impacts identified.

1.4 Draft Development Consent Order

1.4.1 A traffic management plan which addresses construction traffic will be secured by Requirement 17 (Construction Environmental Management Plan) in the draft DCO. The plan will be subject to approval by the relevant planning authority in consultation with the relevant highway authority prior to commencement of the development.

1.5 Report Structure

1.5.1 The remainder of the report is structured as follows:

- Section 2 details the existing situation;
- Section 3 details the construction routing strategy which sets out the preferred route for traffic during construction;
- Section 4 details likely generation flows during the construction process and its impacts;
- Section 5 details the proposed traffic mitigation; and
- Section 6 provides a summary of the findings.
2 EXISTING SITUATION

2.1 Overview

2.1.1 This section details the existing situation in the vicinity of the CCGT Power Plant site and the Euro Auctions Yard site. It includes existing highway conditions, highway restrictions, non-motorised user accessibility and personal injury collision analysis.

2.2 Highway Conditions

CCGT Power Plant Site

2.2.1 The highway network in the vicinity of the CCGT Power Plant consists of a minor road, Common Lane, leading from the main A645 which runs through the town of Knottingley. This connects Knottingley to the A162 and in turn to the A1(M) and M62.

Euro Auctions Yard, near Eggborough

2.2.2 The highway network in the vicinity the Highway network around Euro Auctions Yard consists of a minor road, Roall Lane, leading from the main A19. The A19 leads south towards the village of Eggborough and the M62.

2.3 Highway Restrictions

2.3.1 There are no highway restrictions in the vicinity of the CCGT Power Plant or the AGI.

2.4 Non-Motorised User Accessibility

Pedestrians

CCGT Power Plant

2.4.1 The road approaching the CCGT Power Plant, Common Lane, currently has no footpath provision available. However, Weeland Road, which connects to Common Lane at the north of the site, has footpath provision on both sides of the road.

2.4.2 There are good pedestrian footpaths available to the railway station and local shops.

Euro Auctions Yard, Eggborough

2.4.3 Due to the remote location of Euro Auctions Yard, provision for pedestrians is limited. The entrance to Euro Auctions Yard is located on Roall Lane; a footpath is available from the A19 (east of the site) to the site entrance. The footpath does not continue along Roall Lane to the west of the site entrance.

Cyclists

CCGT Power Plant

2.4.4 There are no national cycle network routes available in the surrounding area and there are no facilities available for cyclists on the roads approaching the CCGT Power Plant.

Euro Auctions Yard, Eggborough
2.4.5 There are no national cycle network routes available in the surrounding area and there are no facilities available for cyclists on the roads approaching the Euro Auctions Yard.

**Bus**

*CCGT Power Plant*

2.4.6 The vicinity of the CCGT Power Plant site is reasonably well served by bus and there are three bus stops within approximately 1 km. Two bus stops are located on Weeland Road (eastbound and westbound) and one on Common Lane (northwest bound). Table 2-1 details the bus services available.

**Table 2-1 – Bus Services to CCGT Power Plant, Knottingley**

<table>
<thead>
<tr>
<th>Service No.</th>
<th>Route</th>
<th>Frequency</th>
</tr>
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<tbody>
<tr>
<td>149</td>
<td>Wakefield Bus Station - Pontefract Bus Station - Knottingley Simpsons Lane</td>
<td>2 buses per hour</td>
</tr>
<tr>
<td>150</td>
<td>Wakefield Bus Station - Pontefract Bus Station - Knottingley Simpsons Lane</td>
<td>1 bus per hour</td>
</tr>
<tr>
<td>188</td>
<td>Wakefield Bus Station – Castleford Bus Station – Knottingley Simpson Lane</td>
<td>1 bus per hour</td>
</tr>
<tr>
<td>487</td>
<td>Knottingley – Chequerfield (Circular)</td>
<td>1 bus per hour</td>
</tr>
<tr>
<td>489</td>
<td>Knottingley – Chequerfield (Circular)</td>
<td>1 bus per hour</td>
</tr>
</tbody>
</table>

**Euro Auctions Yard, Eggborough**

2.4.7 The Euro Auctions Yard is reasonably well served by bus and there are two bus stops (approximately 0.2 km away) next to the site on the A19. Table 2-2 details the bus services available.

**Table 2-2 – Bus Services to Euro Auctions Yard, Eggborough**

<table>
<thead>
<tr>
<th>Service No.</th>
<th>Route</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>150</td>
<td>Wakefield Bus Station – Pontefract Bus Station - Knottingley Simpsons Lane</td>
<td>1 bus per hour</td>
</tr>
<tr>
<td>405/ 407</td>
<td>Selby Bus Station – Doncaster Interchange</td>
<td>1 bus per hour</td>
</tr>
<tr>
<td>X45</td>
<td>Selby Bus Station – Doncaster Interchange</td>
<td>1 service per day</td>
</tr>
</tbody>
</table>

**Rail**
CCGT Power Plant

2.4.8 The CCGT Power Plant site is located approximately 3 km from Knottingley Railway Station which offers services on the Pontefract Line (operated by Northern Rail). Services operating from the station are listed in Table 2-3 below.

<table>
<thead>
<tr>
<th>Route</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knottingley – Leeds</td>
<td>1 train per hour</td>
</tr>
<tr>
<td>Knottingley – Wakefield Kirkgate</td>
<td>1 train per hour (excluding Sundays)</td>
</tr>
<tr>
<td>Knottingley – Goole</td>
<td>1 train per day (excluding Sundays)</td>
</tr>
</tbody>
</table>

Euro Auctions Yard, Eggborough

2.4.9 The Euro Auctions Yard is located approximately 2.3 km from Whitely Bridge Railway Station which offers services on the Pontefract Line (operated by Northern Rail). Services operating from the station are listed in Table 2-4 below.

<table>
<thead>
<tr>
<th>Route</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whitely Bridge – Leeds</td>
<td>2 trains per day (excluding Sundays)</td>
</tr>
<tr>
<td>Whitely Bridge – Goole</td>
<td>1 train per day (excluding Sundays)</td>
</tr>
</tbody>
</table>

2.5 Personal Injury Collision Analysis

2.5.1 At the request of NYCC collision data was examined on the A19 and side road approaches to the crossroads junction at Chapel Haddlesey. Collision data was requested on all four arms at 100m lengths from the junction. The data was requested for the latest validated 5-year (60 month) period, which was the period between 01/01/2009 and 31/12/2013.

2.5.2 Five collisions were listed within this 5-year period. One was listed as serious and four slight and are described in greater detail in Table 2.5 below.
<table>
<thead>
<tr>
<th>Accident Severity &amp; Reference Number</th>
<th>Accident Details</th>
<th>Accident Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Slight</strong></td>
<td>Dark</td>
<td>Vehicle 1 is travelling northbound towards Selby in slow moving traffic. Vehicle 2 is stationary in a layby on the southbound carriageway having a puncture repaired on its trailer. Vehicle 1 attempts to overtake a line of slow moving traffic but vehicles in front have also started to overtake causing Vehicle 1 to collide with Vehicle 2 causing slight injury to driver of Vehicle 2.</td>
</tr>
<tr>
<td>2090007375</td>
<td>Fine (without high winds) Dry road surface 2 x car</td>
<td></td>
</tr>
<tr>
<td>14/01/2009 17:13</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Slight</strong></td>
<td>Daylight</td>
<td>Vehicle 1 travelling north on the A19 through Chapel Haddlesey travels over the brow of a hump-back bridge and encounters Vehicle 2 stationary behind Vehicle 3 turning right into Hirst Road. Vehicle 1 collides with the rear of Vehicle 2 which turn is shunted into Vehicle 3. Driver of Vehicle 3 sustained slight injuries.</td>
</tr>
<tr>
<td>2090095130</td>
<td>Fine (without high winds) Wet/damp road surface 3 x car</td>
<td></td>
</tr>
<tr>
<td>06/06/2009 09:35</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Slight</strong></td>
<td>Daylight</td>
<td>Vehicle 1 travelling south on the A19 passes over hump-back bridge and skids on ice and drifts into northbound carriageway where it collides with Vehicle 2 travelling north. Vehicle 3 following Vehicle 2 avoids the collision but is hit by flying debris from Vehicle 2. Vehicle 4 also travelling north skids off the road on the ice when trying to avoid the collision, but does not make contact with Vehicles 1, 2 or 3. Driver of Vehicle 1 sustained slight injuries.</td>
</tr>
<tr>
<td>2100004565</td>
<td>Snowing Frost/ice on road surface 4 x car</td>
<td></td>
</tr>
<tr>
<td>09/01/2010 09:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Serious</strong></td>
<td>Daylight</td>
<td>Vehicle 1 travelling north on A19 at Chapel Haddlesey indicates to turn right. Vehicle 2 (motorcycle) travelling in the same direction collides into rear nearside of Vehicle 1, throwing its rider and the motorcycle into Vehicle 3 which is stationary at the nearside junction waiting to join the A19. Rider of Vehicle 2 sustains serious injuries.</td>
</tr>
<tr>
<td>2100143740</td>
<td>Fine (without high winds) Dry road surface 2 x car 1 x motorcycle over 500cc</td>
<td></td>
</tr>
<tr>
<td>22/08/2010 14:38</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Slight</strong></td>
<td>Darkness</td>
<td>Vehicle 1 (motorcycle) travelling south on A19 comes over bridge and loses control causing motorcycle to skid and rider to fall. Rider of motorcycle sustained slight injuries.</td>
</tr>
<tr>
<td>12120161492</td>
<td>(streetlights not lit) Fine (without high winds) Wet/damp road surface 1 x motorcycle over 500cc</td>
<td></td>
</tr>
<tr>
<td>28/09/2012 08:41</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2.5.3 The plotted locations of the collisions are shown in Figure 2.1 below.

Figure 2-1 – Map of Collisions at A19 / Millfield Road in Chapel Haddlesey
2.5.4 Of the five collisions that have occurred during the 5-year assessment period all occurred on the A19 northbound and southbound carriageways. One of these collisions was an overtake, two were rear end collisions into stationary vehicles turning from the A19, one was a loss of control on a wet/damp carriageway and one lost control on ice on the carriageway.

2.5.5 Given the high vehicle flows that the A19 already experiences, the construction traffic for the gas pipeline that will travel north and south along the A19 through this junction will represent a very small proportion of these flows. As a result it is extremely unlikely that the construction traffic for the gas pipeline will have any effect on the safety performance of the A19 at this location.

2.5.6 The collision data described in Table 3.5 demonstrates that there are no significantly recurring collision patterns at the junction that would require any action to be taken to implement improvement measures to cater for construction traffic. This is mitigated further by the fact that following consultation with NYCC Millfield Road will not be used by HGV traffic to transport materials to and from the site and Millfield Road will only be used by the minibus service taking workers to and from the “pipeline working area” and by light vehicles accessing the pipeline working area to the north of the River Aire. As a result traffic movements along Millfield Road and the subsequent turning movements from the A19 into Millfield Road, associated with the construction of the Gas Pipeline are likely to be low.
3 CONSTRUCTION ROUTING STRATEGY

3.1 Overview

3.1.1 This section presents a summary of the preferred routing for construction traffic and includes the movement of construction workers to and from the Gas Pipeline working area. It also discusses a rationale for excluding certain traffic movements or use of certain roads through discussions with the local authority and information gained from an audit of the site.

3.1.2 As previously stated, two options have been proposed for a site compound remote from the Gas Pipeline for the delivery of material to be used in the construction of the Gas Pipeline and AGI, and for construction workers to park before being transported to the pipeline working area via minibus. These two proposed locations are:

- **Compound Option 1**: CCGT Power Plant Site; or
- **Compound Option 2**: Euro Auctions Yard, near Eggborough.

3.1.3 They are shown as Compound Option 1 and Compound Option 2 on the Construction Traffic Routing Plan contained within Appendix A.

3.2 Preferred Access Route

**Compound Option 1**

3.2.1 The preferred route to Compound Option 1 at the proposed CCGT Power Plant site would be from the M62 Junction 33 using the A162 and A645 (Pontefract Road, Weeland Road and Common Lane).

3.2.2 An alternative route to this site would be via Junction 34 of the M62 using the A19 and A645 (Weeland Road). This route could be longer for vehicles travelling from the west, but avoids travel through Knottingley.

3.2.3 The preferred egress from the compound would be the reverse of the aforementioned routes.

**Compound Option 2**

3.2.4 Compound Option 2 would be accessed from Junction 34 of the M62 from which construction traffic would then follow the A19 and Roall Lane to access the existing Euro Auctions Yard site.

3.2.5 The alternative route for construction traffic carrying material from the north on the A1(M) may choose to exit the A1(M) at Junction 42 and route to the site via the A63 and A19. There is also the option for traffic to exit the A1(M) at Junction 41 and join the M62 where they would follow the route highlighted above which exits at Junction 34 and follow the A19 north towards the compound at Roall Lane.

3.2.6 Access to Compound Option 2 would be strictly restricted to HGV vehicles accessing it only from the eastern end of Roall Lane from the A19. HGV construction traffic will not be permitted to access this compound from the western end of Roall Lane to reduce the impact of construction traffic on the village of Kellington.

3.2.7 The preferred egress from the compound would also use the above mentioned routes.
3.3 Construction Traffic to the Pipeline

3.3.1 Once equipment and plant has been delivered to the chosen compound there will be a requirement for it to be moved to the appropriate location along the proposed gas pipeline route. More detail is provided in Section 4.2 of this report.

3.3.2 The movement of general construction materials, pipe sections and consumable materials from the chosen compound to the pipeline working area will be via the following routes:

**Compound Option 1**

3.3.3 For Compound Option 1, materials would be transported to sections of the pipeline working area to the south of the River Aire via the A645 Weeland Road. Further to discussions with North Yorkshire County Council Development Control Team access to the pipeline working area from the A645 will be permitted via Common Lane, Beal Lane and Lunn Lane, but no construction traffic would access the pipeline working area via New Lane.

3.3.4 If construction materials are to be transported from Compound Option 1 to the pipeline working area north of the River Aire construction traffic will be instructed to route eastbound from the compound via the A645 Weeland Road onto the A19. From the A19 they will route northwards. Millfield Road will be used for HGV access to the pipeline working area provided there is sufficient clearance to avoid damage to the road surface at Tankards Bridge.

3.3.5 Following consultation with NYCC and the Canal and River Trust it has been established that Tankards Bridge, a Grade II listed bridge, does not have a weight restriction and is full strength, capable of carrying 40 tonnes. The bridge is narrow (without having a posted width restriction) and only permits one-way flow, with opposing drivers required to give way. The file held by the Canals and Rivers Trust for the latest assessment undertaken on the bridge suggests that there was evidence of scratching of the carriageway surface, presumably from low loaders, so a decision has been taken not to route low loader traffic via this route along Millfield Road unless it can be shown that sufficient clearance is possible to avoid damage to the carriageway. Minibus trips to transport workers to the pipeline working area from the compound and trips by light vehicles to the pipeline working area will be permitted via this route along Millfield Road.

3.3.6 Where low loaders or other vehicles with inadequate clearance cannot travel via Millfield Road these vehicles would route north on the A19 and onto the A63 westbound. From the A63 they will reach the pipeline working area using Fox Lane, Hillam Road and Pale Lane. Fox Lane is a single track road but following a visit to the site and liaison with NYCC it has been established that Fox Lane is already used by HGV traffic from a local plant hire firm. There are a number of closely spaced passing places to allow vehicles to pass one another. Hillam Road and Pale Lane will both permit two-way flow so there would be little impact on traffic flow on these routes to the pipeline working area.

**Compound Option 2**

3.3.7 If Compound Option 2 is chosen, no construction traffic will be permitted to turn left from the compound onto Roall Lane and head west towards the village of Kellington. All construction traffic, including light vehicles transporting workers and other equipment, will be required to turn right from the compound onto Roall Lane and...
travel in an easterly direction towards the A19. From the A19 if construction traffic is routed towards the pipeline working area south of the River Aire then they can route from the A19 onto the A645 Weeland Road. The same restriction on using New Lane, as identified in Section 4.3.6 will apply. Construction traffic heading to the pipeline working area north of the Compound Option 2 will be subject to the same restrictions as those identified for Compound Option 1 in Section 4.3.7 of this report.

Consumables Delivered Directly to the Pipeline working area

3.3.8 Any consumable construction materials that are to be delivered directly to the pipeline working area will be subject to the same routes and restrictions as have been highlighted for construction trips to and from either of the compound options. However, for consumables being delivered the pipeline working area to the north of the River Aire there is the potential for vehicles to leave the A1(M) at Junction 42 and use the A63, Fox Lane, Hillam Road and Pale Lane.

3.4 Abnormal Loads

3.4.1 An abnormal load is defined as a vehicle that has any of the following:

- a weight of more than 44,000kg;
- an axle load of more than 10,000kg for a single non-driving axle and 11,500kg for a single driving axle;
- a width of more than 2.9m; or
- a length of more than 18.65m.

3.4.2 NYCC and Wakefield Council will be notified where appropriate of any abnormal loads to be carried along roads under their jurisdiction. However, it is unlikely that any abnormal loads will be required to transport the materials needed to construct the Gas Pipeline or AGI for the KPP.
4 TRAFFIC GENERATION AND IMPACTS

4.1 Overview

4.1.1 This section of the report details the traffic generated by the construction of the Gas Pipeline and the AGI and considers the potential impacts.

4.2 Construction Traffic Generation

4.2.1 The Traffic, Transport and Access section of the Environmental Statement outlined the traffic generated by the project. The traffic generation has been summarised here. The traffic generation was split into three types as follows:

- Construction Workforce Movements;
- Delivery / Transfer of; and
- Delivery / Transfer of Equipment.

Construction Workforce Movements

4.2.2 At the peak of construction of the Gas Pipeline and AGI, approximately 90 workers are required each day. This is expected to comprise three teams of 30 operatives, with two teams engaged in construction of the Gas Pipeline and one team carrying out construction of the AGI. The peak workforce is expected to be required between April and May. During the mobilisation and demobilisation period, workforce numbers are likely to be around half the peak workforce numbers.

4.2.3 Construction activities will generally be undertaken in a single shift commencing at 0700 hours and ending at 1900 hours. The construction workforce will generally arrive at the Temporary Construction Compound / Pipe Storage Yard in the morning before being transferred to their work area, either along the “pipeline working area” or via the road network in the vicinity of the route of the Gas Pipeline.

4.2.4 A small proportion of the construction workforce will undertake additional movements between the Temporary Construction Compound / Pipe Storage Yard and different sections of the “pipeline working area” over the course of the working day.

Delivery / Transfer of Materials

4.2.5 Materials required to carry out the construction of the Gas Pipeline include:

- General Construction Materials;
- Pipe Sections and Associated Materials; and,
- Consumable Construction Materials.

4.2.6 General construction materials are likely to be delivered to the Temporary Construction Compound / Pipe Storage Yard during the initial mobilisation period and removed from site during demobilisation. It is estimated that approximately 50HGV trips would be required. Over a two week mobilisation period, this would equate to approximately 5HGV trips per day. A similar number of trips per day would be required during the demobilisation period. During the construction period, the general construction materials would be transported from the Temporary Construction Compound / Pipe Storage Yard to the “pipeline working area” as required.
4.2.7 The pipe sections and associated materials will likely be delivered to the Temporary Construction Compound / Pipe Storage Yard during the initial mobilisation period. The pipe sections would likely be delivered in 12m lengths. It is estimated that approximately 70 Low Loader trips would be required. In addition, it is estimated that approximately 70 HGV trips would be required for the associated materials. Therefore, approximately 140 trips would be required for the pipe sections and associated materials. Over a two week mobilisation period, this would equate to approximately 7 Low Loader and 7 HGV trips per day. During the construction period, the pipe sections and associated materials would be transported from the Temporary Construction Compound / Pipe Storage Yard to the “pipeline working area” as required.

4.2.8 The remaining consumable materials will all likely be delivered directly to the “pipeline working area” as required over the construction period. Given the construction techniques intended to be utilised the requirements for such materials will likely be limited to no more than 10 HGV trips per day.

Delivery / Transfer of Equipment

4.2.9 The equipment required for construction will likely include: dozers; excavators; pipe-benders and mandrels; side booms; welding sets / welding habitats; pipe carriers; auger bore; HDD; drainage machine; and, road sweepers.

4.2.10 The majority of the equipment required for construction of the Gas Pipeline will likely be delivered to the Temporary Construction Compound / Pipe Storage Yard on the back of a Low Loader during the initial mobilisation period. Over a two week mobilisation period, this would equate to approximately 3 Low Loader trips per day. A similar number of trips per day would be required during the demobilisation period.

4.2.11 During the construction period, the equipment will likely be retained at the “pipeline working area” overnight. However there will be some occasions where it is necessary to transfer equipment by road to other areas of the “pipeline working area” (for example, where the “pipeline working area” is severed by canals / rivers). It is anticipated that up to five transfers will be required over the construction period, each comprising up to 30 Low Loader trips approximately spread over a 6 day period (i.e. a maximum of 5 Low Loader trips per day).

4.3 Construction Traffic Impact

4.3.1 The number of cars and HGVs travelling to the site will vary throughout the construction period. The peak construction period is forecast to be between April and May with the greatest numbers of staff trips and HGV movements taking place. For robustness it has been assumed that all staff will arrive by single occupancy vehicle. In reality some staff are likely to car share when travelling to compound.

4.3.2 Table 4-1 has been produced from the numbers of trips presented in the Environmental Statement and shows the number of trips forecast during the mobilisation, construction and demobilisation periods. It shows the maximum number of trips occurs during the construction period.
Table 4-1 – Daily Construction Traffic Trips

<table>
<thead>
<tr>
<th>Type</th>
<th>Detail</th>
<th>Estimated Peak Daily Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mobilisation Period</td>
<td>Construction Period</td>
</tr>
<tr>
<td>Construction Workforce</td>
<td>To Temporary Construction Compound / Pipe Storage Yard (Private Vehicle Trips)</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>Temporary Construction Compound / Pipe Storage Yard to “Pipeline working area” (Mini Bus Trips)</td>
<td>15</td>
</tr>
<tr>
<td>Materials</td>
<td>General Construction Materials (HGV Trips)</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Pipe Sections and Associated Materials (Low Loader and HGV trips)</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Consumable Construction Materials (HGV trips)</td>
<td>-</td>
</tr>
<tr>
<td>Equipment</td>
<td>Low Loader</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>Overall (Not Including Local)</td>
<td>67</td>
</tr>
<tr>
<td></td>
<td>Overall (Including Local)</td>
<td>82</td>
</tr>
</tbody>
</table>

4.3.3 The data Table 4-1 has been approximated into hourly trips. These are shown in Figure 4-1. From this, the majority of trips are due to occur outside the peak hours between 0600-0700 and 1900-2000. These trips are private car trips from workers arriving at the site in the morning and leaving site in the evening. These will impact upon the road network in the vicinity of Knottingley and Eggborough, depending on which Temporary Construction Compound the workers travel to in order to park before being transported to the pipeline working area by minibus.
4.3.4 There are also a high number of trips between 0700-0800 and 1800-1900. These trips are mini-bus trips transferring workers from the Temporary Construction Compound to the “pipeline working area”. Where possible, these trips will travel along the “pipeline working area” and so the impact upon the road network will be kept to a minimum.

4.3.5 At all other times, including during the peak hours, the construction traffic consists of HGV movements for the delivery or transfer of materials and equipment, and small numbers of workers transferring between sections of the “pipeline working area”. Traffic levels between 0800-1800 show a maximum of 6 two-way trips per hour.
5 MITIGATION MEASURES

5.1 Overview

5.1.1 In order to minimise the impact of the construction traffic on the local community and highway network, a number of mitigation measures have been proposed in this section, supporting the preferred routing set out earlier in Section 3.

5.2 Preferred Construction Route

5.2.1 All construction traffic travelling to either of the proposed compounds or directly to the pipeline working area via the routes described in Section 3.

5.2.2 These preferred routes have been determined to limit the impact of the construction traffic on the surrounding area and in particular to ensure that there is no detrimental impact on the town of Kellington and the village of West Haddlesey. Local residents in those villages will be kept informed of construction programming and progress. Regular contact with local residents will be maintained during the mobilisation, construction and demobilisation periods.

5.3 Construction Traffic Arrivals and Departures

5.3.1 Where possible construction traffic will be controlled to ensure that deliveries to the compound and to the pipeline working area will be spread across the day to minimise the impact of HGV traffic to local residents, in particular during the highway peak hours. Construction site workers will be carried from the chosen compound to the pipeline working area by minibus to reduce the number of vehicle trips and these trips will be undertaken outside of the highway peak with workers taken from the compound to the pipeline working area at 0700 returning at 1900.

5.3.2 There may be a small number of trips made to the pipeline working area and associated AGI for the purpose of inspection and maintenance. Where possible these visitors will be transported from the compound by minibus, but where this is not possible there may be an occasion where these trips are made directly to the pipeline working area by private motor vehicle.

5.3.3 A parking management plan will be developed to include the following features:

- Parking restrictions on all areas outside of the specified designated parking zones.
- Preferential parking for vehicles carrying more than one occupant; and
- The establishment of a car share database within the parking permit system;

5.4 Presence of Personnel to Guide Construction Traffic

5.4.1 Qualified personnel will be provided to guide traffic within the site. This will ensure the safety of construction workers when operating around moving plant and HGVs. This will also ensure that vehicles access the site in a timely manner without blocking local roads.

5.4.2 Measures will be implemented under CDM to reduce the risks to construction workers.
5.5 Cleansing of Vehicles Prior to Exiting the Site

5.5.1 All vehicles exiting the site will be required to pass over a rumble strip and wheel wash to minimise the amount of debris which is transferred to the local highway network.

5.5.2 As a precautionary back-up measure, a road sweeper will be available at all times should mud or debris be observed on the Highway or along the internal site road between the wheel wash facility and the Highway. Details will be provided in the CEMP.

5.6 Local Signage Strategy

5.6.1 Temporary signs will be erected during the mobilisation, construction and demobilisation periods to direct construction traffic along the assigned routes and staff and the construction traffic drivers will be thoroughly briefed on the route that they are required to use to avoid inappropriate use of local roads by construction traffic.

5.6.2 On both main road approaches to the chosen compound signs to the Traffic Signs Regulations and General Directions 2002 (TSRGD) Diagram Number 511 (Reduce Speed Now), 506.1 (Side Road Ahead) and 7301 (Works Access) will be erected. Where appropriate these signs will also be erected on local roads adjacent to pipeline working area where construction traffic is required to enter to drop off materials during the construction phase of the gas pipeline.

5.7 Highway Condition Survey

5.7.1 A before and after condition survey of the local public highway will be undertaken in the vicinity of the accesses to the two Temporary Construction Compounds / Pipe Storage Yards and the vehicle access points to the “pipeline working area” for the Gas Pipeline. Following consultation with NYCC condition surveys are not required on the major A Road route to the sites, these include the A19, A63 and A645. However, KPL will be expected to make good any damage caused to the public highway on the above mentioned A roads where damage is caused by HGVs turning onto the local road network to access the “pipeline working area”. Further to this the developer will be required to make good any damage to the highway surface on the local road network identified in the routing strategy in Section 3 of this report, where the carriageway surface is damaged by HGV trips associated with the Gas Pipeline construction.

5.8 Local Engagement

5.8.1 Engagement will be undertaken with local residents to ensure that they are kept informed of the proposed movements of construction traffic during the mobilisation, construction and demobilisation phases of the construction. Local residents will be given a point of contact to discuss any issues that may arise in conjunction with the construction traffic. Engagement is primarily likely to be undertaken in the villages of Gateforth and West Haddlesey.
6 SUMMARY

6.1.1 This CTMP has been prepared in order to support the construction of the water and gas pipelines and AGI for the Knottingley Power Plant development.

6.1.2 The report considered the following:

- the existing situation;
- the construction routing strategy which sets out the preferred route for traffic during construction;
- likely generation flows during the construction process and its impacts;
- the proposed traffic mitigation; and
- a summary of the findings

6.1.3 Two Temporary Construction Compounds / Pipe Storage Yards have been identified, one or both of these may be used for the laydown of materials and equipment and for construction worker parking. The two options are:

- Option 1: CCGT Power Plant Site; or
- Option 2: Euro Auctions Yard, near Eggborough.

6.1.4 There are reasonable public transport, walking and cycling access arrangements to enable workers to access either of the proposed compounds by sustainable modes of travel.

6.1.5 The preferred route to Compound Option 1 at the proposed CCGT Power Plant site would be from the M62 Junction 33 using the A162 and A645 (Pontefract Road, Weeland Road and Common Lane). An alternative route to this site would be via Junction 34 of the M62 using the A19 and A645 (Weeland Road). This route could be longer for vehicles travelling from the west, but avoids travel through Knottingley.

6.1.6 Compound Option 2 would be accessed from Junction 34 of the M62 from which construction traffic would then follow the A19 and Roall Lane to access the existing Euro Auctions Yard site. However, an alternative route for construction traffic from the north would be to exit the A1(M) at Junction 42, routing to Compound Option 2 via the A63 and A19. Access to Compound option 2 is strictly from the eastern end of Roall Lane, and construction traffic will not be permitted to route towards this compound from the western end of Roall Lane.

6.1.7 For Compound Option 1, materials will be transported to sections of the pipeline working area to the south of the River Aire via the A645 Weeland Road. Construction materials transported from Compound Option 1 to the pipeline working area north of the River Aire will be routed eastbound from the compound via the A645 Weeland Road onto the A19 northbound to Millfield Road and westbound to the working area. Low loaders with insufficient clearance will be routed to the A63 westbound. From the A63 they will reach the pipeline working area using Fox Lane, Hillam Road and Pale Lane.

6.1.8 If Compound Option 2 is chosen, no construction traffic will be permitted to turn left from the compound and head west towards the village of Kellington. All construction traffic, including light vehicles transporting workers and other equipment, will be required to turn right from the compound onto Roall Lane and travel in an easterly direction towards the A19. From the A19 if construction traffic is routed towards the
pipeline working area south of the River Aire then they can route from the A19 onto the A645 Weeland Road. Construction traffic heading to the pipeline working area north of the Compound Option 2 will be subject to the same restrictions as those identified for Compound Option 1.

6.1.9 In any single day the maximum number of construction vehicles will be 157. This would comprise of 90 private vehicle trips to the chosen compound, 40 minibus trips from the compound to the pipeline working area, 5 HGV trips, 7 low loader/HGV trips for vehicles carrying pipe, 10 HGV trips for consumable materials and 5 low loader trips.

6.1.10 A number of mitigation measures have been proposed in order to reduce the impact of the construction traffic on the local area:

- Preferred construction routes to limit the impact on the surrounding area and a signing strategy to ensure that vehicles are routed correctly;
- A system is to be adopted to ensure that construction traffic is spread evenly throughout the day in order to reduce the impact of construction traffic at peak periods;
- All vehicles existing an access from the pipeline working area onto the local highway network will be required to pass over a rumble strip and wheel wash to minimise the amount of debris which is transferred to the local highway network;
- A highway condition survey will be undertaken on local roads in the vicinity of the pipeline working area;
- Consultation will be undertaken with local residents to ensure that they are kept informed of the proposed movements of construction traffic during the mobilisation, construction and demobilisation phases of the construction. Local residents will be given a point of contact to discuss any issues that may arise in conjunction with the construction traffic;
- Staff will be encouraged to car share or travel to the selected compound using sustainable transport measures in order to reduce the number of trips made as part of the construction process.

6.1.11 In conclusion, this CTMP sets out a proposed routing strategy and mitigation measures for the construction works for the proposed construction of the gas and water pipelines including AGI associated with the construction of a new Power Plant at Knottingley. The proposed construction traffic will have a slight impact on the surrounding area during the busiest times of construction activity. However, implementation of the proposed mitigation measures will help to reduce the impact and any impacts associated with the works will be temporary.
APPENDIX A – CONSTRUCTION TRAFFIC ROUTE PLAN
CONSTRUCTION TRAFFIC ROUTES

- Compound Option 1
- Compound Option 2
- Route to Compound Op1
- Compound Op1 to Working Area
- Route to Compound Op2
- Compound Op2 to Working Area
- A63 to AGI and Working Area