

11.0 TRAFFIC AND TRANSPORTATION

Introduction

- 11.1 This chapter of the ES assesses the likely significant effect of the Proposed Development in terms of transport and access and is supported by **Appendix 11.1**.
- 11.2 The chapter describes: the assessment methodology; the baseline conditions currently existing at the Assessment Site and surroundings; the likely significant environmental effects; the mitigation measures required to prevent, reduce or offset any significant adverse effects; and the likely residual effects after these measures have been employed. This chapter has been prepared by R Elliott Associates Ltd.

Planning Policy Context

National Planning Policy

National Planning Policy Framework (March 2012) (Ref. 11.1)

- 11.3 The National Planning Policy Framework (NPPF) came into effect in March 2012 and superseded PPG13 (Ref. 11.2) as the national planning policy guidance. Its emphasis on transport matters in Section 4 is to:

"promote sustainable transport that minimises the emission of greenhouse gases and reduce congestion." (Paragraph 30).

- 11.4 Paragraph 32 of the NPPF requires that:

"All developments that generate significant amounts of movements should be supported by a Transport Statement or Transport Assessment. Plans and decisions should take account of whether:

- ***The opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure;***
- ***Safe and suitable access to the site can be achieved for all people; and***
- ***Improvements can be undertaken within the transport network that cost effectively limit the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts are severe."***

Local Planning Policy

North Yorkshire Local Transport Plan 3 (2011-2016) (Ref. 11.3)

11.5 This is the third North Yorkshire Local Transport Plan (LTP) and replaces the provisional and second Plans. It sets out the aims and objectives for transport as well as the strategies and policies in North Yorkshire for five years. It seeks to support its aims by defining objectives that include:

- ***“reducing the impact of transport on the natural and built environment and tackling climate change (environment and climate change);...”***

11.6 The plan identifies the A64(T) and the A170 as a ‘primary routes’, although the County Council does not control the A64(T). The main transport related issues identified for the Pickering and Thornton-le-Dale area include seasonal congestion associated with summer tourist traffic visiting attractions such as the North York Moors Railway, Pickering Castle, Flamingoland and the Dalby Forest Visitors Centre.

NYMNPA Core Strategy and Development Policies (2008) (Ref. 11.4)

11.7 The Assessment Site is located partly within the boundaries of the North York Moors National Park. It is therefore important to consider the North York Moors National Park Authority (NYMNPA) Core Strategy which was adopted in 2008.

11.8 Chapter 10 of the document refers to transport. Policy 23 ‘New Development and Transport’ requires consideration of the need to travel and by which mode in order to reduce the environmental effect of traffic on the National Park. Points 3 and 4 of this policy are outlined below and are considered to be relevant:

- “3) The external design and layout and associated surfacing works take into account the needs of all users including cyclists, walkers and horse riders.***
- 4) It is of a scale which the adjacent vehicular road network has the capacity to serve without detriment to highway safety or the environmental characteristics of the locality.”***

Ryedale Local Plan, March 2002 (Ref. 11.5)

11.9 The Ryedale Local Plan was adopted in March 2002. It is in the process of being replaced by the Local Development Framework (LDF). In the meantime the Ryedale Local Plan contains a number of key policies, which have been retained since 27 September 2007 under instruction

from the Secretary of State until they are replaced by the LDF. In terms of traffic and transportation the following policy is considered relevant to this assessment.

- 11.10 Policy T3 – Access to the local highway network recognises that all new development should be served by a local road network that can satisfactorily accommodate the traffic it will generate. Proposals that would be unacceptably detrimental to road safety, public amenity or road congestion levels by virtue of the traffic they will generate and/or their access point with the highway network will not be permitted.

The Ryedale Plan – Local Plan Strategy May 2012 (Submission Document) (Ref. 11.6)

- 11.11 The only policy within the Ryedale Plan considered relevant to this assessment is SP19 Generic Development Management Issues which addresses access, parking and servicing. It states that access to and movement within the site by vehicles, buses and pedestrians is not to have a detrimental impact on road safety, traffic movement or the safety of pedestrians and cyclists. It also recognises that development will be expected to comply with the relevant standards in place at the time a planning application is made to the Local Planning Authority.

Assessment Methodology

- 11.12 The primary purpose of the assessment is to determine what the likely significant effects of the Proposed Development would be on traffic and transport, as required by the EIA Regulations (Ref. 11.7). The assessment to determine whether effects are likely to be significant or not significant involves the combined consideration of the sensitivity of the highway network to the Proposed Development, and the magnitude of the effect that would occur.
- 11.13 The assessment process aims to establish the following:
- a clear understanding of the existing conditions of the surrounding highway network;
 - the nature of the Proposed Development and/or any mitigation measures incorporated into the design of the Proposed Development in order to minimise significant adverse effects;
 - the potential direct and indirect effects of the Proposed Development on the highway network;
 - identification of mitigation measures that might be implemented to reduce any effects of the Proposed Development; and

- conclusions concerning the residual effects of the Proposed Development.

11.14 The approach to assessment has followed the procedure suggested by the Institute of Environmental Assessment (IEA) in 'Guidelines for Environmental Assessment of Road Traffic Guidance Notes No. 1 (GN1) (Ref. 11.8), which sets out the recommended list of environmental effects which could be considered as potentially significant whenever a new development is likely to give rise to changes in traffic flows.

11.15 In assessing the effects of the Proposed Development on specific groups and locations, other road users, residential areas and recreational users of the area have been identified as particular groups to be considered (GS1, 17).

11.16 The environmental effects to be considered in this assessment are as follows:

- Severance;
- Accidents and safety;
- Non-vehicular safety (Cyclists Pedestrians and Equestrians (CPEs); and
- Driver delay.

Severance

11.17 Severance is the perceived division that can occur within a community when it becomes separated by a major traffic route. This effect is exacerbated by the coincidence of peak traffic flows with peak pedestrian movements and it can relate to quite minor traffic flows if they impede residents, either pedestrian or motorist.

11.18 GN1 recognises in para 4.28 that:

"The measurement and prediction of severance is extremely difficult. The correlation between the extent of severance and the physical barrier of a road is not clear and there are no predicative formulae which give simple relationships between traffic factors and levels of severance. In general, marginal changes in traffic flow are, by themselves, unlikely to create or remove severance."

11.19 Reference is given in GN1 (Ref. 11.8) to factors contributing to severance such as traffic speed, width of road and the availability of crossing places as well as the composition and number of vehicle movements.

11.20 GN1 recommends that the Manual of Environmental Appraisal indicators, reproduced below,

as a way in which severance might be assessed:

“Changes in traffic flow of 30% , 60% and 90% are regarded as producing ‘slight’, ‘moderate’ and ‘substantial’ changes in severance respectively.”

“These figures have been derived from studies of major changes in traffic flow and therefore should be used cautiously in any environmental assessment. The assessment of severance should pay full regard to specific local conditions.”

11.21 Correlating this approach with the approach in Chapter 2 of this ES, the levels of change relate to each other as shown in **Table 11.1** overleaf.

Table 11.1: Comparison of GN1 and Chapter 2 descriptors of magnitude of effect

Magnitude of Effect	GN1 (MEI Indicators)	Chapter 2 of ES
High	Substantial	High
Medium	Moderate	Medium
Low	Slight	Low

11.22 Effects of lesser magnitude than ‘slight’ or ‘minor’ can be regarded as negligible. It is proposed to use the categories proposed in Chapter 2 of the ES to maintain consistency with the other chapters of this ES.

Accidents and Safety

11.23 The Personal Injury Accident (PIA) record for parts of the local highway network has been obtained from North Yorkshire County Council for a period from 1 January 2008 to 30 April 2013.

Non-Vehicular Safety (Cyclists, Pedestrians and Equestrians)

11.24 Cyclists, pedestrians and equestrians (CPEs) are much more vulnerable to personal injury accidents than occupants of vehicles although no accidents were recorded for these groups by NYCC for the period 1 January 2008 – 30 April 2013 in the area of greatest exposure, along Eberston Lane and Eberston Common Lane. The existing risks faced by all these groups of road users when using this road are:

- High speed motor vehicles passing close to the CPEs;
- Poor visibility of CPEs;
- Risk of being startled;
- Poor awareness of approaching motorised vehicles by CPEs; and

- Poor awareness of CPEs by approaching motorised vehicles.

11.25 Although the Proposed Development will only increase the volume of traffic over a relatively short period of time, this still has the potential to increase the risk to the safety of the cyclists, pedestrians and equestrians. Mitigation measures are considered in more detail in later sections, when it will be shown that the traffic control measures or restriction of CPEs away from areas of overlap will increase the safety of the CPEs.

Driver Delay

11.26 The Proposed Development Vehicle may cause delay to drivers, primarily from the following causes:

- Increased traffic flows on congested roads;
- Vehicles turning off/onto the highway at the site entrance;
- Traffic controls where pipelines are laid in trenches across the road; and
- Movement of equipment from one part of the Assessment Site to another.

11.27 An economic evaluation of the delay will not be undertaken for this Proposed Development and the delays are only likely to be significant when the traffic on the network surrounding the development is already at, or close to, the capacity of the system (GN1, paragraph 4.32).

11.28 The delay caused by each of the issues noted above will be assessed and mitigation measures proposed where necessary..

Assessment of Significance

11.29 The approach to the assessment of significance of effects is summarised in **Table 11.2** below, adapted from DMRB HA 205/08 (Ref. 11.9). This takes into account the duration, magnitude, direction and location of each effect as well as the sensitivity of the receptor.

Table 11.2: Assessment of Significance

Significance Definition	Adverse	Beneficial
Negligible	Very minor loss or detrimental alteration to one or more characteristics, features or elements	Very minor benefit to or positive addition of one or more characteristics, features or elements
Minor	Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements	Minor benefit to, or addition of, one (or more) key characteristics, features or elements; some beneficial impact on attribute or a reduced risk of negative impact occurring

Moderate	Loss of resource, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements	Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality
Major	Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements	Large scale or major improvement of resource quality; extensive restoration or enhancement; major improvement of attribute quality

Baseline Conditions

11.30 Before access routes to the Proposed Development can be considered in detail, an overview of the wider road network will be carried out to confirm the options available for approaching the Assessment Site and the most appropriate routes will then be studied in greater detail. The baseline studies comprise:

- A traffic count using automated traffic counters;
- An examination of accident records over the past five years for the route between the major roads and the Assessment Site;
- Examination of the roads by car, with spot checks on foot; and
- Review of recent road usage.

Local Highway Network

11.31 Two 'A' Class roads cross the Vale of Pickering from west to east as shown on **Figure 11.1**. The A64 passes to the south of the KGS at the southern extent of the Assessment Site whilst the A170 runs west from Scarborough to Thirsk where it meets the A19, A61 and M1. At Pickering the A169 runs north to south between Whitby and Malton but has no adequate direct access to the Assessment Site and will not be considered further. The Assessment Site crosses the A170 between Wilton and Allerston.

11.32 The B1258 forms a junction with the A64 east of Rillington and heads north towards Eberston before turning to the east to meet the A170 at Snainton. The B1415 meets the B1258 south of Eberston and heads in a north west direction passing through Allerston to join the A170 as a minor road junction.

11.33 Minor unclassified roads cross the pipeline route between the River Derwent and the A170. Marishes Road joins the B1258 at Yedingham and runs parallel to the River Derwent to connect with the A169 west of the Assessment Site, and Malton Lane runs west from its junction with the B1415, changing name to Wilton Ings Lane at the parish boundary before turning north to meet the A170 at Wilton. These minor roads are shown on **Figures 11.2 –**

11.4.

- 11.34 Access to the Assessment Site north of the A170 from either the north or the east is restricted to narrow unclassified roads through the Dalby Forest with gradients of 1:5 in places and would require significant road works to accommodate the vehicles delivering pipes and equipment to the Assessment Site. Access from these directions has therefore been scoped out of further consideration.
- 11.35 Minor roads lead north from the A170 in several locations between Allerston and Brompton-by-Sawdon, with the only direct route to the northern end of the Assessment Site being via Eberston Lane and Eberston Common Lane, the former having a junction with the A170 at Eberston.

A64(T)

- 11.36 The A64(T) is a trunk road operated, managed and maintained by the Highways Agency, extending between the intersection with the A1(M) at its west end and Scarborough in the east. The A64(T) has a junction with the A1 (M) near Leeds and heads to the east as a two-lane dual carriageway with grade-separated interchanges until it has by-passed York, where it becomes a two-way single carriageway with two stretches of dual two-lane carriageway, the second section of dual carriageway by-passing Malton. The road between the east end of the Malton by-pass and Staxton is single two-way carriageway, passing through Rillington, to the south west of KGS and the Assessment Site, before reaching the junction with the B1258.
- 11.37 Traffic lights are located in Rillington, where the approach to the village is marked by red chevron road markings and a 20m section of red road colouring to indicate the start of a 40mph speed limit. A traffic island set within a red-coloured 'ghost island' marks the 30mph zone through the village, with the painted ghost island extending past the traffic lights through to the change in speed limit on the east side of the village.
- 11.38 The A64 continues eastwards from Rillington as a two-way single carriageway road with a pavement on the north side. The junction with the B1258 has a slip road in the north-bound direction only, permitting vehicles to decelerate before turning north onto the B1258.

A170

- 11.39 The A170 is crossed by the Assessment Site about equidistant between Wilton and Allerston.

- 11.40 Outside the towns and villages, the A170 between Pickering and Scarborough is subject to the national speed limit (60mph) except to the east of Allerston, where a 50mph section extends from the 40mph limit for about 1 km towards Ebberston. The speed limit reduces to 40mph and 30mph where it passes through villages such as Allerston and Ebberston.
- 11.41 There are gateway features at the entrance to the some of the villages, where space permits in the verge, and road markings such as yellow or red lines at 100m intervals precede the speed limit and village name signs. At the location of village name signs and the start of the lower speed limits, a 20m section of highway has red colouring to highlight to drivers the change in speed limit, and villages such as Allerston and Ebberston have double white lines, hatched central strips and traffic islands to reinforce the speed restriction signs.

B1258

- 11.42 The B1258 joins the two 'A' class roads, crossing and then running parallel to the pipeline route before turning east towards Snainton. It mostly comprises a 7.3m wide single lane two-way carriageway generally with an open perspective, wide verges and moderate bends except at Yedingham.
- 11.43 The B1258 has a 60mph speed limit until the village of Yedingham, where a 30mph speed limit is in force as the road takes a moderately sharp left hand turn into the village before crossing the River Derwent on the north side of the village. . A pub is located at the north end of the village adjacent to the highway bridge over the River Derwent.
- 11.44 The road turns to the east at the Marishes Road/Allerston Lane/B1258 junction before turning north again to the junction with the B1415 south of Ebberston. The B1258 then turns to the east to meet the A170 at Snainton.

Dalby Forest Drive

- 11.45 A minor road heads north from Thornton-Le-Dale to meet the A169 about 5.5 km north of Thornton-Le-Dale, from which access can be gained onto the Dalby Forest Drive which passes close to the northern edge of the Assessment Site. Dalby Forest Drive is maintained by the Forestry Commission which charges a toll for its use.
- 11.46 The Dalby Forest Drive forms part of a major tourist attraction for cyclists, horse-riders, hikers and holidaymakers and the effect of the proposed works upon the amenity of the area would be significant. Dalby Forest Drive is used throughout the year by amenity groups or

individuals. The length of Dalby Forest Drive up to the junction with Eberston Common Lane is about 7 km, with about 4 km after the main amenity area comprising single track road without formal passing places. Eberston Common Road heads southwards from this junction past the entrances to the Assessment Site to a junction with the A170.

- 11.47 The effect that using the Dalby Forest Drive route would have on amenity and the reluctance of the Forestry Commission to allow its use as an access to the site is sufficient to discount it from further consideration.

Eberston Lane and Eberston Common Lane

- 11.48 The width of the A170 in the vicinity of the Eberston Lane junction is 7.3m, with the two lanes of traffic separated by double white lines and a traffic island. Eberston Lane forms the minor leg of the junction with the A170, being 7 m wide at the junction and narrowing to 4 m away from the junction.
- 11.49 Eberston Lane remains about 3.5 m wide for the rest of its length, except at passing places and widenings.
- 11.50 Eberston Lane forms a minor leg on the north side of crossroads at the A170, where the A170 passes through the village of Eberston. The lower end of Eberston Lane, near the A170, rises at gradients up to 1:10 from the village up through a narrow valley, Netherby Dale, to reach the upper plain, where the landscape becomes flatter and more open with good visibility along the road.
- 11.51 The proposed access route passes the along the length of Eberston Lane (approx 5.0 km) up to Givendale Head Farm. From this point northwards, the road known as Eberston Common Lane is unsurfaced and continues for approximately 2.2 km to reach the well site entrance. This route is shown on **Figure 11.3**.
- 11.52 Eberston Lane is mainly single-track with passing places that were installed when the original Lockton exploration sites were being constructed and drilled in the 1960's and 1970's. The spacing of these passing places varies to provide inter-visibility between them, with those in the lower sections near the A170 being closer together than the passing places in the upper section where Eberston Lane rises onto the more open plain. Two corners have been eased by local road widening so articulated vehicles are able to manoeuvre around them without difficulty.

- 11.53 Eberston Lane has 30mph signs posted along its length applicable to site traffic generated by work at Eberston Moor 'A' Well Site and the Eberston South Well Site near Givendale Head Farm that forms part of a separate application and is not discussed further here.
- 11.54 Eberston Common Lane under the control of the Forestry Commission forms part of a series of trails for pedestrians, cyclists and equestrians centred on the Dalby Forest visitor centre and Dixon's Hollow; and is also part of the Tabular Hills Walk, a long-distance walking route that forms part of the circuit of the North York Moors.
- 11.55 Planning permission for Eberston Moor 'A' Well Site was granted in 2006 (NYM/2005/0254/FL), with access for heavy goods vehicle traffic being taken from the A170 up Eberston Lane and Eberston Common Lane.
- 11.56 Vehicles associated with the construction and drilling operations at Eberston Moor 'A' Well Site and the well site near Givendale Head Farm have used this access without incident since work commenced in 2006.
- 11.57 There have been no accidents relating to turning movements at the junction of the A170 with Eberston Lane.
- 11.58 Eberston Lane is primarily used for access to the farms located in the area and a recycling unit at Givendale Head Farm. This facility is operated by the landowner under the trade name of Gwilliam Recycling and is a fully licensed Waste Transfer Station (Licence Nr EAWML66157). The recycling unit accepts agricultural, building and gardening waste for separation and recycling, thus generating HGV traffic along Eberston Lane. There has been no reported conflict between traffic accessing the recycling unit and that servicing the Eberston Moor 'A' Well Site. Likewise, there have not been any conflicts reported between well site traffic and farm traffic.
- 11.59 Apart from the large house, Cliff House and the associated cottages, located at the junction of Eberston Lane with the A170, the only other property within 100m of Eberston Lane is Givendale Head Farm, which is at the northern end of Eberston Lane. Other farms such as High Park Farm, Malton Cote and Scamridge are set at least 200m from the public highway, hidden from the highway by the topography, and are considered to have low sensitivity to the traffic using the road.
- 11.60 Cliff House is located immediately adjacent to the A170 and the effect on the occupants to traffic using Eberston Lane is considered to be minimal in comparison to the effects of

traffic on the major road.

- 11.61 Eberston Common Lane is also used as a Public Right of Way and it extends from the head of Eberston Lane at Givendale Head Farm in the south to the junction with Dalby Forest Drive in the north. Eberston Common Lane forms a minor leg at an oblique junction with Dalby Forest Drive about 300m to the north of the Assessment Site.
- 11.62 Works traffic for the Eberston Moor 'A' Well Site has used this established access from the A170 and Eberston Common Lane in the past, as shown on **Figure 11.3**. The same route is proposed for the northern part of the Assessment Site.

Penniston Lane (B1415)

- 11.63 There is one dwelling along Penniston Lane, at the east end near the junction with the B1258, set back behind hedges. It is considered to have low sensitivity.

Malton Lane/Wilton Ings Lane

- 11.64 This minor road is a single track lane without passing places, with a narrow verge and a ditch on the north side, and a flat grass verge on the south side. There are no pavements along this road, nor at the junction with Allerston Road.
- 11.65 Although there are two dwellings on the corner of Malton Lane, they are set back from the lane and screened from it by trees. There are no pavements in either Penniston Lane or Malton Lane, with no pedestrians observed during the survey.
- 11.66 There is very low pedestrian usage of the Penniston Lane/Malton Lane junction; the traffic speeds are low and the road width and condition of Malton lane deter speeding. There are no schools or nursing homes in the vicinity and the sensitivity of the area is considered to be low.

Marishes Lane

- 11.67 Marishes Lane has a wide junction with the B1258 that will allow articulated vehicles to access the road without difficulty. The site lines are adequate and the junction is level without any changes of gradient.
- 11.68 The pavement from Yedingham terminates at the south west corner of the junction of

Marishes Lane with the B1258 with a verge about 2m wide separating the pavement from the road. The location of the pavement ensures that occupants of half the cottages at the junction will not be affected by the traffic using the road, whilst the occupants of the cottages on the northwest corner will have to cross the road to reach the pavement. There are no pavements along the lane to the west.


- 11.69 Marishes Lane is primarily used by farm vehicles and HGVs servicing the farms located along the road. The road is single track, about 3m wide with verges of varying widths on either side that are over-run at farm entrances and corners. The road is generally open and level, and sight lines are mostly good. The junction is heavily marked by tyres from HGVs using the junction to service the farms off Allerston Lane but the severance caused by this existing traffic is minimal as it does not pass the pedestrian gates to the properties in the NW corner.
- 11.70 The properties along the road to the west, other than Derwent Farm, are generally set back from the road by at least 200m.
- 11.71 The road is accessible by HGV traffic although its width and lack of formal passing places will cause difficulties unless traffic management measures were put in place. It has been assumed that this road will have minimal use as an HGV access to the Assessment Site, except for vehicles associated with the horizontal directional drilling of the pipeline under the River Derwent and for bringing out machinery following the completion of the pipeline down to the River Derwent. Private vehicles would access the Assessment Site along this road.


Existing Traffic Flows

A64 Traffic Flows

- 11.72 Data regarding traffic flows along the A64 have been sourced from the UK Traffic Data website which shows that the two-way vehicle flows on the A64 are in excess of 8,000. The census point between the B1258 junction and Heslerton recorded the traffic flows shown in **Table 11.3**.

Table 11.3: A64 traffic statistics by year: all traffic two-way Average Daily Flows

Vehicle Types - Average Daily Flow for Year 	2007	2008	2009	2010	2011	2012
Pedal Cycles	5	5	5	5	5	5
Motorcycles and Mopeds	56	59	59	54	59	55
Cars	8081	7822	7799	7690	7643	7582
Buses and Coaches	107	114	118	122	126	130
Light Goods Vehicles	1478	1534	1531	1578	1621	1677

Vehicle Types - Average Daily Flow for Year 	2007	2008	2009	2010	2011	2012
Two-axle Rigid HGVs	396	390	358	374	361	356
Three-axle Rigid HGVs	52	58	58	58	60	64
Four-axle Rigid HGVs	53	55	53	46	50	56
Three-axle Articulated HGVs	52	46	42	47	35	26
Five-axle Articulated HGVs	218	197	170	153	144	136
Six-axle Articulated HGVs	176	177	171	165	167	169
All HGVs	947	923	852	843	817	808
All motor vehicles	10669	10452	10359	10287	10266	10251

Notes:

Figures are daily averages calculated from all traffic counts over the course of the year.

Values are rounded to the nearest whole number

A value of zero for any entry means that there were either no recorded vehicles of that type or too few to register after rounding.

A blank value means that there were no counts made in that year

- 11.73 The traffic flows for the latest full year of records (2012) show that proportion of HGVs is 7.9% of the 10,251 vehicles travelling along the road.


A170 Traffic Flows


- 11.74 Previous surveys have confirmed that the daily traffic vehicle movements on the A170 are in excess of 5,000 per day, of which 4% was HGV traffic. These traffic flows are well within the capacity of a road of this type.
- 11.75 The survey carried out in April 2013 confirmed that the average daily traffic (ADT) movements along the A170 were 6,601 vehicles with cars and motorbikes comprising 93% of the volume. Light and Heavy Goods Vehicles represented 7% of the total flow with an average of 497 movements daily.

B1258 Traffic Flows

- 11.76 The road connecting the A64 in the south with the A170 in the north is extensively used as a short cut for traffic heading towards Scarborough. The UK Traffic Data website (Ref. 11.10) provides traffic data for a census point located, as shown on **Figure 11.4** between Yedingham and the railway crossing as shown below in **Table 11.4**.

Table 11.4: B1258 traffic statistics by year: all traffic

Vehicle Types - Average Daily Flow for Year 	2008	2009	2010	2011	2012
Pedal Cycles	1		2	0	2
Motorcycles and Mopeds	15		9	24	17
Cars	1839		1965	2094	1844

Vehicle Types - Average Daily Flow for Year 	2008	2009	2010	2011	2012
Buses and Coaches	9		4	9	6
Light Goods Vehicles	315		337	412	259
Two-axle Rigid HGVs	48		35	23	65
Three-axle Rigid HGVs	7		12	19	10
Four-axle Rigid HGVs	24		20	26	20
Three-axle Articulated HGVs	8		8	49	4
Five-axle Articulated HGVs	13		9	24	1
Six-axle Articulated HGVs	17		19	21	16
All HGVs	117		103	162	115
All motor vehicles	2295		2418	2701	2240

Notes:

Figures are daily averages calculated from all traffic counts over the course of the year.

Values are rounded to the nearest whole number

A value of zero for any entry means that there were either no recorded vehicles of that type or too few to register after rounding.

A blank value means that there were no counts made in that year

- 11.77 These baseline figures show that a minimum of 103 daily journeys (during 2010) were made along the B1258 by HGVs of different sizes.

Ebberston Lane Traffic Flows

- 11.78 The baseline traffic flows along Ebberston Lane were perceived to be considerably lower than for the A170 so a traffic survey was conducted to provide a basis for comparison with predicted vehicle movements during both the construction, operational, and decommissioning and restoration phases of the Proposed Development.
- 11.79 A survey was commissioned from 'Sky High-Count On Us' to count the daily traffic vehicle movements on Ebberston Lane and to report on the findings. The survey was carried out between 30th April 2013 and 6th May 2013, with automatic traffic counters placed across Ebberston Lane and the A170. The results of the survey are included in **Appendix 11.1**.
- 11.80 The survey confirmed that the traffic flows on Ebberston Lane are low, with a maximum recorded number of 19 movements northbound and 11 movements southbound in one hour (Monday 30 April 0900-1000 hrs). The hourly total of traffic movements between the hours of 0800 and 1700hrs, averaged over the working week, vary between 10 and 17, with an average over the working day of 13 movements per hour.
- 11.81 Motorcycles and cars comprised 80% of the traffic, with LGVs and HGVs comprising the remaining 20%. These averaged daily movements are summarised in **Table 11.5**.

Table 11.5: Baseline Traffic Flows along Eberston Lane (Average Weekday Totals)

Direction	Motorbike	Cars Class	LGVs, 2 Axles	HGV 3/4 axles	HGV 4/5/6 axles
Southbound	2	69	14	2	2
Northbound	3	71	12	4	2

- 11.82 Given that the road provides direct access to only nine properties, the level of car usage suggests that each household generates four double journeys per day for each property.
- 11.83 A possible explanation for these higher than expected figures is that Eberston Lane is used as a short cut by vehicles originating from further north avoiding the toll payable on Dalby Forest Drive by using farm roads.
- 11.84 The relatively low figures recorded for HGV traffic movements along Eberston Lane suggests that the recycling centre generates fewer traffic movements than might be expected for such a centre to remain viable. The website dedicated to the recycling centre makes no mention that cars carrying waste for treatment would be acceptable, with 1 tonne loads being the minimum quantity charged for by the centre.

Minor Roads South of the A170

- 11.85 Malton Lane and Marishes Lane are both minor unclassified roads that do not carry significant volumes of traffic and almost any usage will generate a change of more than 90% of the existing flows.

Severance

- 11.86 There is some potential for severance to occur at the junction of Eberston Common Lane with the A170, but experience of the area has shown that the pavement alongside the A170 is little used by pedestrians and there is no scope for severance on Eberston Common Lane more than 200m from the A170 junction.
- 11.87 Similarly, there is potential for substantial severance at the east end of Malton Lane, but this is limited in practice, given that there is so little traffic and few pedestrians.
- 11.88 The construction traffic will avoid passing through the villages south of the A170, thus avoiding issues of severance within those communities.
- 11.89 Traffic passing through Yedingham has the potential to cause severance as houses are

located on either side of the main road and on the minor road heading south to West Heslerton.

Accident Records

B1258

- 11.90 The B1258 has a record of accidents related to the railway level crossing gates near the mill. A fatal accident occurred at the junction of the B1258 with the A170 in Snainton, where a motorcyclist crashed whilst travelling along the A170. Excessive speed was considered to be a contributory factor.
- 11.91 A search was undertaken for Personal Injury Accident (PIA) records for the length of Eberston Lane between Eberston and Givendale Head Farm. North Yorkshire County Council has confirmed that in the period from 1 January 2008 – 30 April 2013 no PIAs were recorded for the road.
- 11.92 It can be seen that the observed accident record on Eberston Lane is negligible and the road could be considered as a receptor of 'Low' sensitivity.

Cycle, Pedestrian and Equestrian (CPE) Facilities

A64 (T)

- 11.93 A cycle path/footpath runs parallel to the highway and it is anticipated that CPEs use that in preference to the highway itself.

A170

- 11.94 The A170 has pavements within the villages but there are no cycle lanes or pavements outside the villages. No CPEs were observed using the A170 during the surveys.

Eberston Lane/ Eberston Common Lane

- 11.95 There are no pedestrian specific facilities along Eberston Common Lane south of Givendale Head Farm and most recreational walkers use the network of public footpaths in the area, or use the facilities provided in Dalby Forest. A public footpath runs parallel to the lower section

of Eberston Lane, meeting the road near High Park Farm, where another footpath heads westwards.

- 11.96 Similarly, there are no specific provisions for cyclists to use Eberston Common Lane, and it is less favoured than the Dalby Forest Drive, which has been developed to attract cyclists as well as other recreational users.
- 11.97 Equestrians are understood to use the area although relatively few use Eberston Common Lane, preferring the quieter tracks and rides within the Dalby Forest.
- 11.98 Dalby Forest, north of Givendale Head Farm, has open access and a campsite adjacent to the road through the forest is used on occasion by Scouts and Guides. The coordinates for this campsite are SE89300,88900, placing it just inside the trees south of Eberston Low Moor, about 1.2 km south of the Eberston Moor 'A' Well Site, with the pipeline route following the forestry track that passes the campsite.
- 11.99 Dalby Forest is considered to have very high amenity value, although the main centre for activities is near Low Dalby, to the west side of the forest. The forestry tracks and the Dalby Forest Drive are used extensively by off-road cyclists and hikers, whilst numerous picnic sites have been prepared by the Forestry Commission centred around viewpoints and Dalby Forest Drive.
- 11.100 Two cycle routes have their starting point at Dixons Hollow, about 1.5 km to the west of the Assessment Site and use Eberston Common Lane where it passes Eberston Moor 'A' Well Site, with one cycle route using Eberston Lane up to the boundary of the Dalby Forest and Givendale Head Farm and then turns west along the southern boundary of the Forestry Commission land.
- 11.101 This cycle route re-joins the pipeline route south east of the well site.
- 11.102 Apart from the cycle routes, the Assessment Site and its surroundings have not been developed by the Forestry Commission to the same extent as the west of the Forest. There are no picnic facilities or viewpoints within 1 km of the Assessment Site although the Dalby Forest Drive passes within 100m of the Assessment Site, separated from it by woodland.
- 11.103 Eberston Common Lane is part of the network of gravel roads in Dalby Forest, but its distance from the main visitor centre and its location off the direct route to viewpoints makes

it less used than other tracks in the area. However, awareness of recreational users is still needed, as both pedestrians and cyclists have been observed using the route.

11.104 The pipeline route leaves Eberston Common Lane and follows the route of another pipeline along Givendale Rigg, where its route coincides with the 'Moor to Sea' cycle route and, for a short distance, the Adderston Cycle Trail. This section of the route follows an existing Forestry Commission track that has a wide verge to the west side through which the other pipeline runs.

11.105 No cyclists were observed on the Givendale Rigg track, but the parallel track to the west was heavily trafficked by cyclists with 25 observed in a 15 minute period.

Marishes Lane

11.106 The pavement from Yedingham terminates at the south west corner of the junction of Marishes Lane with the B1258 with a verge about 2m wide separating the pavement from the road. The location of the pavement ensures that occupants of half the cottages at the junction will not be affected by the traffic using the road, whilst the occupants of the cottages on the north west corner will have to cross the road to reach the pavement.

11.107 The junction is heavily marked by tyres from HGVs using the junction to service the farms along Allerston Lane but the severance caused by this existing traffic is minimal because it does not pass the pedestrian gates to the properties in the NW corner.

11.108 The main usage of Marishes Lane will be to bring the excavation and pipe-laying machinery out from the end of the pipeline route on the north side of the River Derwent and allow private vehicles to access the works. This movement of HGVs is expected to amount to four low-loaders to transport the excavators and pipe-laying machines, with a further 6 for the drilling unit and ancillary equipment. A maximum of 20 HGV movements would therefore be generated as the equipment is brought out, spread over a number of days.

11.109 The magnitude of increase in the HGV traffic flows will be comparable to the traffic generated by a farm, but for a very limited period. This severance effect is considered to have a negligible adverse effect upon the occupants of the houses at the junction because of the limited number of vehicles, the low speeds and low number of pedestrians that might use the junction.

The Assessment Site

11.110 The Assessment Site is a linear site, starting in the north at the Ebberston Moor 'A' Well Site and extending along the route of the pipeline down to the Knapton Generating Station (KGS) in the south. For convenience of reference, the component parts of the Assessment Site will be referred to separately within the report as:

- Ebberston Moor 'A' Well Site;
- The pipeline; and,
- KGS.

11.111 Vehicles accessing the Assessment Site will use either the A64 and B1258 or the A170 to reach the area, with traffic approaching from either York or Thirsk in the west or Scarborough in the east.

11.112 Increased traffic flow will cause delay and the A169 and A170 around Pickering already experience high traffic flows and congestion in summer months. It is for that reason that the route from the A64 via the B1258 is considered to be the most appropriate route to the Assessment Site, although that does not bar access from other directions.

11.113 This assessment has been based on the understanding that there will not be any intermediate compounds for the reception and storage of pipes during construction of the Proposed Development, and that construction of the pipeline will progress continuously from the Ebberston Moor 'A' Well Site southwards along the pipeline route and terminate at KGS. Supplies of pipes, excavation and pipe-laying machinery will gain access to the pipeline route north of the A170 via Ebberston Moor 'A' Well Site and travel along the pipeline route to the point of need. Access will not be required along any other minor roads north of the A170 other than Ebberston Lane and Ebberston Common Lane.

11.114 Access onto the pipeline route including for pipe deliveries between the A170 and River Derwent has been assumed to take place from the A170. However, alternative points of access will be used where the pipeline route crosses the minor roads in the area, as shown on **Figure 11.4**.

11.115 Construction traffic will not be allowed to access the Assessment Site south of the A170 through the villages of Wilton, Allerston or Ebberston. Vehicular access along Malton Lane will only be permitted for LGV and private vehicle traffic.

11.116 Paragraphs 6.10 and 6.17 confirm that auger boring method will be used to limit surface disturbance when crossing roads. This method is assumed to apply to all the points where the pipeline route crosses the public highway, and most specifically the A170 and B1258. The use of auger boring to cross under roads has been assumed for the minor roads although traffic volumes along them are so low that temporary road closures are appropriate.

11.117 Traffic turning into and out of the site entrance will only occur where the pipeline route crosses the A170 and B1258. The effect this will have on driver delay will be considered in more detail in the following sections.

11.118 Site equipment will potentially use Marishes Lane to exit the pipeline route north of the River Derwent unless it travels the entire length of the pipeline route back up to the A170.

11.119 Access to the Assessment Site between the River Derwent and KGS is assumed to be from the B1258 south of the River Derwent.

Likely Significant Effects

11.120 The Proposed Development is described in detail in Chapter 4 and the traffic volumes differ between the construction, operational, and decommissioning and restoration phases. These will be considered separately below.

Construction

11.121 The greatest effect on traffic flows will occur during the construction phase of the project, with specific activities within the construction phase generating peaks in the anticipated traffic flow. All the effects arising from this phase can be considered as short term and temporary, as described in Chapter 2.

11.122 The cumulative effect of this traffic flow with other that from other projects is discussed further in the paragraphs below that specifically address that issue.

11.123 Details of the pipeline construction, including the method of passing under roads, are described in Chapter 6 and this assessment is based on that description.

11.124 The use of temporary road closures on minor roads has not been ruled out, but will only be used where necessary and only after consultations have been held with the Highways Authority and local residents affected by the closure. The effects on driver delay will be

considered later in this chapter.

- 11.125 Traffic management (TM) measures will be introduced where appropriate to ensure safety of the construction personnel and other road users. The form of TM will be tailored to suit the specific task and minimise the potential for delay to other road users.
- 11.126 The point on the A170 where the pipeline crosses is an essential access point for the pipeline construction. The pipes and equipment needed for construction of the section south of the A170 have to be delivered to this point, with the earthmoving and pipe-laying equipment being moved across from the section north of the A170.
- 11.127 Traffic flows along the A170 are consistently steady throughout the day with peaks during the morning and evening rush hours, making TM essential. Traffic lights or manually operated stop/go boards are necessary for this location so that definite control of the traffic flow is maintained, with a preference for lights on safety grounds. The imposition of a temporary speed restriction on the A170 between Wilton and Allerston during the course of the works will increase safety and not have a significant effect on driver delay.
- 11.128 The position of the access into the fields north and south of the road will be determined during the detailed design stage but would most likely use the existing field entrances near the crossing point. Sight lines from the entrances are marginal and, to improve safety, road traffic signs would be erected to warn approaching traffic of manoeuvring vehicles. A speed restriction would also mitigate the effects on safety of sub-standard sight lines. Traffic lights would be used to control both the traffic on the A170 and construction plant crossing the road. Details of phasing and response timing of the lights will be confirmed in the detailed design stage.
- 11.129 Temporary traffic lights will also be required at the pipeline crossing of the B1258, which has less but faster traffic. All agreement on road signage and permissions will form part of the detailed design stage during which the NY County Highways Department will be consulted.
- 11.130 Traffic flows along Malton Lane/Wilton Ings Lane and Marishes Lane are so low that any traffic will be controlled by stop/go boards. Advance warning notices would be erected at the ends of all the affected roads, informing road users of the intended works and the time frame of the works that affecting that road.
- 11.131 Pipe-laying equipment will generally travel along the pipeline route, but will have to cross four roads, the A170, the B1258, Wilton Ings Lane and Marishes Lane. Driver delay will only

be likely to occur at the A170 and B1258 crossings, and this effect will be assessed for those two roads.

Personnel and Vehicles

11.132 A mixture of light and heavy goods vehicle traffic (including some abnormal loads) will be generated during the construction phase. The anticipated construction personnel and traffic to be generated is outlined in **Tables 11.6** and **11.7** below, with the numbers of personnel based on previous experience of similar activities.

Table 11.6: Summary of Personnel

Project Activity	Personnel on site each week			
	Project Duration weeks (no.)	Max (no.)	Min (no.)	Average (no.)
Ebberston Moor 'A' Well Site	5	15	6	10
Pipeline	23	73	20	51

Table 11.7: Summary of Construction Vehicle Movements

Project Activity	Vehicle Movements (no.)		Time period
	HGV	Others	
Ebberston Moor 'A' Well Site	6	35	Weekly
	2	7	Daily
Pipeline	64	225	Weekly
	18	48	Daily

11.133 In accordance with IEA guidance (Ref. 11.8) there are two 'rules of thumb' to delimit the scale of traffic effect.

"Rule 1: include highway links where traffic flows will be increased by more than 30% (or the number of heavy goods vehicles will increase by more than 30%)."

"Rule 2: include other specifically sensitive areas where traffic flows have increased by 10% or more."

11.134 The A64(T) and A170 are not considered to be 'sensitive areas' given their status as a Primary Routes. Previous site construction and drilling projects on Ebberston Moor 'A' Well Site and the Ebberston South Well Site near Givendale Head Farm, both accessible from Ebberston Lane and Ebberston Common Lane, have not caused more than a slight and temporary effect, with percentage increases less than the threshold of 30%.

11.135 Although the Proposed Development contains no proposal to drill a borehole, the provision of these figures shown in **Table 11.8** below provides details on the level of traffic flow generated during past projects which are higher than the relatively low levels of traffic that will be generated by this Proposed Development.

Table 11.8: Comparison of Base Traffic Flows on A170 with Development Traffic for Previous Projects using A170 and Eberston Common Lane

Construction Activities	Traffic Flows on A170 during previous projects			
	Duration (Days)	Daily Base Flow HGVs(2013 figures)	Day Traffic Movements Generated	% increase in HGV traffic movements
Site Construction	28	100	25	25%
Rig Mobilisation	3	100	22	22%
Drilling	28	100	20	20%
Rig de-mobilisation	3	100	22	22%

11.136 **Table 11.8** shows that, when using the traffic volumes measured in the recent survey, the increases in traffic movements generated by these previous projects were less than 30% of the base flow on the A170. Therefore as the actual peak flows associated with the construction of the Proposed Development will not exceed those previous peaks as shown in **Table 11.8**, these will also be less than 30%. In summary the traffic effect on the A170 is therefore considered to be of low magnitude and insignificant. The A170 is therefore scoped out of further assessment.

11.137 If all traffic generated during the construction phase is assumed to approach the Assessment Site along the B1258 from the A64, the increase in daily traffic of 18 movements will result in a 15.6% increase in traffic along the B1258. However, if at least 30% of the total traffic flow generated by the Proposed Development only accesses the pipeline route south of the River Derwent and not approach Yedingham, the effect of the Proposed Development will be reduced so that the overall temporary increase in traffic flows falls even further below the 30% threshold. The B1258 is therefore scoped out of further assessment.

11.138 In accordance with the 30% rule, the traffic effect on Eberston Lane and Eberston Common Lane will be moderately adverse, given that the lane has very low base traffic flows. However, it was the approved route for construction of two sites, Eberston 'A' in 2006 for Viking UK Gas Ltd (application reference NYM/2005/0254/FL), and Eberston Moor in 2007 for Moorhouse Petroleum (application reference NYM/2007/0901/FL); followed by the drilling of exploratory boreholes on each site. The traffic levels for these schemes as shown in **Table 11.8** were much higher compared with the Proposed Development (**Table 11.7**).

11.139 Consequently, the severance effect on Eberston Lane and the properties along the road will

be reduced from the levels previously experienced. The increased traffic flows arising from the construction phase within Dalby Forest will have a minor adverse significance in respect of severance.

Penniston Lane/Malton Lane

11.140 Penniston Lane and Malton Lane will only be used by private cars and light vans associated with the construction of the pipeline between the A170 and the River Derwent. The total number of vehicle movements along either road is anticipated to be less than the maximum number working on the pipeline in a single day shown in table 11.7. Deployment of personnel elsewhere along the pipeline route and vehicle sharing will further reduce traffic movements.

11.141 Consequently, whilst the magnitude of the change in traffic flows is greater than 30%, the low sensitivity of the lane and its occupants means that the severance effect of the traffic is considered to have a temporary minor adverse significance.

Marishes Lane

11.142 The main usage of Marishes Lane will be to bring the excavation and pipe-laying machinery out from the end of the pipeline route on the north side of the River Derwent and allow private vehicles to access the works. This movement of HGVs is expected to amount to four low-loaders to transport the excavators and pipe-laying machines, with a further 6 for the drilling unit and ancillary equipment.

11.143 The cottages and farm near the east end of Marishes Lane have the greatest sensitivity of the occupant of the lane, but even this is low due to the volumes of traffic passing through and past the junction. The number of construction-related vehicles that might use the access is nominal, so that although the magnitude of the increase in traffic is greater than 30%, this would be considered to have a temporary and minor adverse effect of severance on the residents

Accidents

11.144 The risk of accidents is increased by an increase in traffic flows, but the past record of development using the route from the A170 up to Ebberston Moor 'A' Well Site has shown that the risk of accidents is negligible with the current traffic management in place.

11.145 The level crossing for the railway on the B1258 is highlighted as a risk location and drivers of any large or slow vehicles should contact the train operators in accordance with normal practice. If this is done and normal highway protocol involving level crossings is complied with, there will be no increase in the risk of accidents.

11.146 Control of vehicle speeds and minimising the volume of traffic using the minor roads will result in negligible effect on accident rates.

CPEs

11.147 The emphasis within Dalby Forest on recreational activities suggests that there will be a moderate adverse effect resulting from the construction phase on CPEs using the facilities. However, the location of the pipeline route away from main cycling and walking routes within Dalby Forest reduces the potential significance to minor adverse.

11.148 Use of Marishes Lane, Penniston Lane and Malton Lane by development traffic could have a minor adverse effect on CPEs using those roads because they share the road way with vehicles.

Driver Delay

11.149 Careful implementation of traffic management schemes will avoid causing delays of any magnitude to drivers, with the maximum time spent stationary at lights being no more than for lights at an urban road junction. Avoidance of any unnecessary lights or operation of lights when there is no traffic entering or leaving site will also reduce the magnitude of any effect.

11.150 Where HGV traffic has to use Marishes Lane, driver delay could be reduced or avoided by notifying local residents when vehicles movements will be taking place. The magnitude of any driver delay will be minimal and thus have a negligible effect on road users.

Operation

11.151 Once the construction phase is complete, there will be minimal traffic relating to the operation of the Proposed Development with daily maintenance visits to the well site required. No every-day access will be necessary to the pipeline although a 10m wide easement will be provided along the pipeline route with the appropriate access from roads. Instead, staff will control the processes remotely from KGS.

Accidents

11.152 The traffic flows generated during operation are negligible and the risk of accidents is correspondingly reduced, suggesting that if the current levels of care are maintained during operation there will be a negligible effect upon the safety of road users.

CPEs

11.153 The low traffic flows during operation will minimise the significance of the effects from the Proposed Development but there will remain an overlap of usage by CPEs and vehicles of Eberston Lane and Eberston Common Lane that keeps the significance at a minor adverse level.

11.154 There will be no effect on CPEs elsewhere on the Assessment Site during the Operation Stage.

Decommissioning and Restoration

11.155 Decommissioning and restoration of the Proposed Development (see Chapter 6), will require the removal of buildings, pipework and above-ground installations such as pipe runs, tanks and bunded areas on the well site to enable the well site to be restored to forestry in a condition as close as practicable to its original state if planning permission for future use of the well site is not forthcoming. Prior to that removal process, all residual fluids will be removed from site to appropriate licensed waste disposal sites, using sealed tankers operated by hauliers licensed to carry the particular fluids.

11.156 Removal of fluids will generate additional vehicle movements, estimated at about five two-way vehicle movements in total.

11.157 The decommissioning and restoration activities will produce similar numbers of vehicle movements to the construction phase. Consequently, this phase will have traffic flows along Eberston Lane and Eberston Common Lane producing a negligible increase in adverse effect from that in the construction phase.

11.158 The pipeline will be left in-situ and the ends capped, so no traffic will be generated by decommissioning the pipeline, and KGS will be unaffected by the de-commissioning works.

Restoration

- 11.159 All fluids arising from the gas production process will have been removed from the well site during the decommissioning phase. The tanks, pipework and steel framework for the buildings will also have been removed leaving the stone and concrete surfaces and sub-surface structures.
- 11.160 The wells will be plugged and abandoned in a manner agreed with the Health and Safety Executive, the Environment Agency and NYMNPA if future planning permission for the well site has not been obtained. Generated traffic numbers will be similar to those quoted in **Table 11.8**.
- 11.161 The restoration phase will have an effect that will depend on the manner in which the work is carried out and the manner of disposal of removed materials which will be agreed with the appropriate authorities before the end of the operation phase. For example, if the concrete and hardcore produced by removing the site surfaces is re-used as road material to make up the Forestry Commission Roads, no HGV traffic will be generated along Eberston Common Lane although more Forest roads will be affected than if the materials were exported.
- 11.162 However, if the stone and concrete were to be disposed of to another site or a licensed tip away from the area, it would all have to be exported via Eberston Common Lane to the A170 and then further afield to its destination. The rate of disposal will be slower than during construction of the sites, because the material will have to be broken up, excavated, crushed if necessary, and then loaded onto lorries.
- 11.163 The total number of HGV lorry movements generated by this restoration process will amount to about 250, with 220 loads being generated by removal of the stone surfacing on the Eberston Moor 'A' Well Site.
- 11.164 It would be appropriate to suggest that the number of HGV movements be limited to that generated during construction of the well site (30 each way per day) so that the effect on receptors is no worse than during construction. The effect of this might be to prolong the restoration process, but may be preferable to higher traffic movements over a shorter timeframe.
- 11.165 The relatively short term duration of this restoration phase (8 -12 weeks) will not change the significance of the effects on receptors from that of earlier phases.

Mitigation Measures

Construction

A170

11.166 Road traffic signs, temporary traffic lights and a speed restriction between Wilton and Allerston will reduce the potential for delays during construction to a minimum.

Eberston Lane/Eberston Common Lane

11.167 Mitigation measures to be implemented during construction will include the use of route cards which will be issued to all drivers visiting the Assessment Site and vehicles accessing the Assessment Site along Eberston Lane and Eberston Common Lane (the Lanes) and other minor roads shall be restricted to speeds of 30 mph. This will be most relevant to CPEs who are the most vulnerable of all receptors.

11.168 Large loads being moved along any minor road will be escorted by an escort vehicle to avoid conflict with oncoming traffic.

Malton Lane/Wilton Ings Lane

11.169 Access to the Assessment Site along Malton Lane/Wilton Ings Lane will be normally limited to private cars and light goods vehicles and a temporary 30mph speed restriction will be applied.

11.170 Access by essential HGVs to the Assessment Site will be permitted only from the east and Penniston Lane and will be escorted. Traffic management including signage and traffic lights will be required between the road junction at Penniston Lane and the Assessment Site to avoid conflict between vehicles passing in different directions.

Marishes Lane

11.171 Access will be only from the east, off the B1258 and speed restricted to 30mph.

11.172 Traffic management including signage escort vehicles and traffic lights will be in force between the B1258 and the Assessment Site to ensure that the risk of two vehicles meeting is minimised.

Allerston Lane

11.173 Access along Allerston Lane will be prohibited for HGVs because articulated lorries will not be able to avoid over-running the verges when turning into or out of Malton Lane.

Operation

11.174 There will not be any mitigation measures required during operation of the Assessment Site.

Decommissioning

11.175 The mitigation measures applied during the construction phases will apply to Eberston Lane/ Eberston Common Lane during this phase as well, particularly in respect of escorting large loads such as tanks.

11.176 No mitigation measures will be required for the pipeline section of the Assessment Site, which will be left intact.

Restoration

11.177 Mitigation measures such as dispersal of surfacing materials on forestry roads will reduce the effects of raised volumes of traffic travelling along Eberston Common Lane.

11.178 The pipeline will be left undisturbed and will not generate any traffic movements during this phase and will have no effect.

Residual Effects

Construction

11.179 Residents living along the minor roads will still experience minor/negligible severance due to construction works traffic, but the short term nature of the construction phase will cause only a temporary effect. Residents in Yedingham and other villages next to the A170 and A64 will not experience any increased magnitude of traffic flow and thus will not experience any increase in the effects of severance.

11.180 The construction phase is short-term with the construction activities being short term and temporary in nature. The overall effects of the construction phase upon CPE receptors will

remain during the course of the work, having a minor adverse significance in spite of the control measures proposed above being put into force. However, these effects will cease upon completion of this phase

11.181 The traffic control and traffic management measures proposed for this Development will ensure that Road Safety should not be affected by this proposal and the residual effect of the construction phase on safety is negligible.

11.182 The effect on other road users of extra traffic, traffic controls and disruption of traffic flow by moving machinery will be minimised but not completely avoided. However, the residual effect following mitigation is considered to be temporary and of a minor/negligible adverse effect.

Operation

11.183 There will be a continued overlap of operations with CPE activity along Ebberston Lane and Ebberston Common Lane. There will be no other effects on the remainder of the Assessment Site. The effect of this overlap is minimal so that the residual effect is negligible.

Decommissioning

11.184 The residual effects of the decommissioning will have minor adverse significance along Ebberston Lane and Ebberston Common Lane for the short term duration of the works, in either scenario, that will cease upon completion of the decommissioning.

Restoration

11.185 Placing the salvaged surfacing upon the Dalby Forest tracks (if agreed by the Forestry Commission) will reduce during this phase the significance of the effects on Ebberston Lane between Givendale Head Farm and the A170 to negligible. Total disposal offsite via Ebberston Common Lane will keep the effect of this phase upon CPEs in Dalby Forest and along Ebberston Common Lane as minor adverse significance. The management of CPE access will reduce the significance of the options to negligible and minor adverse respectively.

Cumulative Effects

11.186 There are two projects that are considered to potentially have cumulative effects when

combined with the Proposed Development: Ebberston Moor EDS (NYM/2013/0477/EIA) and Ryedale Gas Project (NY/2010/0159/ENV). Both schemes are described in Chapter 2.

11.187 Both the Ebberston Moor EDS and Ryedale Gas Project will potentially affect Ebberston Lane and Ebberston Common Lane north of the A170 and will increase traffic flow along the A170 during both the construction phases and operation phases

11.188 The Ryedale Gas Project shares the same access route from the A170 via Ebberston Lane, and a number of different pipeline routes suggested in that application follow the same route as the Proposed Development down beyond Givendale Head Farm and Warren House, but then turn to the west to cross the A170 between Thornton-le-Dale and Wilton.

11.189 The traffic generated by that scheme will be broadly similar to that for the Proposed Development and so traffic volumes during construction would be double the numbers quoted in this assessment. Whilst the magnitude of the traffic flow will double the sensitivity of the main receptors will remain low so that the consequent effect on severance along Ebberston Lane will be marginally increased to minor adverse effect.

11.190 Doubling the traffic volumes with two different projects using the same route could lead to increased effect on safety that will require mitigation, possibly in the form of a joint traffic management scheme, which will reduce the impact on safety to a minor adverse effect.

11.191 The Ryedale Gas Project will not use the Ebberston Moor Road so the impact on CPEs will remain unchanged.

11.192 Driver delay could increase on all the roads used jointly by the two projects and the effect on congestion, will increase marginally but still remain relatively low with a minor adverse effect.

11.193 However, the construction of the Ebberston Moor EDS will not coincide with this scheme, because the Ebberston Moor EDS will be either built first, if consent is granted, or not built at all. This means that the construction phases of these two schemes will not coincide, so there will not be a cumulative effect when the Ebberston Moor EDS and this scheme are considered.

11.194 The construction phase of this Proposed Development will overlap with the operational phase of the Ebberston Moor EDS and traffic management measures to be adopted for both schemes will be the same. Ebberston Moor EDS will also affect the B1258 during its

operational phase, but the aggregate of HGV traffic produced by both schemes will still fall below the threshold of 30% on that road so no significant adverse effect is anticipated for residents along the B1258.

11.195 Once this Proposed Development becomes operational, the gas conditioning building on the Lockton Compound and flare will be decommissioned but there will be no cumulative effect because the operational phase of the pipeline will not generate any additional traffic.

11.196 The sensitivity of Eberston Lane is low so the effect of the increased traffic upon road users and local residents will also be low.

11.197 The mitigation measures suggested for traffic to the Assessment Site include an escort for large or loads of by-products or treatment fluids, and this provision should be made known to the developers of the Ryedale Gas Project.

Summary

11.198 The Assessment Site extends from the existing Eberston Moor 'A' Well Site located to the north of the A170, along the pipeline route down to and across the A170 and then across the Vale of Pickering to Knapton Generating Station (KGS). During construction a number of access points will be required that will utilise the A64(T), A170, and B1258 as primary access routes. The A64(T) and A170 form part of the primary route network in Yorkshire, and the B1258 is recognised as a link road for HGVs between the two main roads. These three roads are considered to be suitable as an HGV access to the Assessment Site.

11.199 It is also considered that the established access to the north part of the Assessment Site from the A170 using Eberston Lane and Eberston Common Lane is appropriate especially if subject to traffic restrictions including a speed limit and ensuring that the volume of traffic generated by both the construction and operational phases of this Proposed Development will be less than those during the original site construction and drilling operations on Eberston Moor 'A' Well Site.

11.200 The greatest effect of the Proposed Development is anticipated to be during the construction phase, whilst the decommissioning and restoration phases will have minor adverse significance on CPEs north of Givendale Head Farm. These phases will occur over a short term and temporary period, minimising the significance of any effects.

11.201 The effect of the Proposed Development during operation is considered to be negligible. The

Proposed Development will generate very few trips (with the majority to the well site) and these can be easily accommodated within the existing road network.

11.202 **Table 11.9** provides a summary of the likely significant effects of the Proposed Development.

Table 11.9: Table of Significance – Traffic and Transportation

Potential Effects	Nature of Effects (Permanent/ Temporary)		Significance (Major/Moderate/Minor) (Beneficial/Adverse/ Negligible)	Mitigation / Enhancement Measures	Geographical Importance*							Residual Effects (Major/Moderate/Minor) (Beneficial/Adverse/ Negligible)
					I	UK	E	R	C	D/ NP	L	
Construction												
Construction activities	Short term	temporary	Moderate Adverse	Routing of construction traffic to suitable roads imposing traffic control measures							*	Minor Adverse / Negligible
Operation												
Operational staff	Long term	temporary	Negligible	No additional provision							*	Negligible
Decommissioning												
Traffic along Ebberston Lane and Ebberston Common Lane	Short term	temporary	Minor Adverse	Routing of construction traffic to suitable roads imposing traffic control measures							*	Minor Adverse / Negligible
Traffic on minor roads south of A170	None		None	N/A							*	None
Restoration												
Traffic along Ebberston Common Lane	Short term	temporary	Minor Adverse/ Negligible	Routing of construction traffic to suitable roads imposing traffic control measures							*	Minor Adverse / Negligible
Cumulative Effects												
Coincidence of construction work with the Moorland Gas Well Site Development	Temporary		Minor Adverse	Routing of construction traffic to suitable roads imposing traffic control measures							*	Minor Adverse/ Negligible
Coincidence of construction with operation of Ebberston Moor EDS	Temporary		Moderate Adverse	Imposing traffic control measures							*	Minor Adverse / Negligible

***Geographical Level of Importance**

I = International; UK = United Kingdom; E = England; R = Regional; C = County; D = District; NP = National Park; L = Local

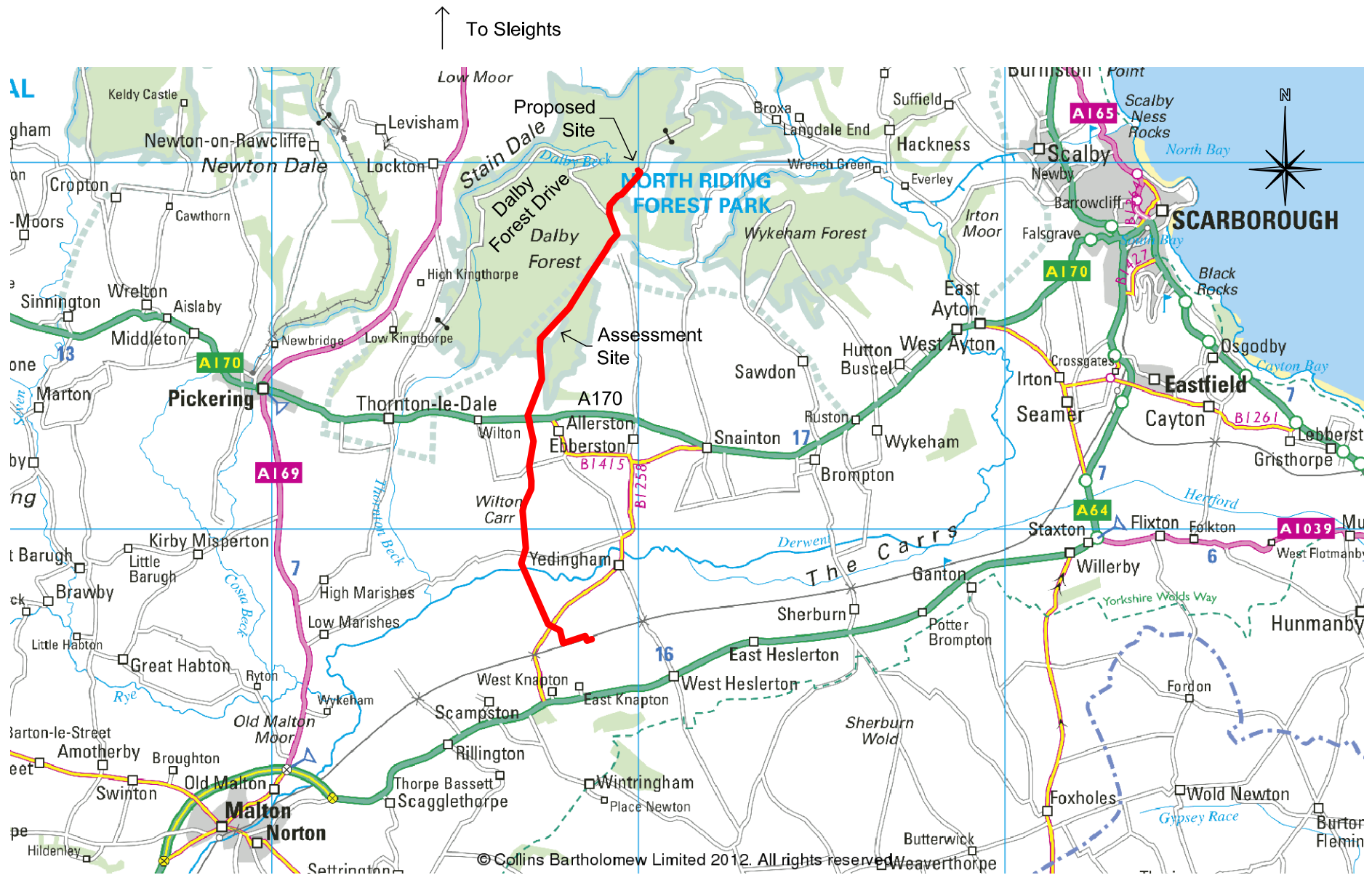
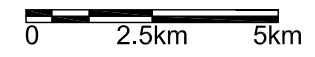


Figure 11.1 - Major Access Routes



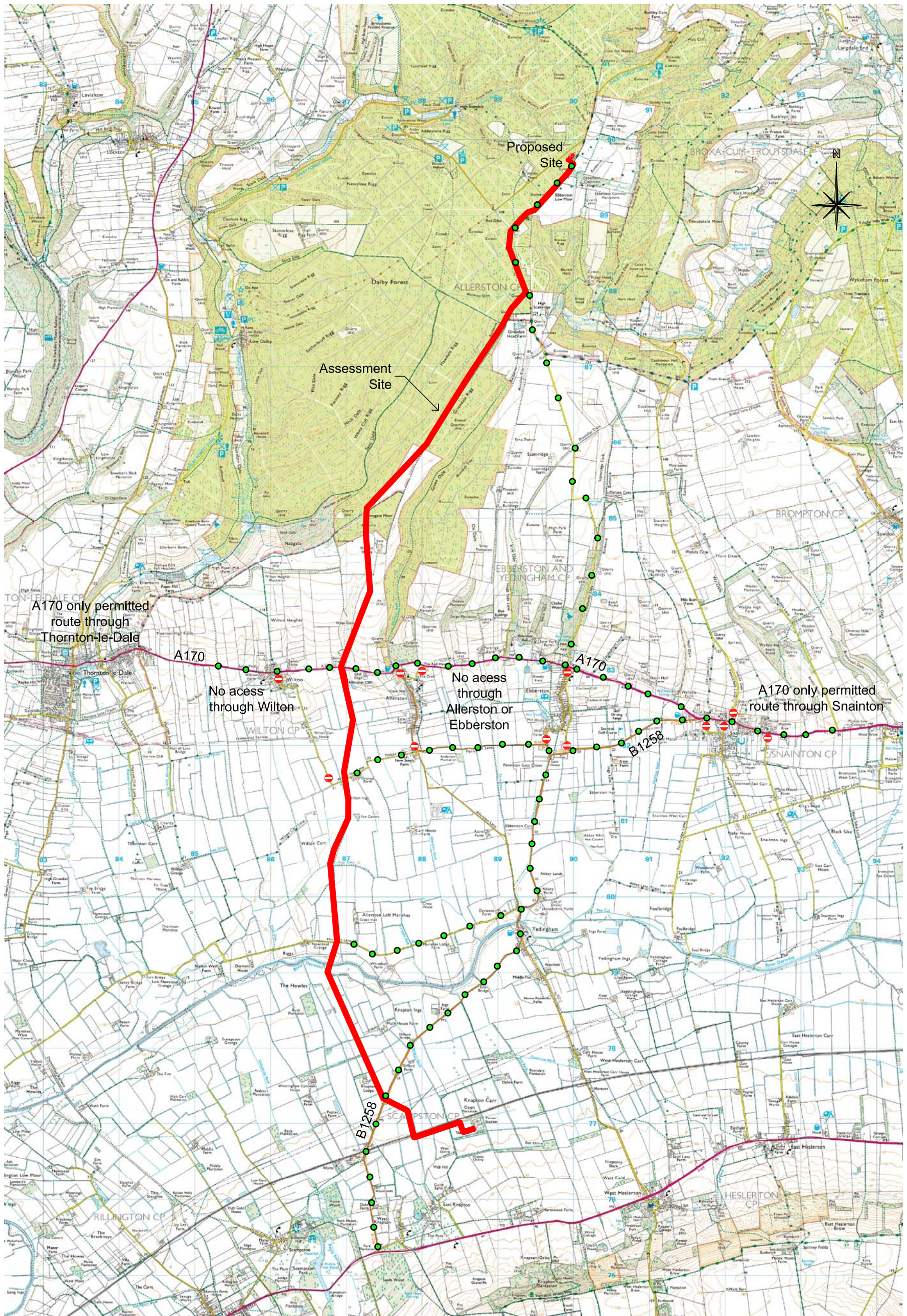
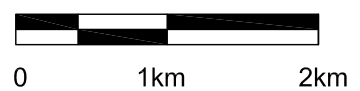


Figure 11.2 - Proposed Site Traffic Routes

● Approved Route for HGV Vehicles



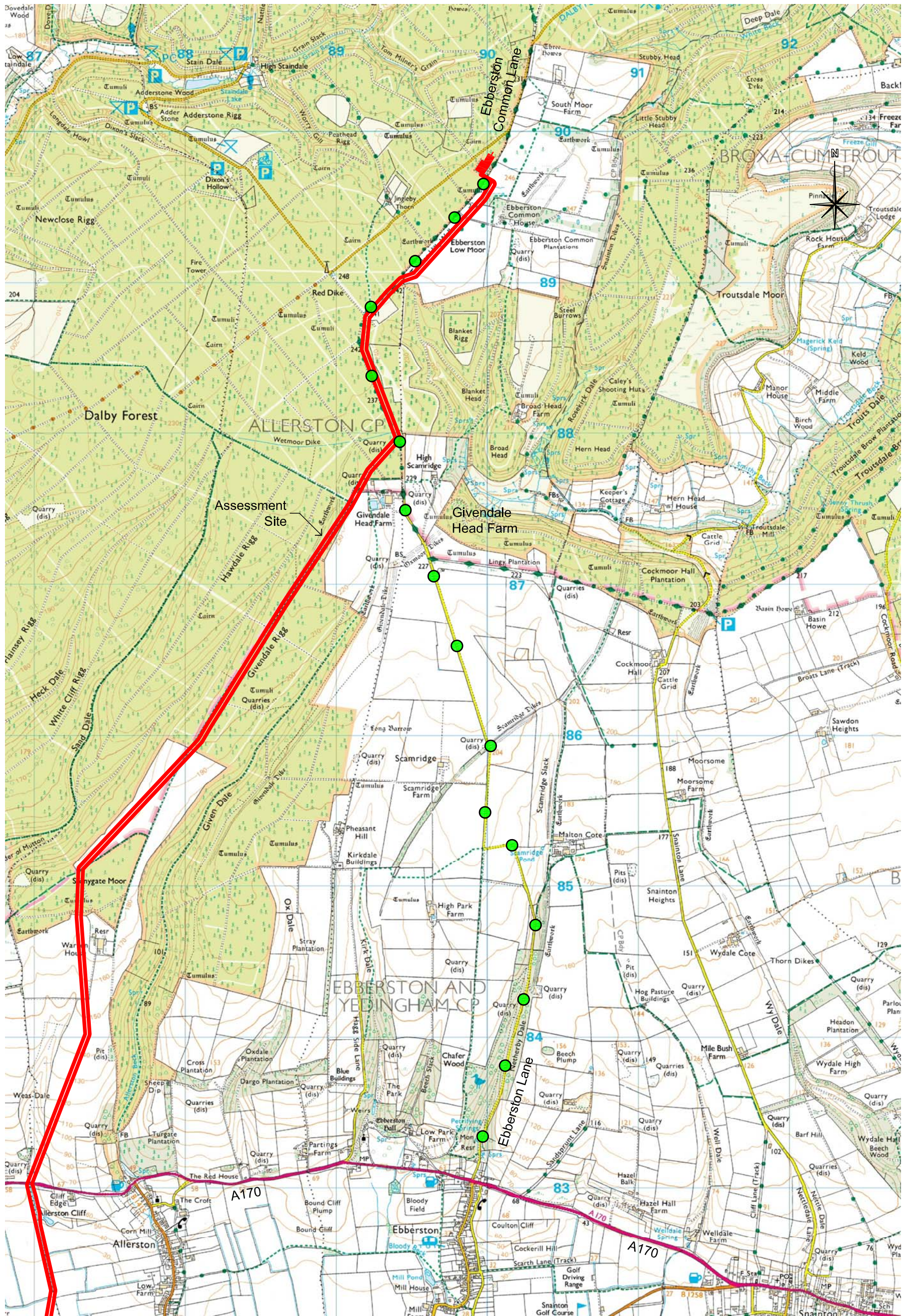
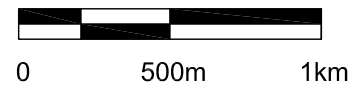


Figure 11.3 - Proposed Site Traffic Route (North)

● Approved Route for HGV Vehicles



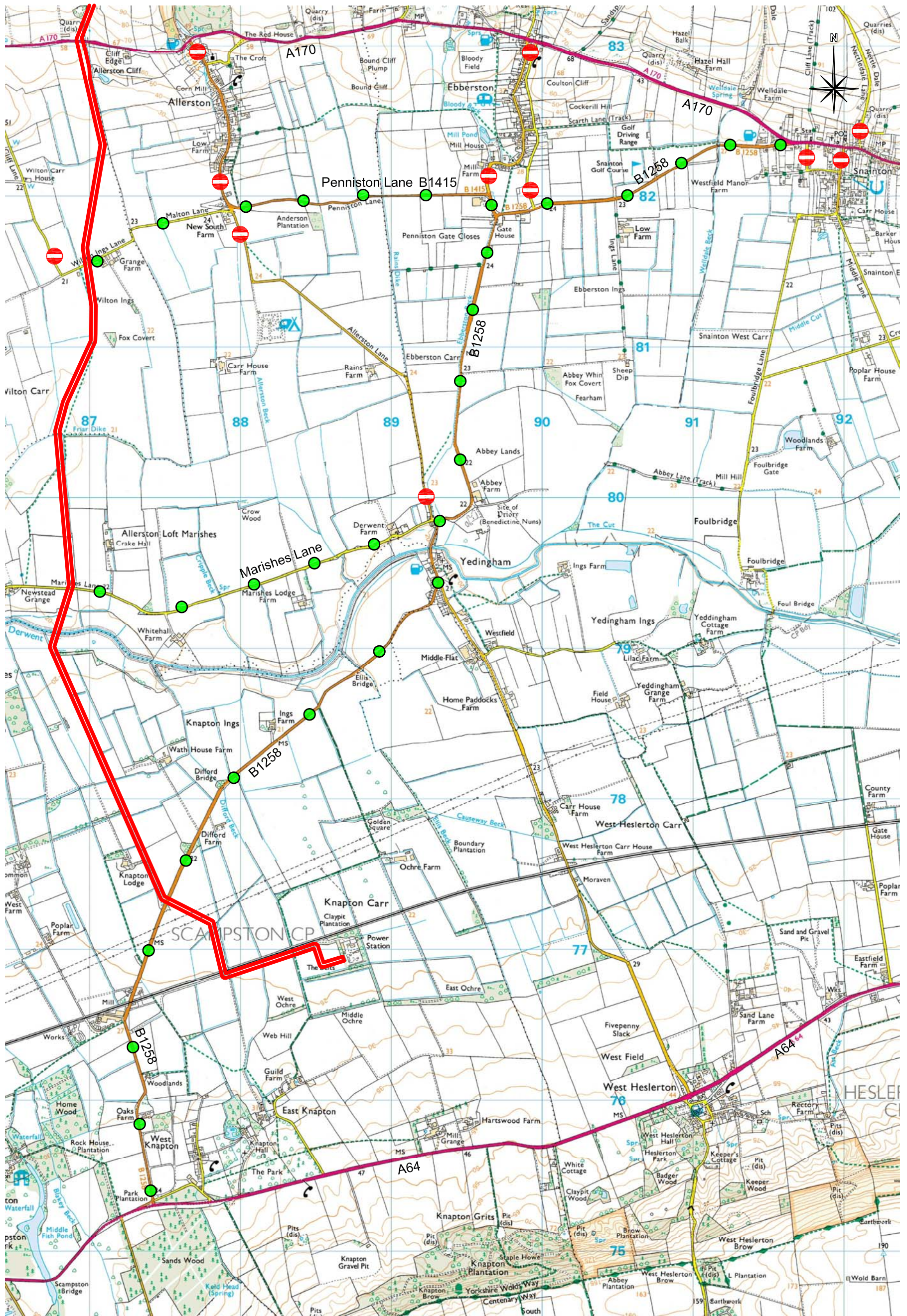


Figure 11.4 - Proposed Site Traffic Routes (South)

● Approved Route for HGV Vehicles

