

Written Representation
for
CATS North Sea Limited

Submitted for Deadline 2
09 Jun 2022

Planning Act 2008

Application by Net Zero Teesside Power Limited and Net Zero North Sea Storage Limited for an order granting development consent for the Net Zero Teesside Project

Planning Inspectorate Reference: EN010103

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Burgess Salmon LLP



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SUMMARY

This written representation is submitted on behalf of CATS North Sea Limited (“**CNSL**”) in respect of the development consent order (“**DCO**”) application for the Net Zero Teesside Project (“**the Project**”) submitted by Net Zero Teesside Power Limited and Net Zero North Sea Storage Limited.

CNSL do not object to the principle of the project, but have concerns that if the DCO is granted in its current form then it will unacceptably impact CNSL’s operations of national importance and have an adverse impact on public safety. CNSL’s main points of objection are:

- (a) The compulsory acquisition of land and rights in land occupied by CNSL is unnecessary and could cause material disadvantage to CNSL.
- (b) Compulsory acquisition of Plot 112 – the applicant has not suitably considered alternatives to the acquisition of plot 112.
- (c) There are safety concerns with the scheme and the protective provisions in the DCO are insufficient.

Compulsory acquisition powers

CNSL is the operator of the Central Area Transmission System (“**CATS**”). CATS includes the CATS terminal on and the CATS pipeline, which is a 36 inch diameter pipeline that is 404 km long. The CATS pipeline is classified as a “Major Accident Hazard” pipeline and is operated in compliance with the Pipeline Safety Regulations 1996. It is essential national infrastructure.

The draft DCO allows the Applicant to impose restrictions on, or extinguish, private rights in land that is subject to compulsory acquisition of rights by the Applicant. Any restriction or extinguishment of CNSL’s private rights in respect of CATS will adversely impact their ability to operate and maintain the major accident hazard infrastructure per the applicable legal obligations. CNSL need to maintain access to the infrastructure at all times for inspection and maintenance purposes. CNSL consider that the draft DCO ought to be amended such that these powers should be restricted in relation to any private rights in land held by CNSL in respect of CATS infrastructure.

Compulsory acquisition of plot 112

The Applicant is proposing to acquire plot 112 to locate above ground infrastructure. The Applicant has not given sufficient regard to CNSL’s operations as the occupier of the CATS terminal site. CNSL is not opposed to the principle of above ground infrastructure being located within the CATS Terminal lease site, however it would wish to have that infrastructure located in a manner that minimises impact on CNSL. CNSL is not aware of the Applicant having carried out a detailed assessment of locations within the wider CATS Terminal site that the infrastructure could be located. The proposed infrastructure could adversely impact the ability of CNSL to conduct critical inspection and maintenance activities and rapidly investigate and rectify certain emergency situations.

Furthermore, the acquisition of plot 112 will extinguish CNSL’s private rights over that area of land. That could prejudice published development proposals of CNSL’s parent company, Kellas Midstream Limited, in respect of the H2NorthEast Project.

Protective provisions

CNSL consider that the protective provisions contained in Part 5 of Schedule 12 of the draft DCO relating to the CATS pipeline corridor are not adequate given the particular risks associated with the CATS pipeline. CNSL consider that the protective provisions of the draft DCO could be amended to allow CNSL to withhold approval of plans where these will cause any adverse impact to the CATS pipeline and to strengthen the

monitoring requirements to ensure that if damage was caused to the pipeline it was quickly identified.

CNSL is continuing to engage with the Applicant in respect of the protective provisions and the application more generally.

1 INTRODUCTION

- 1.1 This representation is submitted on behalf of CATS North Sea Limited (company number 09250798) and having its registered office at Suite 1, 3rd Floor 11-12 St James's Square, London, United Kingdom, SW1Y 4LB ("**CNSL**") in accordance with rule 10(1) of the Infrastructure Planning (Examination Procedure) Rules 2010 in relation to an application under the Planning Act 2008 ("**the 2008 Act**") for a Development Consent Order ("**DCO**") for the Net Zero Teesside Project (Planning Inspectorate Reference: EN010103) ("**the Project**") submitted by Net Zero Teesside Power Limited and Net Zero North Sea Storage Limited (together "**the Applicant**") to the Secretary of State. This representation expands upon CNSL's Relevant Representation.
- 1.2 CNSL has an interest in land affected by the DCO application in terms of ss.42 and 44 of the 2008 Act.
- 1.3 CNSL does not object to the principle of the Project, but is concerned that the DCO, if granted together with compulsory acquisition powers, would have an unacceptable impact on CNSL's operations and could give rise to significant issues of public safety. CNSL therefore **objects** to the draft DCO being granted in its current terms. CNSL's main points of objection are:
 - (a) The compulsory acquisition of land and rights in land occupied by CNSL is unnecessary and could cause material disadvantage to CNSL.
 - (b) Compulsory acquisition of Plot 112 – the applicant has not suitably considered alternatives to the acquisition of plot 112, which will adversely impact CNSL's interests.
 - (c) There are safety concerns with the scheme and the protective provisions in the DCO are insufficient.
- 1.4 CNSL is engaging with the Applicant on the terms of the DCO, including the protective provisions.

2 BACKGROUND TO CNSL'S OPERATIONS

- 2.1 CNSL is the operator of the Central Area Transmission System ("**CATS**"). CATS is one of the largest UK North Sea natural gas transportation and processing systems and can carry over 48 MCMD (1700 mmscfd) of natural gas, which represents approximately 25% of daily UK gas demand. CATS transports gas from the Central North Sea to a terminal at Teesside. CATS includes the CATS terminal on Teesside situated within a 29-hectare site and the CATS pipeline, which is a 36 inch diameter pipeline that is 404 km long. The CATS pipeline is classified as a "Major Accident Hazard" pipeline and is operated in compliance with the Pipeline Safety Regulations 1996.
- 2.2 CATS, including the CATS pipeline, is essential national infrastructure necessary for the operation at any one time of approximately 30 natural gas fields in the North Sea. Any incident which results in damage to the CATS pipeline or which would require the CATS pipeline to shut down would, amongst other things, have considerable impact upon the UK gas and electricity supplies to both the domestic and commercial markets.

CATS Terminal Overview

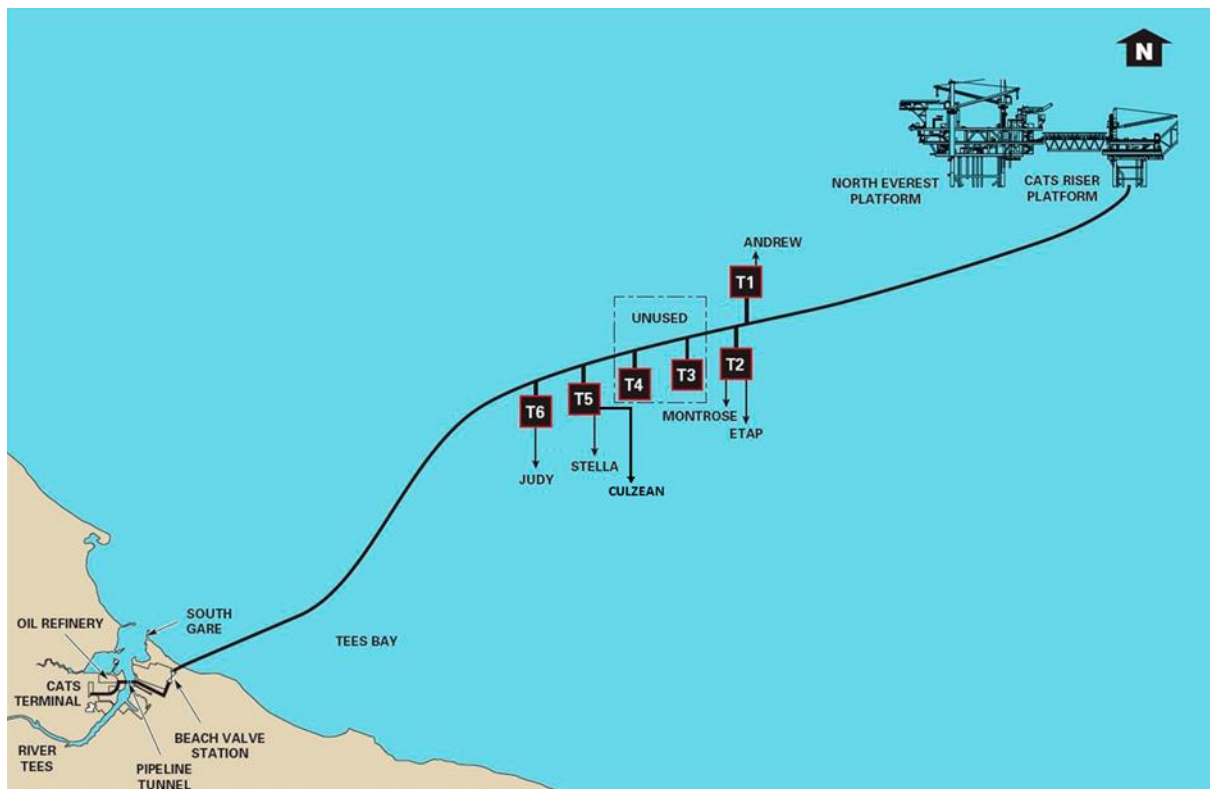
- 2.3 The CATS Terminal is a combination of pipeline and processing facilities owned by a group of international infrastructure, oil, gas and energy companies and operated by Kellas Midstream. Wood plc is appointed by Kellas Midstream as COMAH Operator of the CATS Terminal and Pipeline Operator of the CATS Pipeline. The CATS Terminal transports and treats gas on behalf of a number of customers.
- 2.4 The system can currently handle more than 1.6 billion cubic feet of natural gas per day, enough to supply more than 8 million British homes.
- 2.5 The CATS pipeline begins at a riser platform in the Central North Sea and transports gas some 250 miles (400km) to the CATS processing Terminal at Seal Sands, Teesside on the North East coast of England. At the Terminal, Natural Gas Liquids (NGLs) are removed and the gas is processed for delivery into the Transco National Transmission System (NTS).
- 2.6 At the Terminal, which is situated within a 29-hectare site, there are two gas processing trains each of 600 million cubic feet per day capacity to process gas. These processing trains remove impurities (such as hydrogen sulphide removed by absorption treatment beds) and NGLs from the incoming gas. The processed natural gas (largely methane) is metered before leaving the Terminal and being fed directly into the NTS. The NGLs are fractionated into useable products, which meet tightly controlled specifications. The four products generated by this process are:
- (a) Natural gas, largely methane
 - (b) Propane
 - (c) Butane
 - (d) Condensate
- 2.7 These products are transported through dedicated pipelines to the nearby facilities as raw materials or 'feedstock' for the chemical industry. The CATS feed and export pipelines are regulated, operated and maintained under the Pipeline Safety Regulations 1996.

CATS 36" Pipeline (PL774)

Physical Description

- 2.8 The offshore section of the 36" CATS pipeline runs for 404km from the CATS Riser Platform to a Beach Valve Station at the pipeline landfall by Coatham Sands.
- 2.9 The pipeline transports natural gas from the CATS Riser Platform (bridge linked to the North Everest Platform) in the Central Graben area of the North Sea to CATS Onshore Terminal at Seal Sands, Teesside.
- 2.10 Third party shippers feed gas into CATS. The Everest, Lomond, Erskine and Fleming, Drake, Hawkins, Seymour, Maria and Revfields enter the 36" pipeline at the CATS Riser Platform. Gas also feeds into the pipeline at subsea tees as shown in Figure 1 below.

Figure 1 Offshore Schematic of CATS Pipeline



- 2.11 The onshore section of the pipeline passes mainly through industrial land before it reaches the CATS terminal at Seal Sands, Teesside (a total of 8 km) as shown in Figure 2 below.
- 2.12 Pig launching facilities are installed on the CATS 36" gas pipeline at the CATS Riser Platform and pig receiving facilities at the CATS terminal. The CATS 36" gas pipeline pigging facilities are maintained in working order such that in-line inspection pigging operations can be conducted or as a requirement for operational pigging.
- 2.13 At the CATS terminal the gas is processed and redelivered to CATS users by whom it is delivered to local industrial users and the National Transmission System.

Figure 2 Onshore CATS Schematic



Design and Operating Limits

2.14 The CATS 36" gas pipeline has a design pressure of 179.3 barg and a design temperature of 60 degrees Celsius and holds an inventory of up to $49 \times 10^6 \text{ Sm}^3$ of natural gas at normal operating pressure of around 135barg. The gas entering the pipeline is dehydrated using glycol contactors. Moisture content and corrosion rates are monitored and strictly controlled in accordance with contractual arrangements. The pipeline is designed for sour service for H_2S levels of 1500 ppm at design pressure. Current average H_2S levels are low at approximately 10 ppm.

3 COMPULSORY ACQUISITION OF LAND OCCUPIED BY CNSL IS UNNECESSARY AND COULD CAUSE MATERIAL DISADVANTAGE

3.1 The DCO creates extensive compulsory rights for the applicant over land occupied and/or utilised by CNSL as part of its operations. The relevant articles contained in Part 5 of the draft DCO do not take sufficient account of CNSL's obligations in terms of the safe operation and maintenance of the CATS pipeline and terminal.

3.2 In terms of Article 26(1) of the draft DCO, all private rights over land to be acquired would be extinguished. This would extinguish CNSL's private rights over operational land in relation to plot 112, which is considered further below. Article 26(2) of the DCO allows the Applicant to impose restrictions on, or extinguish, private rights in land that is subject to compulsory acquisition of rights by the Applicant. Any restriction or extinguishment of CNSL's private rights in respect of CATS will adversely impact their ability to operate and maintain the major accident hazard infrastructure per the applicable legal obligations. CNSL need to maintain access to the infrastructure at all times for inspection and maintenance purposes.

3.3 CNSL welcome the inclusion of the protective provisions in Part 5 of Schedule 12 of the draft DCO, however for the reasons detailed further below these are currently considered

insufficient. CNSL consider that these powers should be restricted in relation to any private rights in land held by CNSL in respect of CATS infrastructure.

- 3.4 The rights required by the Applicant could be granted on a voluntary basis by agreement between CNSL, the Applicant and the landowner. CNSL made this clear during the limited pre-application engagement.

4 COMPULSORY ACQUISITION PLOT 112

- 4.1 Schedule 7 of the draft DCO states that plot 112 is being acquired in connection with Work No.2A and Work No.2B. Schedule 1 of the DCO details that Work No.2A is an underground high pressure pipeline. Work No.2B is above ground installations, including a compound for National Grid Gas plc's apparatus. The statement of reasons submitted with the Application states that this land is required for connecting the existing Sembcorp gas supply pipeline to the National Transmission System for gas and connecting the existing Sembcorp gas pipeline to the Gas Connection.
- 4.2 Plot 112 is owned by PD Teesport Limited but is occupied by CNSL under a lease and forms part of the CATS Terminal site. The statement of reasons notes that engagement between the Applicant and PD Teesport Limited commenced in December 2019 and that the Applicant is seeking to reach agreement with PD Ports to ensure that the pipelines required for the Project can be developed without material disruption to the Landowner's development plans for Teesport. However, the Applicant has not given sufficient regard to CNSL's operations as the occupier of the site.
- 4.3 CNSL is not opposed to the principle of above ground infrastructure being located within the CATS Terminal lease site, however it would wish to have that infrastructure located in a manner that minimises impact on CNSL. CNSL is not aware of the Applicant having carried out a detailed assessment of locations within the wider CATS Terminal site that the infrastructure could be located. CNSL have concerns that the development of the infrastructure proposed within plot 112 could impact on its ability deliver the sufficient volumes and flow rates of gas required for existing CATS terminal customers and for both the Project and the Sembcorp power stations. Furthermore, the proposed infrastructure could adversely impact the ability of CNSL to conduct critical inspection and maintenance activities and rapidly investigate and rectify certain emergency situations.
- 4.4 CNSL consider that the Applicant has simply not undertaken the necessary detail of work to identify that plot 112 is the most suitable location for this infrastructure to be located. CNSL is not aware of any justification having been provided by the Applicant for this choice of location. The Applicant will require the consent of CNSL to connect to CATS directly. At this stage, no agreement has been reached to do so and, as such, there is currently no need for the Applicant to acquire plot 112.
- 4.5 Furthermore, the acquisition of plot 112 will extinguish CNSL's private rights over that area of land. CNSL's parent company, Kellas Midstream Limited, has published plans to develop H2NorthEast, which is a strategic initiative to build a 1GW facility producing low carbon, blue hydrogen utilising UK North Sea natural gas that is already processed at the existing CATS Terminal. Although that project is in the early stages of development, CNSL wish to minimise the loss of any land from its lease of the CATS terminal site, which might be utilised as part of the H2NorthEast project. H2NorthEast would be co-located within the CATS terminal site to enable it to access gas supplies and benefit from cost synergies associated with sharing plant utilities. The plant will require a significant area of land within the terminal site for the new processing facilities, as well as a direct connection to CATS and various pipeline routes. Plot 112 is land where this infrastructure might be located. The land take will potentially prejudice the delivery of the new project. This impact is unnecessary and would be avoidable with further consultation with CNSL. CNSL consider that more work should have been undertaken by the Applicant, and more significant engagement with CNSL to ensure any above ground infrastructure was located at a suitable location for both parties.

5 INSUFFICIENT PRE-APPLICATION ENGAGEMENT

5.1 The Applicant's pre-application consultation was insufficient and the applicant failed to comply with guidance issued by the Department for Communities and Local Government, "Planning Act 2008: Guidance related to procedures for the compulsory acquisition of land" (September 2013) (the "Guidance") in seeking to use powers of compulsory acquisition.

5.2 Paragraph 8 of the Guidance states:

"The applicant should be able to demonstrate to the satisfaction of the Secretary of State that all reasonable alternatives to compulsory acquisition (including modifications to the scheme) have been explored. The applicant will also need to demonstrate that the proposed interference with the rights of those with an interest in the land is for a legitimate purpose, and that it is necessary and proportionate."

5.3 Paragraph 25 of the Guidance states *inter alia*:

"Applicants should seek to acquire land by negotiation wherever practicable. As a general rule, authority to acquire land compulsorily should only be sought as part of an order granting development consent if attempts to acquire by agreement fail."

5.4 The Applicant should have carried out more detailed consultation with CNSL to find a solution that could facilitate the Applicant's scheme without causing harm to CATS. The Applicant should have engaged with CNSL as part of its discussions with PD Teesport Limited to ascertain if the necessary rights could be granted to develop the above ground infrastructure within the CATS terminal lease site without the need for these to be acquired compulsorily and extinguishing CNSL's rights. For example, a sub-lease may have been sufficient for these purposes, rather than the Applicant acquiring ownership. CNSL remains open to dialogue with the Applicant for the rights to be granted voluntarily.

6 THE COMPULSORY ACQUISITION ORDER PLANS

6.1 CNSL consider that the compulsory acquisition order plans are insufficient, as they omitted relevant existing infrastructure, such as the CATS pipeline. As part of their response to the Examining Authority's first written question CNSL have submitted plans showing the location of their infrastructure overlaid on the NZT Order Land. These plans have been prepared with the assistance of the Applicant.

7 SAFETY ISSUES AND THE PROTECTIVE PROVISIONS

7.1 The scheme may have severe operational impacts and safety implications for the CATS "Major Accident Hazard" gas pipelines, 6" product pipelines to Sabic and Navigator, Beach Valve Station, and associated infrastructure. There are concerns with the proximity of the proposed development, including pipeline crossings, cable crossings, the long term effects of induced AC voltages on the pipelines and sterile zones required for the compressor station.

7.2 The Health and Safety Executive place responsibilities on both CNSL and the landowners along CATS pipeline routes to ensure the continued safe operation of CATS underground pipelines. The greatest threat to CATS pipelines is accidental damage resulting from third party works. CNSL undertakes a number of risk reduction measures including regular foot, road and aerial surveillance.

7.3 CNSL has published a number of guidance documents for parties undertaking works near CATS:

- (a) CATS Wayleaves Guidance for Landowners and Third Parties, Doc Number: CAT-PPI-PRC-019;

- (b) CATS Conditions and Restrictions for Work Activities in Close Proximity to CATS Pipelines, Doc Number: CAT-PPI-PRC-020; and
- (c) CATS Procedures for the Excavation and Backfill of CATS Pipelines, Doc Number: CAT-PPI-PRC-021

These documents are included at Appendices 1 – 3 of this representation.

7.4 Through these procedures, CNSL approves and may choose to witness or directly supervise at CNSL discretion, all works that may impact upon pipelines and request notification of any proposed works within 50m of a pipeline that could move within the pipeline wayleave. It is the responsibility of landowners and developers to advise CNSL of any works proposed by contractors that could result in potential damage to the CATS pipelines.

7.5 CNSL welcomes the inclusion of Part 5 of Schedule 12 of the draft DCO, which includes certain protective provisions for the CATS pipeline corridor and incorporated the above noted guidelines. However, in their present form these are not considered adequate given the particular risks associated with the CATS pipeline. By way of example only and to illustrate some of the inadequacies:

- (a) Paragraph 58(2) of Schedule 12 of the draft DCO sets out that CNSL must be able to reasonably demonstrate that the Project would “significantly adversely” affect the safe operation of the CATS pipelines before they can withhold their consent to works plans. Given the nature of the CATS pipeline and its status as a Major Hazard gas pipeline, any adverse impact on the ability for CATS to operate it safely is unacceptable and represents a potential danger to the public.
- (b) Restrictions on use of explosives for blasting should be restricted over a wider area than is contained in the protective provisions.
- (c) Provision should be made for monitoring for any damage to the pipeline while works are ongoing and detailing steps that must be taken if damage occurs.
- (d) As set out at section 3 above, if the powers contained in the draft DCO that allow the Applicant to restrict or extinguish private rights in land are exercised in relation to the CATS pipeline, that could adversely impact CNSL’s ability to operate and maintain the CATS pipeline. Those powers should not be exercisable in relation to any rights relating to CATS.

8 FURTHER PARTICIPATION IN THE EXAMINATION PROCESS

8.1 CNSL will be happy to provide additional detail in respect of the matters contained in this representation.

8.2 CNSL will continue to engage with the Applicant in respect of the application.

Appendix 1

CATS Wayleaves Guidance for Landowners and Third Parties, Doc Number: CAT-PPI-PRC-019



CATS Wayleaves Guidance for Landowners and Third Parties

Doc Number: CAT-PPI-PRC-019

C2	04/11/19	04/11/24	Reviewed and updated	KB	DH/GR	KB
C1	02/03/16	02/03/19	Issued for Approval	KB	GD	JB
REV	DATE	NEXT REVIEW	DESCRIPTION	BY	CHKD	APPVD

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1.0 INTRODUCTION

The CATS Pipelines referred to below were constructed and are operated under the terms of the Pipelines Act 1962 and Pipeline Safety Regulations 1996. They are owned by CATS Parties and operated by Wood UK Ltd. The Pipelines are essential links in the transportation of Natural Gas, Butane, Propane and Natural Gas Liquids from the North Sea to the Terminal, National Grid and local customers. This booklet provides general guidance on working close to these pipelines and answers some of the questions commonly asked by landowners, tenants, contractors and others.

Please visit [\[REDACTED\]](#) for more information

The pipelines in this booklet are:

- **PL-774** 36" High pressure gas pipeline transporting offshore natural gas from the North Sea to Coatham Sands and 7.84 km onshore to Seal Sands via a Tees Tunnel.
- **PL-937** 6" Condensate export pipeline transporting condensate 2.87km from the CATS Terminal to SABIC North Tees plant.
- **PL-938** 6" Condensate export pipeline transporting condensate 2.45km from the CATS Terminal to the Navigator Terminals storage site.
- **CAT-Pipeline-04** 6" Propane pipeline transporting propane 1.09km from the CATS Terminal to Conoco Phillips storage site.
- **CAT-Pipeline-05** 6" Butane pipeline transporting butane 1.09km from the CATS Terminal to Conoco Phillips storage site.



Construction Images of the 36" pipeline routing through South Tees industrial sites



Construction Images of 6" exports in various locations in Seal Sands

2.0 CONTACT DETAILS

The day to day management of activities within the pipeline wayleave is implemented at the CATS Terminal. The pipeline wayleave being defined as the 3.5m to 7.5m wide strip of land either side of the CATS pipeline. The width varies depending on the landowner and location of the pipeline, for more information regarding the location of your work please contact CATS Terminal. It is a requirement by the pipeline operator that if you plan any works within 50m of the pipeline you must contact us to receive confirmation the pipeline will be unaffected by your work.

By using the free online LineSearchBeforeUDig enquiry process you will find out if your work location is within 50m of CATS pipelines. It's also important to note that this free service also notifies you of other assets nearby owned and operated by others.

It is important that any notifiable activities are brought to the CATS pipelines team attention to start the enquiry process. Upon receipt of your information the CATS terminal will provide you with Authorisation to Work.

[REDACTED] [REDACTED]
[REDACTED] [REDACTED]
[REDACTED] [REDACTED]

CATS Terminal,
Seal Sands,
Middlesbrough
TS2 1UB



3.0 RESPONSIBILITIES & ADVICE

The Health and Safety Executive place responsibilities on both CATS Terminal and the landowners along CATS pipeline routes to ensure the continued safe operation of CATS underground pipelines.

The greatest threat to CATS pipelines is accidental damage resulting from 3rd party works and in this respect CATS Terminal takes reasonable and practical steps to reduce this risk. A number of risk reduction measures are in place including regular foot, road and aerial surveillance.

CATS Terminal also approves and directly supervises all works that may impact upon pipelines and request notification of any proposed works within 50m of a pipeline that could move within the pipeline wayleave.

It is the responsibility of landowners to advise CATS Terminal of any works proposed by contractors that could result in potential damage to the CATS pipelines.

It is the responsibility for all landowners, works sponsors, works managers, contractors and employees to make sure HSG47 is followed and that you have taken reasonable steps under the Health and Safety at Work act to keep people and underground pipelines safe. If you are not sure if the minimum searches or notifications have been completed before starting your work, then stop and ask.

It is always good practice to keep a pack of responses from those pipeline operators you have contacted at your work site, during your approved works. CATS always issue confirmation that you have been through our consultation process and can proceed with your works. Pipeline operators often challenge works in close proximity to pipelines and this information will be helpful to confirm you have received the required approvals.

4.0 NOTIFIABLE WORKS

Any activity that involves excavation, vehicular or service crossings, or landscaping or other work close to the pipeline that could affect pipeline integrity including ditching or fencing should be notified to CATS Terminal. Our wayleaves members will discuss the proposal with you in detail, and any conditions or restrictions needed to protect the pipeline will be advised.

No work should start near a CATS pipeline until a short consultation has taken place. CATS representative may request a site meeting to locate and peg out the route of the pipeline for your works.

This requirement includes emergency works and CATS Terminal understand that local contractors require immediate support for emergency works and will respond immediately when emergencies are declared.

If any works are required within the wayleave the CATS representative will refer to our additional restrictions and guidance documentation. This will often result in additional CATS mitigation such as supervision for your works, performing only hand digging, using load spreading mats etc.

Request a copy of Conditions and Restrictions for Work Activities in Close Proximity to CATS Pipelines document number: CAT-PPI-PRC-020 for more information.

IF IN DOUBT - PLEASE CALL 01642 546404



5.0 TYPICAL QUESTIONS AND ANSWERS

Q. What do CATS pipelines carry?

- The 36" CATS pipeline (PL-774) transports high pressure natural gas 411.84km (404km subsea, 7.84km onshore) from the CATS Riser Platform, located in the Central Graben Development of the North Sea, to processing facilities at the CATS Terminal in Teesside.
- Onshore 6" Condensate export pipeline (PL-937) transporting natural gas condensate 2.87km from the CATS Terminal to Sabic, North Tees plant.
- Onshore 6" Condensate export pipeline (PL-938) transporting natural gas condensate 2.45km from the CATS Terminal to the Navigator Terminals storage site.
- Onshore 6" Propane pipeline (CAT-Pipeline-04) transporting Propane 1.09km from the CATS Terminal to ConocoPhillips storage site.

- Onshore 6" Butane pipeline (CAT-Pipeline-05) transporting Butane 1.09km from the CATS Terminal to ConocoPhillips storage site.

Q. Why do we need to contact CATS terminal?

A. The HSE requires you to perform searches and understand what dangers there are when working near underground services. An example of the legislation you must follow is HSG47, this can be searched on the HSE website. Due to the complex nature of the CATS infrastructure and assets only the CATS pipeline engineers have the design information to advise you of what is acceptable before starting your proposed work.

Q. Why do CATS want to do this consultation process?

A. As a responsible operator CATS terminal has an obligation to safeguard people and the environment from any potential pipeline incident. Operators can't monitor the entire pipeline route 24 hours per day, so they mark the pipeline route and provide the public with free services to ensure they receive health and safety advice.

Q. What's a notifiable activity?

A. Anything that might change the ground conditions such as loading the ground with crane outriggers, crossing with vehicles, hand digging or machine digging, ditching, demolition, drainage fencing, dumping materials, landscaping, storage of temporary materials, equipment or people. If in doubt, just ask and we can provide more examples.

Q. How close do I need to be before I contact you?

A. CATS pipeline operators follow UKOPA guidance for a 50m notification distance between your proposed works to the Pipeline. Marker Posts are not always directly above the pipeline and we'll quickly tell you whether your type of work is close enough for us to require a detailed review. CATS terminal takes a very pragmatic view on distances and impact from work types.

Q. How do I contact you?

A. See section 2.0 Contact Details for various ways to contact us.

Q. I need to press on with my project, how long will this take?

A. CATS operator do not intend to unnecessarily delay your work, they only care about the safety of people and the safe operation of our pipeline. The operators initially respond within 24 hours and aim to close out all enquiries within 4 weeks but have often been able to close out much quicker than this. To avoid impact on your project schedule. We advise that early engagement is better, even if you don't have all the detail yet.

Q. Do I need to setup a legal agreement?

A. Depending on the nature of your works the CATS Pipeline owner may want to enter into a commercial agreement. We will inform the legal team of your intended works and we will receive confirmation whether they want to start a legal consultation and discuss liabilities. Third Parties progressing work without a required legal agreement resulting in damage or loss incurred by CATS operations will be pursued by CATS owners with unlimited liability.

Q. I'm just a small contractor, this minor job isn't worth pursuing if enquiries are expensive?

A. CATS pay for you to use LSBUD service for free. CATS do not charge for enquiries or site visits. There should be no cost involved for you to notify us of your proposed work. Only large construction projects that may require CATS terminal to complete engineering studies or provide additional resources may be back charged.

Q. Can't you just have one set of rules for the entire pipeline length?

A. Unfortunately certain areas are at more risk than others due to environmental conditions, changing in ground cover or recent development of land. It would be unfair to put restrictive conditions on areas of land where the pipeline is more protected. Therefore, we commit more review time at no cost to third parties to ensure we only request what we consider to be necessary for ensuring safety.

Q. How long have the pipelines been operational?

A. The 36" CATS pipeline operating safely and continuously since its installation in 1993. The export lines to SABIC, Conoco Phillips and Navigator Terminals have been operating safely and continuously since their installation in 1996.

Q. How do I know where a pipeline is located across my land?

A. All pipelines are clearly identified at crossings (road, rail and river) by markers and with aerial markers. However, do not assume that the pipeline is routed in a direct line between the markers. If you wish to start an activity, then please contact CATS Terminal so we can show you where the pipeline is.

Q. How deep are the pipelines?

A. The landlines were installed with a varied amount of cover and this has been recorded in technical documentation. However, in some locations, the cover may have been reduced by factors such as soil erosion, and it is therefore not always safe to assume that the full cover is present. In reclaimed land of an industrial nature, especially Teesside, the cover is often significantly less than anticipated and in parts may only be less than 1m. Please note, if you have completed trial digs down to normal service depths, the CATS pipelines may be below this point and without confirming with CATS terminal you could strike a pipeline.

Q. How can CATS Terminal help?

A. If you are planning an activity, we can help at the earliest stages in defining any restrictions or conditions that might be needed to protect the pipeline. Then when you are about to start a job, we

can accurately mark the position of the pipeline and supervise any operations close to it to ensure these are performed safely.

Q. Who will issue permission to proceed with my work?

A. The CATS Terminal Operations Team control all Authorisation to Work forms and on the day your works start you will have a set of instruction to request your permission. There will also be instructions on how to close out your job, as we need to know when you have finished. These instructions are explained during the enquiry process.

Q. Why do I need to report any damage to CATS Terminal?

A. Any physical damage to the pipeline may result in a major incident. It must be inspected to check whether a repair is required or to reinstate the corrosion protection coating system. Please note accidental damage is a serious incident and must be reported, see section 6.0 for more information.

Q. Are maps and pipeline route details available?

A. Yes, the route of CATS pipelines can be provided on various scale Ordnance Survey maps in paper or digital form from our Geographical Information System. However, it's possible for third parties to incorrectly interpret these so we request you first confirm your work location with an Easting and Northern number set, and we can make a bespoke map for your work that includes our pipelines and wayleave location. There are free online services for getting your work site location data such as:

████████████████████

Q. Why are you issuing this booklet?

A. The Pipelines Safety Regulations 1996 place a duty on pipeline operators to supply information on the existence and whereabouts of their pipelines. We are always looking for new ways to raise awareness of the pipelines.

Q. I'd like more information, are you able to help?

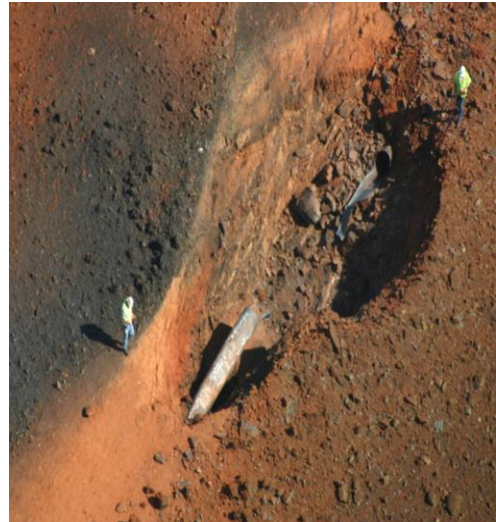
A. The CATS terminal has developed an annual awareness campaign and this ranges from one-to-one meetings with landowners, asset owners, neighbours and local planning authorities. We provide awareness presentations and can arrange one for you or your contractors free of charge. Just contact us in the same way you would raise a works enquiry.

Please remember, although you may not have work planned yet; we can send you copies of this document to hand out to your colleagues to raise awareness, helping you avoid any delays.

6.0 EMERGENCY PROCEDURES

1. Shut down any machinery and other sources of ignition.
2. Evacuate all personnel from the vicinity immediately.
3. Keep moving upwind of the incident.
4. Notify immediately - **The Police 999**

CATS Terminal 01642 546404



Please note: Shut down all working plant and machinery in the vicinity of a pipeline strike (within 350 meters) of the incident and ensure there are no other potential sources of ignition in the vicinity.

Prevent the approach of traffic or any other unauthorised persons.

Wait for a representative from CATS or the Police to arrive on site and ensure that assistance is given as required safeguarding People, the Environment and Property.

N.B. IN THE EVENT OF A CATS PIPELINE LEAK OCCURRING OBSERVE THE ABOVE PRECAUTIONS BUT DO NOT ATTEMPT TO STOP THE LEAK



36" Gas Pipeline Explosion, North Texas June 7, 2010

Appendix 2

CATS Conditions and Restrictions for Work Activities in Close Proximity to CATS Pipelines, Doc
Number: CAT-PPI-PRC-020



CATS Conditions and Restrictions for Work Activities in Close Proximity to CATS Pipelines

Doc Number: CAT-PPI-PRC-020

C2	04/11/19	04/11/22	Reviewed and updated	KB	DH/GR	KB
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1.0 INTRODUCTION

The CATS Pipelines referred to below were constructed and are operated under the terms of the Pipelines Act 1962 and Pipeline Safety Regulations 1996. They are owned by CATS Parties and operated by Wood UK Ltd. The Pipelines are essential links in the transportation of Natural Gas, Butane, Propane and Natural Gas Liquids from the North Sea to the Terminal, National Grid and local customers. These conditions and restrictions have been produced as a guide to acceptable working practices for activities within 50m of the pipelines, whilst ensuring the pipelines continued safe operation. The guidelines may be modified at the discretion of the CATS wayleaves representative to accommodate particular circumstances.

Please visit [\[REDACTED\]](#) for more information

The pipelines in this booklet are:

- | | |
|--------------------------|---|
| PL-774 | 36" High pressure gas pipeline transporting offshore natural gas from the North Sea to Coatham Sands and 7.84 km onshore to Seal Sands via a Tees Tunnel. |
| • PL-937 | 6" Condensate export pipeline transporting condensate 2.87km from the CATS Terminal to SABIC North Tees plant. |
| • PL-938 | 6" Condensate export pipeline transporting condensate 2.45km from the CATS Terminal to the Navigator Terminals storage site. |
| • CAT-Pipeline-04 | 6" Propane pipeline transporting propane 1.09km from the CATS Terminal to Conoco Phillips storage site. |
| • CAT-Pipeline-05 | 6" Butane pipeline transporting butane 1.09km from the CATS Terminal to Conoco Phillips storage site. |

2.0 SAFETY STANDARDS

It is a requirement that third parties support and reflect the high standards Wood demand while working within their area of interest. Wood kindly request third parties set expectations to reflect our core values, in particular:

- Set a minimum requirement for a high-risk activity
- Provide your equivalent or endorse the Wood Life Saving Rules
- Support the Wood Safety Shield
 - Commit to [prepare](#)
 - Care to [engage](#)
 - Courage to [intervene](#)



1.0 SCOPE

This document is for use for those completing works within 50m of CATS pipelines. If not completed already you must review Wayleave Guidance for Landowners and Third Parties document number: CAT-PPI-PRC-019. Any works described by this document are notifiable and the proper enquiry process must be followed. This document does not provide permission to start work, it is guidance only to describe what considerations are important to the approval process.

This documentation sets out the safety precautions and other conditions affecting the design, construction, demolition and maintenance of services, roads, structures and all other works, excluding mineral extraction, across or in the vicinity of existing CATS pipelines and associated equipment.

2.0 APPLICATION

The requirements of these recommendations shall apply to all works to be completed within 50m of CATS pipelines and associated equipment. The document is intended for the guidance of those responsible for planning and completing such work activities and of CATS personnel appointed to supervise the work on site.

Please note that emergency work is not covered in the document, but it is recommended that in such cases the conditions and restrictions should be observed as far as is practically possible.

3.0 ESSENTIAL PRELIMINARIES

It is a legal duty of any organisation to determine the exact location of underground pipelines and services when proposing excavation and/or construction works. The process to be followed when a CATS pipeline is affected is outlined below and detailed in the following sections.

3.1 Formal Consent

- i. No work shall be undertaken within the pipeline wayleave (3.5m to 7.5m either side of the pipeline, depending on location) without the prior formal consent from CATS terminal.
- ii. In considering the granting of formal consent CATS Terminal may require the promoter of the new works, his servants, agents and contractors to insure against any loss, damage, expenses, claims and actions brought against CATS, its servants, agents and contractors in consequence of the provision of the new works and activities associated therewith.
- iii. Formal consent may be obtained by engaging the CATS terminal pipelines team who will liaise with the CATS pipeline owners during the enquiry process. However, you may also send a formal consent request to: **CATSpipeline@woodplc.com**
- iv. An "Authorisation to Work" form may be required to be signed and issued by the CATS Terminal Operations Team on the day of third-party works commencing. This will be confirmed during the enquiry process.
- v. A CATS issued Permit to Work is required for internal company works.

3.2 Commencement of Works

Where formal consent has been given, a minimum of five working days notice is requested before commencement of works. This is to ensure any supervision requirements can be met with CATS resources.

3.3 Locating the Pipeline

If your work is deemed close enough to require ground scanning for approximate identification of the pipeline location the following shall be observed: Before any work is started in the vicinity of existing CATS pipelines, a CATS representative shall locate and peg out the line of the pipeline.

3.4 Supervision of Works

A CATS representative shall be responsible for protecting the company's interest and shall supervise all works in close proximity to the pipeline. The representative shall have the power to stop work proceeding if, in their opinion, safety of personnel or the integrity of the pipeline is being threatened as a result of these activities. The actions of the representative do not remove the responsibility of the promoter, his servants, agents and contractors from complying with the requirements of these conditions.

3.5 Other Planning Considerations

CATS terminal operates Major Accident Hazard Pipelines. These assets if damaged can cause a major incident and significant damage to the environment. The operators have an HSE obligation to understand what is within their effected zone of an emergency. The following should be considered:

- i. Temporary buildings, structures, vehicles, trailers, caravans, and storage of materials within the wayleave or in the vicinity of the pipeline or associated pipeline equipment shall not be permitted.
- ii. Lighting of fires within the wayleave or in the vicinity of the pipeline apparatus shall not be permitted.
- iii. The new works shall not reduce or increase the cover above the existing wayleave unless agreed via the CATS enquiry process.
- iv. If the pipeline is to be left exposed overnight, security, barriers and lighting arrangements will be provided.
- v. The Health and Safety at Work Act and associated statutory regulations shall be strictly observed.

3.6 Working in Industrial Environments

The CATS pipelines run through industrial areas of land where neighbours can have emergency events that affect the pipeline route. It is important that any work party recognise the risk of adjacent sites and have procedures to react to any site alarms in the area.

Likewise, any ground crews working in close proximity to CATS pipelines are required to have an understanding of the dangers of process systems. It is important for the ground crews to be able to recognise dangerous situations that may lead to emergencies. CATS terminal will arrange a free pipeline awareness presentation for any ground crews before work commences.

3.7 Submitting works information

It is reasonable to expect third party projects may contain multiple instances of the following list of notifiable works. In the interest of reducing the review time and providing third parties with approval it is important that information is adequately documented, stepped out and presented to the CATS pipelines team for review.

Please consider that the CATS pipelines team may only provide permission to proceed once the methods of work and risk assessments have been read and understood. It is strongly recommended that the CATS pipelines team are offered the opportunity to take part and assist your work risk assessments.

4.0 Notifiable Activities

Before any of the following activities are carried out in the vicinity of an existing CATS pipeline; the promoter of the new works shall notify CATS pipelines team by following the enquiry process. The enquiry process is detailed in document "CATS Wayleaves Guidance for Landowners and Third Parties" document number: CAT-PPI-PRC-019.

4.1 Land slips or erosion

If any excavations, landscaping or excessive water from flooding or leaking equipment undermines the CATS pipeline wayleaves then this should be notified to CATS Terminal immediately as an emergency. If the pipelines lose any ground support, they may be subjected to bending moments which can cause them to fail. CATS have previously responded to leaking water mains to supervise & assist in reinstating ground.

4.2 Use of Naked Flame

No welding or other hot works involving naked flame shall take place within the wayleave without the written consent of the CATS pipelines team. Mitigation such as enclosure and flame proof mats may be required to protect adjacent assets from heat exposure etc.

4.3 Use of Explosives

Before a decision is made to use explosives for blasting within 400 metres of any part of a CATS pipeline or associated installations, the CATS pipelines team is to be consulted and agreement obtained. This agreement shall include the position and size of the charge(s) to be used.

4.4 Piling / Boring / Directional Drilling

The CATS pipelines team shall be consulted and agreement obtained prior to any piling or boring being carried out within 50 metres of a CATS pipeline or associated installations. Any percussive or impact techniques may require a study to ensure the CATS pipelines will not be adversely affected. Directional drilling techniques must be reviewed in detail to understand the mitigation in place for avoiding pipeline strikes. There may be a requirement to have additional tool locating controls or steel plate shielding of adequate thickness installed between the drilling location and pipeline to protect against pipeline strikes.

4.5 Excavating

Before a decision is made to excavate within 50m of a CATS pipeline or associated installation, the CATS pipelines team is to be consulted and agreement obtained. More detail on excavations has been provided in section 8.0.

4.6 Lifting Operations

Before a decision is made to lift over or near a CATS pipeline wayleave or associated installation, the CATS pipelines team is to be consulted and agreement obtained. The considerations for lifting are that CATS pipelines team recognise this as lifting over live plant as any failure of lifting equipment may impact the ground and subsequently damage the pipeline. CATS also operate above ground pipelines and the same review process is required when lifting near them.

Typical considerations when the pipelines team engage their competent lifting representative may be to reduce ground loading from outriggers, reduced maximum wind loading, additional slings and sometimes practicing a complex lift away from the underground pipeline first. There are procedures to dictate what kind of precautions should be taken depending on the lifting method and detail.

4.7 Landscaping & Tree Planting

Generally only ground cover planting is permitted within CATS wayleaves. All tree planting proposals within or close to the pipeline wayleave must be submitted to CATS pipelines team for approval as certain species can grow enough that roots may damage pipelines or make it very difficult to maintain the wayleave.

Please note that some areas of ground are SSSI or SPA which need agreement from Natural England before proceeding.

4.8 Increased traffic

Normal traffic is only permitted to cross CATS pipelines at designated crossings. However, if large loads or traffic needs to cross at a new position either temporarily or permanently then this will require review and should follow the enquiry process. More information on crossings are available in sections 6.0 and 7.0.

5.0 INSTALLING NEW SERVICES

The design of new equipment and structures close to or crossing an existing CATS pipeline must be discussed at an early stage to ensure there is no risk to the integrity of the pipeline or reduction in access for CATS terminal to maintain their pipeline. The design of new services crossing pipelines shall conform with all requirements of 5.1 to 5.3 inclusive.

5.1 Orientation and Location

- i. Where a new service is to cross an existing CATS pipeline whether above or below it the normal minimum separation distance of 600mm should be maintained between the outside pipe walls, or between protective sleeves if they are used. A concrete separation slab, ducting, marker tiles or warning tape may be required.
- ii. Planning of a new service which must cross a CATS pipeline should take account that the preferred angle of crossing shall be not less 60 degrees.
- iii. At such crossings both the pipeline and the new service shall be suitably supported to prevent any future settlement and the backfill shall be properly consolidated to the satisfaction of the CATS representative.
- iv. No new service shall be laid parallel to an existing CATS pipeline within the wayleave. However, under special circumstances, and at the discretion of the CATS pipeline team, a new service may be laid parallel to an existing pipeline provided there is adequate clearance between them and provided that the service is not laid either directly above or below the existing CATS pipeline.

5.2 Cathodic Protection

- i. CATS pipelines have active cathodic protection which is monitored regularly. Where a new service is to be laid, CATS will require interaction tests to be carried out to determine whether the cathodic protection system will be adversely affected.
- ii. Should any Cathodic Protection posts or associated apparatus have to be moved to facilitate construction operations, reasonable notice shall be given to CATS.

5.3 Pressure Testing

Hydraulic testing shall not be permitted within 8 metres of an existing CATS pipeline unless suitable precautions have been taken against the effects of a possible burst. Should safeguards such as the

use of pre-installation tested pipe, sleeves, barriers etc. be required, then any such details are to be approved by the CATS pipelines team.

6.0 ROADS, HIGHWAYS AND RAILWAYS

Any remediation to existing roads, railways, handrails, barriers, lighting, bridges or other equipment are also notifiable works as they pose the same risks to safe pipeline operations. However, for new installations the following design considerations shall be observed.

6.1 New Road Crossings

Where new road works are to be constructed and are to cross existing CATS pipelines, permanent pipeline protection shall be provided. This will generally be by means of a protective reinforced concrete slab but in all cases CATS pipelines team will discuss and approve the design.

6.2 Major Roads or Railways

In the case of new major road works where it may not be possible to obtain a license to excavate for future pipeline repairs it shall be necessary to provide a spare sleeve adjacent to the pipeline through which a replacement pipe section could be installed if required. This is in addition to the permanent pipeline protection.

6.3 Marker Posts

For transportation crossings; marker posts at fencing lines shall be installed on the line of the pipelines, facing toward the road or railway. More information about marker post design & detail will be provided and final designs approved by the CATS pipelines team.

7.0 Construction Traffic

During third party works it's important to consider the movement of people, plant and vehicles.

7.1 Crossing the Pipeline

Construction traffic and other plant shall cross CATS pipelines only by public roads or at previously agreed and clearly marked crossing points and crossing lanes that conform with all requirements of 7.2 to 4.4 inclusive.

7.2 Temporary Fencing

Crossing points shall be fenced on both sides over a width not less than the full wayleave and shall be returned along the wayleave corridor away from the crossing for a distance specified by the CATS representative.

7.3 Temporary Protection

It may be necessary at crossing points to install temporary protection over the wayleave. Such protection may, at the discretion of the CATS pipelines team, consist of the laying of steel plates of adequate thickness on a hard-core base, or an approved sleeper raft, or other approved method.

The design and construction of such protection is to be approved by the CATS pipelines team. The protection installed shall be maintained in good condition to the satisfaction of the CATS representative for the duration of the works.

7.4 Warning Notices

Any temporary crossing must be clearly marked by appropriate warning notices and flags which draw attention to the danger of not using the crossing.

Additionally, the crossing should be provided with lights at dusk, at night or in poor visibility conditions. All notices should be erected and maintained in a clearly legible condition.

8.0 Excavation

8.1 Demarcation of Wayleave

Where excavation machinery or any construction traffic is operating outside the pipeline wayleave but within 50m of the pipeline, a temporary fence shall be erected to demarcate the wayleave and exclude access. The fence shall have signage detailing the CATS pipeline wayleave, danger of underground services and the words "No Digging" clearly visible.

8.2 Mechanical Excavation

Excavation within the pipeline wayleave requires a detailed review by the pipelines team for approval and the authority and supervision of the CATS representative. It shall be completed by hand unless the CATS representative specifically authorises the use of a mechanical excavator and handheld power tools; in any event, the use of such tools shall not be permitted within 1000mm of the pipeline wall or associated equipment. Reducing the minimum distance of 1000mm will be at the discretion of the CATS representative. ***Excavators with toothed buckets are not permitted.***

8.3 Vacuum Excavation

Although this is the preferred form of excavation around underground services it must be noted that this modern technique comes with new and additional risks. It's important for operators to understand contact between the steel suction pipe and underground services can have similar catastrophic consequences as traditional excavation techniques. It must also be noted that the vacuum excavation technique can undermine topsoil and mitigation must be in place to stop people and equipment falling into the excavation.

8.4 Support of Pipeline

Where it is necessary to excavate adjacent to and below a CATS pipeline, the pipeline ground shall be supported, during all stages of the operation, and protected against damage to the satisfaction of the CATS site representative. On completion permanent supports shall, if necessary, be constructed to avoid future settlement.

8.5 Protection of Exposed Pipeline

To avoid damage during work, any exposed part of the pipeline shall be protected by cladding (e.g. timber) as directed by the CATS representative and any damage to the protective wrap / coating of the pipeline, whether existing or caused by excavation work, etc. shall be brought to their attention. However, details on excavating to expose the pipeline require review of document Procedure for the Excavation and Backfill of CATS Pipelines document number: CAT-PPI-PRC-021.

8.6 Security

If a pipeline has to be left exposed overnight or during non-working periods, a continuous watch will be provided using accredited security personnel acceptable to the CATS Terminal. These personnel should be equipped with a mobile phone and suitable shelter.

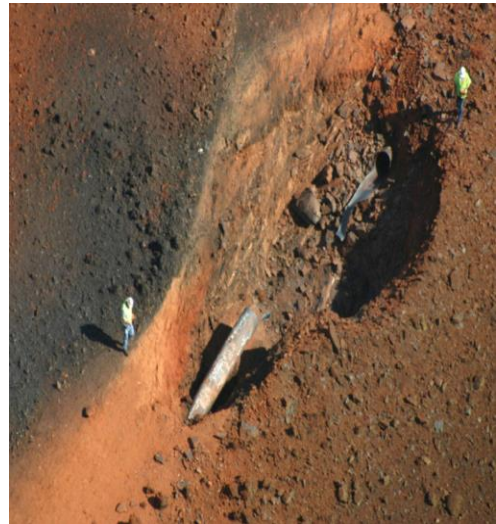
9.0 Backfilling

If there is a requirement to expose a CATS pipeline and subsequently backfill then a CATS representative shall be in attendance during the whole of the backfilling operations. The CATS representative shall advise as to the suitability and degree of consolidation of backfill material around the pipeline, see document Procedure for the Excavation and Backfill of CATS Pipelines document number: CAT-PPI-PRC-021 for more detailed information on these requirements.

10.0 EMERGENCY PROCEDURES

1. Shut down any machinery and other sources of ignition.
2. Evacuate all personnel from the vicinity immediately.
3. Keep moving upwind of the incident.
4. Notify immediately - **The Police 999**

CATS Terminal 01642 546404



Please note: Shut down all working plant and machinery in the vicinity of a pipeline strike (within 350 meters) of the incident and ensure there are no other potential sources of ignition in the vicinity.

Prevent the approach of traffic or any other unauthorised persons.

Wait for a representative from CATS or the Police to arrive on site and ensure that assistance is given as required safeguarding People, the Environment and Property.

N.B. IN THE EVENT OF A CATS PIPELINE LEAK OCCURRING OBSERVE THE ABOVE PRECAUTIONS BUT DO NOT ATTEMPT TO STOP THE LEAK



36" Gas Pipeline Explosion, North Texas June 7, 2010

Appendix 3

CATS Procedures for the Excavation and Backfill of CATS Pipelines, Doc Number: CAT-PPI-
PRC-021



CATS Procedures for the Excavation and Backfill of CATS Pipelines

Doc Number: CAT-PPI-PRC-021

REV	DATE	NEXT REVIEW	DESCRIPTION	BY	CHKD	APPVD
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1.0 INTRODUCTION

The CATS Pipelines referred to below were constructed and are operated under the terms of the Pipelines Act 1962 and Pipeline Safety Regulations 1996. They are owned by CATS Parties and operated by Wood UK Ltd. The Pipelines are essential links in the transportation of Natural Gas, Butane, Propane and Natural Gas Liquids from the North Sea to the Terminal, National Grid and local customers. These conditions and restrictions have been produced as a guide to acceptable working practices for activities within 50m of the pipelines, whilst ensuring the pipelines continued safe operation. The guidelines may be modified at the discretion of the CATS wayleaves representative to accommodate particular circumstances.

Please visit [REDACTED] for more information

The pipelines in this booklet are:

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1.0 SAFETY STANDARDS

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- Set a minimum requirement for a high-risk activity
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- Support the Wood Safety Shield
 - Commit to [prepare](#)
 - Care to [engage](#)
 - Courage to [intervene](#)



2.0 SCOPE

This document provides details of CATS Terminal requirements for any excavation and backfilling operations being conducted within the wayleaves of CATS onshore pipelines.

Prior to any excavation, approval must be granted from the CATS Operations team using the Authorisation to Work form and procedure. It must be noted that works shall be notified in accordance with CATS Conditions and Restrictions for Work Activities in Close Proximity to CATS Pipelines document number CAT-PPI-PRC-020.

All notifications to work shall follow an enquiry process detailed within Wayleave Guidance for Landowners and Third Parties document number: CAT-PPI-PRC-019.

This document does not provide permission to start work, it is guidance only to describe what considerations are important to the approval process. The document will guide third parties who have no choice but to excavate in the CATS pipeline wayleave. The guidance is assistance for generating method statements and risk assessment for review by the CATS pipelines team in order to obtain Authorisation to Work from the CATS Operations Team.

3.0 PRELIMINARIES

Prior to any excavation within a CATS wayleave strip, the following preliminaries shall have been carried out:

- CATS Terminal formal consent shall have been provided as per Section 3.1 of the CATS procedure "Conditions and Restrictions document for work activities in close proximity to CATS Pipelines" document number CAT-PPI-PRC-020.
- A method statement covering the excavation and backfilling shall be prepared by the contractor and presented to CATS Terminal for approval. Written approval of the proposal must be given by CATS Terminal before any work can commence within the wayleave. In addition to CATS Terminal conditions, standard Health and Safety requirements shall be strictly enforced by the party undertaking the work.
- A risk assessment for the proposed excavation and backfilling shall also be submitted for approval by CATS Terminal.
- ***Excavator buckets with teeth are not permitted***
- Demarcation of the wayleave and any temporary crossing points designated for construction traffic shall be installed as per the CATS procedure "Conditions and Restrictions document for work activities in close proximity to CATS Pipelines" document number CAT-PPI-PRC-020.
- A minimum of 5 working days' notice is required in advance of the commencement of works following consent. This is to ensure CATS supervision can be made available.
- A site visit has been arranged to discuss the works and mark work locations.
- CATS Terminal shall have located and pegged the detected position of the pipeline where the excavation is to take place.

4.0 EXCAVATION

4.1 General Requirements

The following general requirements shall apply:

All excavation work within the pipeline wayleave strip shall be performed only when a CATS Terminal Authorisation to Work has been issued by the CATS Operations Team as covered in the CATS procedure "Conditions and Restrictions document for work activities in close proximity to CATS Pipelines" document number CAT-PPI-PRC-020.

Work shall be completed during daylight hours wherever possible, if it is essential to continue work beyond daylight hours, then the CATS representative must be advised.

The following precautions shall be taken:

- Mobile lighting towers shall be provided to illuminate the excavation location.
- Work shall be suspended and rescheduled during periods of severe or inclement weather.
- Portable diesel driven dewatering pump(s) with suitable lengths of discharge hose shall be available to keep the excavation free of water as necessary.

4.2 Locating the Pipeline

Unless this has already been performed in advance of the excavation operation, the pipeline should be ground scanned by CATS representative for approximate identification.

Although trial holes are generally hand dug, mechanical excavation may be permitted to within 1000mm of the crown of the pipe in particular circumstances where:

- a CATS representative is present,
- the CATS representative has been able to obtain an approximate depth using his pipe locating tool (CAT) and
- the ground conditions are suitable for him to use a probe to ascertain safe excavation depths ahead of mechanical earth removal.
- **Buckets with teeth are NOT permitted.**
- **Percussive tools are NOT permitted unless authorised by the pipelines team and included in the Authorisation to Work form.**
- Reducing the minimum distance of 1000mm will be at the discretion of the CATS representative.

Prior to commencing this machine operation, the CATS representative will need to satisfy himself of the competency of the machine operator. Should his competency be suspect, the use of the machine close to the pipeline will not be allowed. CATS terminal will arrange a free pipeline awareness presentation for any ground crews before work commences.

4.3 Excavating the Pipeline

Once the pipe has been located and the depth established, the excavation can proceed as follows:

4.3.1 Statutory Regulations

The promoter is also responsible for ensuring that all aspects of the excavations follow the appropriate local and national safety regulations governing such work.

4.3.2 *Excavation Procedure*

- The exact location of the pipe must be checked by probing prior to each machine excavated layer being removed.
- The traditional machine may excavate to within 1000mm of the top of the pipe with the excavation carried out in layers not exceeding 150mm. The remaining soil is to be removed by hand.
- Once the exact position of the pipe has been determined, a machine may excavate either side of the pipe but shall not encroach within 1000mm of the pipe wall on either side of the pipeline with the remaining soil removed by hand.
- Reducing the minimum distance of 1000mm will be at the discretion of the CATS representative.
- A vacuum excavation vehicle may be permitted to excavate closer than 1000mm of the pipe but at the approval of the CATS representative. Note that vacuum excavations may create a void under the topsoil penetration undermining the ground. There is a danger that people and equipment may fall into the excavation and onto the pipeline causing a major incident.
- Similarly, soil removed from below the pipe shall be by hand although an excavator can be used to uplift the soil from the trench.

4.3.3 *Storing of Soil*

During these excavations (hand and mechanical), the following shall be observed:

- All topsoil shall be stored for re-use away from the side of the excavation.
- Sub soil shall be stored separate from the topsoil.
- Soil should not be stored under power lines.

4.3.4 *Shoring of Trench*

Depending on the depth of the pipeline and therefore the depth of the excavation, the sides of the trench shall be suitably shored or special trench boxes used to comply with statutory requirements.

4.3.5 *Stepped Excavation*

It must be noted if the excavation technique wishes to avoid shoring then a stepped excavation may be in excess of 10m wide due to the depth of some section of CATS pipeline.

4.3.6 *Protection of Pipe*

Where a pipeline has been exposed by excavation, it shall be protected by cladding (e.g. timber) as directed by the CATS representative to prevent impact damage occurring. If damage is caused or is found when the pipeline is excavated, this shall be brought immediately to the attention of the CATS representative.

4.3.7 *Pipe Support*

Any plans to excavate or remove material supporting the pipeline must have supporting designs agreed in advance. This will confirm the unsupported span length, exposure depth and support design. A permanent support shall, if necessary, be constructed to avoid future settlement.

If the support beneath the pipe has been unexpectedly removed, work must stop and temporary support shall be provided to the satisfaction of the CATS representative if deemed to be necessary. On reinstatement of supporting ground, work may recommence with agreement of the CATS representative.

4.3.8 *Foreign Services*

It is the responsibility of the promoter of the new work to ensure that adequate provision is made for the protection of any foreign services that may be uncovered within the extent of the excavation.

4.4 **Security**

It is CATS Terminal standard practice that, whenever a pipeline must be left exposed overnight or during non-working periods, security personnel be employed to provide a continuous presence at the excavation site.

The security personnel should be acceptable to the CATS representative and must be equipped with suitable shelter including lighting, heating, cooking and toilet facilities. He must also be equipped with appropriate mobile communications and contact details for all parties.

5.0 **BACKFILLING**

5.1 **General Requirements**

The pipeline coating shall be inspected for damage before any backfilling commences. Any damage to the pipeline coating must be brought to the attention of the CATS representative and shall have been satisfactorily repaired to the approval of the CATS pipelines team before backfilling is allowed to proceed.

Backfilling shall not commence without CATS Terminal approval. Adequate notice shall be given to CATS Terminal Operations Team of the intention to backfill within the pipeline wayleave. Backfilling, depending on the complexity or significance may be within a separate Authorisation to Work at the discretion of the CATS pipelines Team. The promoter will provide a method statement for CATS approval.

All water shall be removed from the trench before backfilling commences.

A CATS representative shall be present during the backfilling operation within the pipeline wayleave and will supervise and approve the materials being used and the method of consolidation around the pipe.

5.2 **Backfilling Requirements**

The following requirements shall be applied:

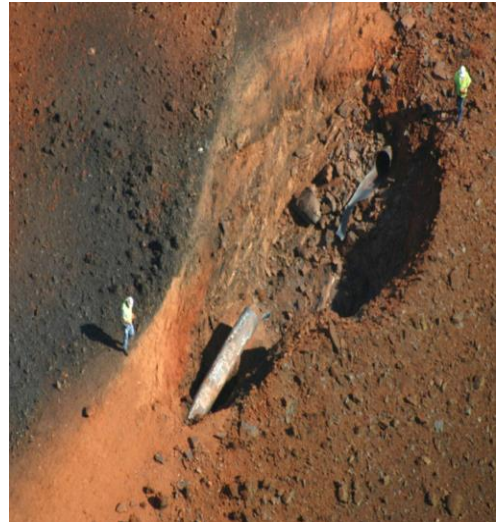
- The bottom of the trench shall be padded with suitable backfill material to a depth up to 300mm from the bottom of the pipe.
- A minimum of 300mm of suitable imported granular material padding (typically, building sand) shall be infilled around the pipe and suitably consolidated to the satisfaction of the CATS representative.
- Before final backfilling the pipe shall be checked to ensure it is evenly bedded throughout its exposed length.
- Backfilling operations should be organised in such a manner in order to avoid heavy loads passing over the pipeline.
- Backfilling should be in well compacted layers with allowance made for sufficient overfilling or mounding of the filled trench to compensate for subsequent settlement.
- No perishable materials such as vegetation, timber, bush, etc. are to be used in the backfill material.

- Special care must be taken to prevent any stones, cinders, slag, debris from made-up ground or other harmful matter, such as may set up corrosion if it comes into contact with the pipe, from being used for backfilling.
- The original topsoil is to be replaced in the top of the trench.
- It is the responsibility of the promoter of the works to ensure that all surplus excavated materials, rock, waste and all unwanted materials are removed from the site of the works and the site left in a tidy condition.

6.0 EMERGENCY PROCEDURES

1. Shut down any machinery and other sources of ignition.
2. Evacuate all personnel from the vicinity immediately.
3. Keep moving upwind of the incident.
4. Notify immediately - **The Police 999**

CATS Terminal 01642 546404



Please note: Shut down all working plant and machinery in the vicinity of a pipeline strike (within 350 meters) of the incident and ensure there are no other potential sources of ignition in the vicinity.

Prevent the approach of traffic or any other unauthorised persons.

Wait for a representative from CATS or the Police to arrive on site and ensure that assistance is given as required safeguarding People, the Environment and Property.

N.B. IN THE EVENT OF A CATS PIPELINE LEAK OCCURRING OBSERVE THE ABOVE PRECAUTIONS BUT DO NOT ATTEMPT TO STOP THE LEAK



36" Gas Pipeline Explosion, North Texas June 7, 2010