

Viking CCS Pipeline

9.24 Technical Note Summarising Decision- Making Process for TAGI Option 2 Location

Document Reference: EN070008/EXAM/9.24

Applicant: Chrysaor Production (U.K.) Limited,
a Harbour Energy Company
PINS Reference: EN070008
Planning Act 2008 (as amended)
The Infrastructure Planning (Applications: Prescribed Forms
and Procedure) Regulations 2009 - Regulation 5(2)(q)
Date: May 2024

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Introduction

General

Land for the preferred site option for the Theddlethorpe Facility (Option 1) is not owned by the Applicant, and whilst there is ongoing discussion over a lease agreement with National Gas Transmission plc (landowner) it was deemed necessary to have an alternative site, in the event that a lease could not be agreed. The land owned by National Gas Transmission plc is shown in Fig.1

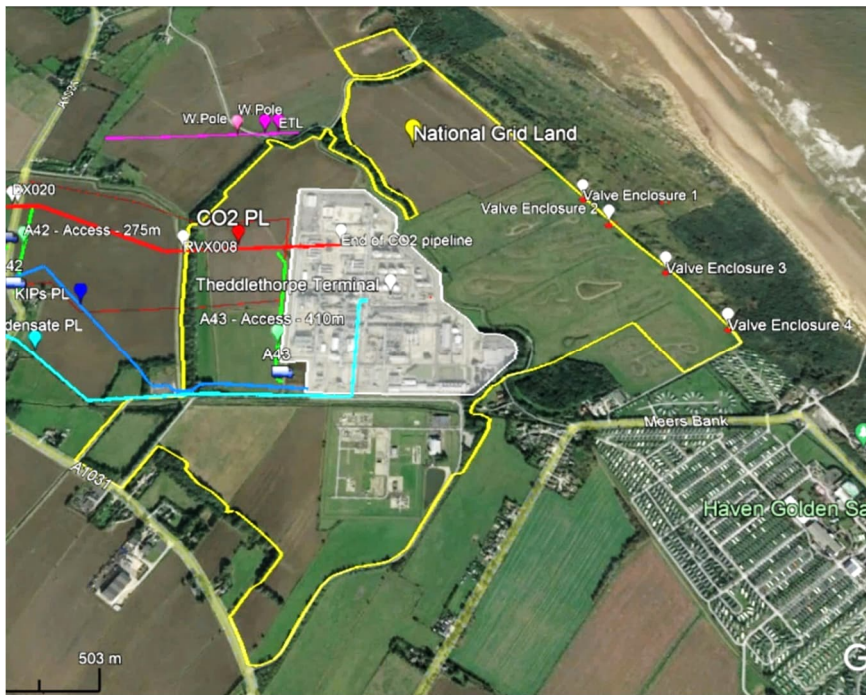


Fig.1 National Gas Transmission land ownership surrounding the former Theddlethorpe gas terminal (bounded in yellow).

Harbour Energy therefore requested Penspen to identify a number of potential alternative sites close to the former Theddlethorpe Gas Terminal which may be suitable to locate the proposed Above Ground Installation (AGI). The potential search area is shown in Fig.2



Fig.2 Potential alternative site search area

The alternative location would have to be able to accommodate the following equipment (note this equipment is the same as for option 1):

- A connection to the LOGGS pipeline – this would necessitate an extension from the existing 36" pipeline tie-in to the location of the alternative facility
- Emergency shutdown valves
- Pig receiver (for the 24" onshore pipeline) and a pig receiver (for the 36" offshore pipeline)
- High-Integrity Pressure Protection System
- Venting system including vent pipework, valves and a vent stack
- Local Equipment Room (LER)
- Supporting utilities

Selection Methodology

Prior to undertaking a search for suitable sites a set of criteria were discussed and agreed upon. These included:

- Proximity of the Theddlethorpe Facility and/or the pipeline route, to local communities / occupied buildings
- Potential for visual impacts
- Ease of access during both construction and operation
- Proximity to LOGGS 36" offshore pipeline and quantity of additional line pipe required
- Ideally, sites that did not require changes to the Order limits

Using the criteria above, and the project WebGIS system, five potential sites were identified. The sites were labelled Thed AGI nos. 1 to 5, as shown on the image in Appendix A and in individual images below.

summary of site descriptions

Thed AGI No. 1

This site (Figure 3) lies on the east-side of the A1031 Mablethorpe Road in the northwest corner of an arable field, close to a road-bridge over The Cut (drainage channel).

Advantages – This site lies within the currently proposed Order limits and there is an existing gated entrance off the A1031 road that could be utilised with good visibility north and south.

Disadvantages – Immediately adjacent to, and therefore visible from, the A1031 road in an otherwise farming environment. This location would require either the creation of a 300m long access track in an arable field alongside the A1031 road or a new access directly off the A1031. The nearest residential property lies approximately 110m away on the northside of The Cut. This option would require approximately 850m of 36" diameter pipe to connect to the existing LOGGS tie in point.



Fig.3 Location of Thed AGI no.1 to the east of the A1031.

Thed AGI No. 2

This site lies on the opposite side of the A1031 Mablethorpe Road to “Thed AGI No.1” in similar surroundings, in the north-eastern corner of an arable field and close to The Cut road-bridge.

Advantages - This site (see Figure 4) lies within the currently proposed Order limits. It may be possible to access through the existing farmyard entrance and then to create a 150m track alongside the west-side of the A1031 to reach the site.

Disadvantages – Similar visibility from the A1031 road as for Thed AGI No.1. It may require a new access off the A1031. The nearest residential properties are those on the north side of The Cut approximately 140m away and the properties approximately 110m to the south. This option would require approximately 950m of 36” diameter pipe to connect to the existing LOGGS tie in point.



Fig.4 Location of Thed AGI no 2 to the west of the A1031.

Thed AGI No. 3

This site (owned by Uniper Ltd) lies within an enclosed 1.4 acre field to the west of the KIPs AGI (see Figure 5). It is understood this vacant site was earmarked for future development and whilst it appears to have been planted-up with a surrounding belt of trees (sometime before 2003) no further development has been undertaken. This site lies 400m south of the current pipeline route. The KIPs pipeline runs close to the NE corner of the site and the disused 6" condensate pipeline runs along its southern boundary, see Fig 5.

Advantages – The site lies adjacent to another industrial installation and benefits from an existing belt of mature trees and shrubbery. There is an existing entrance off a private road and the area that is screened would be suitable to accommodate the required infrastructure.

Disadvantages – This site (Figure 5) lies 300m outside of the current Order limits (excluding the existing private access road) and would require a substantial change to the order limits to incorporate. This translates into approximately 50m of additional incoming 24" pipe and approximately 840m of outgoing 36" pipe. Both pipelines will need to cross beneath the KIPs pipeline. The nearest property is approximately 160m to the southwest.

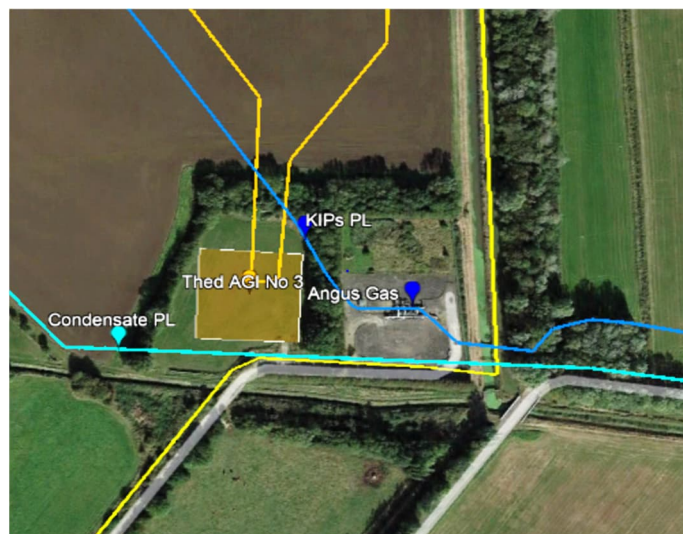


Fig 5 – Thed AGI No.3 adjacent to the KIPs AGI, SW corner of former Theddlethorpe Gas Terminal

Thed AGI No.4

This site lies on the southside of a narrow tarmac public road called Crook Bank which is a turning off Sea Lane in Theddlethorpe St Helen. This road connects the village with a car park beside the coastal nature reserve and the beach. An overhead 11kv powerline on wooden poles lies adjacent to the site.

Advantages – This site (Figure 6) lies in a fairly remote area, 200m northwest of the former Theddlethorpe Gas Terminal. There are no residential properties within 300m. The entrance could be immediately alongside the road such that the length of any access track would be minimal.

Disadvantages – This site lies 250m outside of the current Order limits and would require a change to the Order limits to incorporate. This location would require an additional 50m of 24" pipe and an additional 550m of 36" pipeline. It would require an additional crossing of The Cut and the overhead power lines may need to be diverted.



Fig 6. Location of "Thed AGI No.4" on the southside of Crook Bank.

Thed AGI No.5

This site lies adjacent to The Cut (drainage channel) on the east-side of an arable field, 400m away from the nearest convenient public road, the A1031 Mablethorpe Road.

Advantages – This site (Figure 7) is the closest of the potential options to the former Theddlethorpe Gas Terminal. The site sits within the current Order limits. This location would require the least amount of 36" pipe (450m). There is a current gated access to this field which could be utilised.

Disadvantages – This location would require an access track to be built. Several options have been proposed including using an existing access from the A1031 and creating a track across the field in an easterly direction, using an access off Crook bank and creating a track in a southerly direction or using an existing access and following alongside of The Cut (drainage channel) to reach the proposed location.



Fig 7 – Thed AGI No.5 with access options shown in green

Conclusions

Table 1 presents a qualitative assessment of the relative advantages and disadvantages of each location presented in a simple Red, Amber, Green system

No.	Element	AGI Site Option				
		No 1	No 2	No 3	No 4	No 5
1	Proximity to property	Amber	Amber	Amber	Green	Green
2	Visual impact	Amber	Amber	Green	Amber	Amber
3	Accessibility	Amber	Amber	Green	Green	Amber
4	Proximity to pipeline route	Green	Green	Amber	Amber	Green
5	Within the proposed Order limits	Green	Green	Amber	Amber	Green
6	36" line pipe quantity	Red	Red	Red	Amber	Amber

Table 1 – RAG assessment of potential AGI sites

Following the Red, Amber, Green assessment option No.5 was selected as the preferred alternative location for the Theddlethorpe Facility. The proximity to the LOGGS pipeline and limited need for new 36" pipeline or additional 24" pipeline, distance from properties, and the set-back location from the A1031 made it most favourable, in addition to its location on the preferred pipeline route and within the previous Order limits.