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1. Introduction

Each year National Grid undertakes a variety of maintenance and investment activities on the gas National Transmission System (NTS). This work can take many different forms, including keeping our assets in good working order, replacing ageing assets with new equipment, inspecting assets and facilitating new connections and capacity requirements.

This maintenance programme is intended to provide an indication to the gas industry of the impact of these works on the NTS, and any associated impact on entry or exit capacity from April 2022 to March 2025. This programme supersedes all previous plans.

This document provides an overview of all work scheduled at NTS compressor stations and NTS pipelines. Where this work affects the capability at an Aggregate System Entry Point (ASEP), an indication of the revised ASEP's minimum daily capability is included for each month.

Although every effort is made to align work to any customer or associated asset outages which we have been made aware of, this is not always possible and where NTS Exit Points are affected, we will endeavour to issue Maintenance Day notices to our customers by 1st February and any revisions at least 42 days in advance of the scheduled Maintenance work.

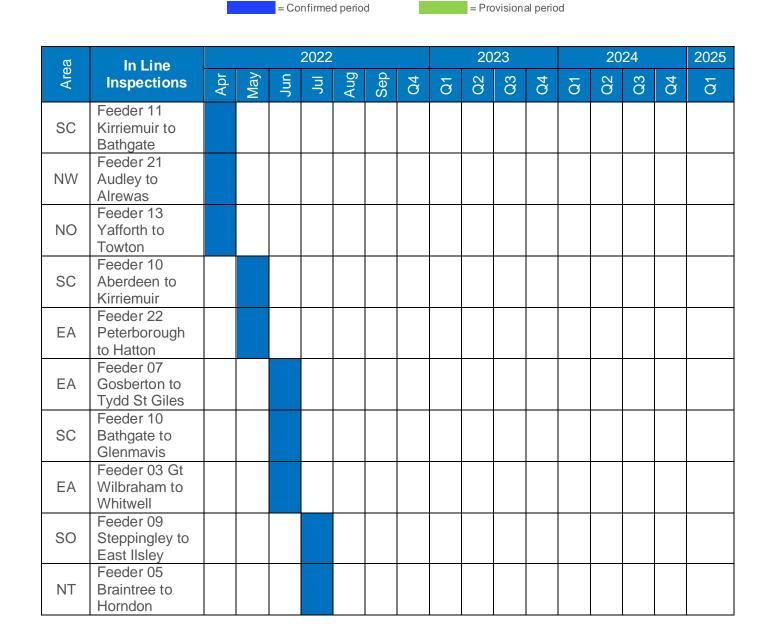
This document only includes maintenance activities on the NTS which are to be undertaken by National Grid NTS. It does not include maintenance carried out upstream of the NTS by Delivery Facility Operators (DFOs) and Producers or downstream of the NTS by the Distribution Networks and other NTS connected parties.

2. NTS Maintenance Work Monthly Summary

The following tables provide a summary of the NTS in line inspection work, other NTS pipeline work and NTS compressor outages. The month where the work is scheduled to take place has been highlighted in the tables. If it is the case that any work listed below has an effect on the flow of gas, affected sites and associated shippers will be contacted individually. The tables indicate which month the work takes place in, not that the work will take the whole of the month.

2.1 Planned In-Line Inspections

National Grid is required to carry out in-line inspections of our pipelines periodically in order to monitor and maintain their integrity, ensuring that they comply with the Pressure Systems Safety Regulations (PSSR). The in-line inspection process requires a number of Pipeline Inspection Gauges (PIGs) to travel through the pipeline in order to complete a full inspection. The number of "runs", and the associated time taken for the work, can vary from pipeline to pipeline.



WS	Feeder 28 Felindre to Three Cocks								
NO	Feeder 07 Asselby to Susworth Trent West								
EA	Feeder 17 Theddlethorpe to Hatton								
EM	Feeder 07 Tydd St Giles to Old Warden								
WM	Feeder 14 Alrewas to Churchover								
SC	Feeder 11 Bathgate to Longtown								
SC	Feeder 12 Bathgate to Longtown								
EA	Feeder 22 Goxhill to Hatton								
NW	Feeder 11 Grayrigg to Samlesbury								
SW	Feeder 20 Kenn South to Choakford								
SC	Feeder 12 Kirriemuir to Bathgate								
NO	Feeder 29 Pannal to Nether Kellet								
SC	Feeder 10 Penicuik to Boon								
WS	Feeder 02 Treaddow to Dowlais								
NT	Feeder 03 Whitwell to Peters Green								
WS	Feeder 02 Wormington to Treaddow								
SC	Feeder 12 Aberdeen to Kirriemuir								
NE	Feeder 07 Eastoft to Keadby								
NW	Feeder 21 Elworth Mickle Trafford								

SE	Feeder 05 Isle of Grain to Medway								
EA	Feeder 18 Matching Green to Rye House								
NW	Feeder 21 Mickle Trafford to Deeside								
EA	Feeder 03 Roudham Heath to Great Wilbraham								
NT	Feeder 05 Roxwell to Luxborough Lane								
SE	Feeder 05 Shorne to Isle of Grain								
EA	Feeder 18 St Neots to Little Barford								
EA	Feeder 05 Stow Market to Braintree								

2.2 Pipeline Work

Pipeline work listed in this table below can include diversions of existing pipelines, facilitation of connections to the NTS, and replacement or maintenance of pipeline and associated assets (pipes, valves, pig traps etc.) which require some form of pressure restriction or isolation. Some work can be performed by restricting the pressure of gas in the pipeline; however some work requires a full shut down (often termed "isolation" or "outage") of a section of the pipeline which would then be reinstated back to operational pressures once the work is completed. The 2024 and 2025 pipeline works are yet to be fully planned.

	= Pressure Restriction	n	= Pipeline Shutdown										= Provisional period							
g					2022				2023					20	24		2025			
Area	Pipeline	Apr	Мау	Jun	Jul	Aug	Sep	Q4	Q	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1			
EA	Feeder 07 Linwood to Hatton																			
SC	Feeder 10 Hume to Coldstream																			
SC	Feeder 11 St Fergus to Kinknockie																			
NW	Feeder 15 Abram to Warburton																			
SC	Feeder 24 Aberdeen to Lochside																			
SC	Feeder 13 Balhardgardy to Aberdeen																			
SC	Feeder 11 Aberdeen to Woodlands																			
NE	Feeder 06 Elton to Pickering																			
SW	Feeder 14 Barrington to Aylesbeare																			
SW	Barrington AGI																			
WS	Feeder 02 Llanvethrine to Dowlais																			
WM	Feeder 21 Alrewas to Weston Bank																			
NW	Feeder 04 Audley to Nantwich																			
SC	Feeder 12 Bathgate to Elvanfoot																			
SC	Feeder 12 Nether																			

	Howcleugh to								
	Langholm Feeder 12								
SC	Bathgate to								
	Blackness								
WS	Cilfrew AGI								
NO	Feeder 15 Carlisle to Keld								1
	Feeder 13 St								
SC	Fergus to								
	Balhalgardy Feeder 11								
SC	Glenbervie to								
	Brechin								
	Feeder 02 Dyffryn								
WS	Clydach to								
	Dowlais								
EM	Feeder 09 Brocklesby to								
LIVI	Stallingborough								
WS	Felindre AGI								
	Feeder 06								
NE	Beeford to Hornsea								
	Feeder 21								
NW	Elworth to								
	Birch Heath Feeder 11								
SC	Kinknockie to								
	Aberdeen								
SW	Feeder 14 Sapperton to								
300	Easton Grey								
	Feeder 13								
SC	Aberdeen to Parkneuk								
	Feeder 07								
NE	Asselby to								
	Drax Feeder 07								
SW	llchester to								
	Mappowder								
CVA	Feeder 14								
SW	Aylesbeare to Woodbury								
	Feeder 18								
SE	Shorne to								
	Farningham Feeder 21								
NW	Audley to								
	Alrewas								
NW	Feeder 04 Audley to								
. 4 4 4	Alrewas								
SE	Lower Thames								
	Crossing								

Please note: where a pipeline is required to be shut down the specific isolation points may differ from those displayed above. Any parties impacted by the works are contacted directly.

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2.3 NTS Compressor Stations

Compressors are used to help move gas around the NTS to where it is needed, maintaining pressures required at exit points whilst avoiding over-pressurising pipelines. In order to maintain our capability at Compressor Stations, routine maintenance is performed as well as a variety of other projects to maintain and improve the fleet.



Compressor Station Outages				2022					20	23			20	24		2025
		Мау	Jun	Jul	Aug	Sep	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	۵1
Aberdeen																
Alrewas																
Avonbridge 1																
Avonbridge 2																
Aylesbury																
Bishop Auckland																
Carnforth																
Cambridge																
Chelmsford																
Churchover																
Diss																
Felindre																
Hatton																
Huntingdon																
Kings Lynn																
Kirriemuir																
Lockerley																
Moffat																
Nether Kellet																
Peterborough																
Warrington																
Wisbech																
Wooler																
Wormington																

3. ASEP Capability

The table below shows an indicative flow capability for each Aggregate System Entry Point (ASEP), taking into account the effect of the final maintenance programme. The volumes are displayed month by month and are based on appropriate seasonal normal conditions.

In generating the ASEP capabilities, no account has been taken of any supply side (Delivery Facility) maintenance outages.

The values represent the ASEP's daily capability for each month, based on Seasonal Normal Demand conditions and for the period in the month where scheduled maintenance has most impact on capability. The analysis performed to produce the figures uses the assumption that a supply at a particular ASEP is favoured over other ASEPs. For example, in producing capability figures for St Fergus, it would be assumed that St Fergus ASEP would be flowing at its maximum for the season and the rest of the NTS supply was spread over other ASEPs.

Where "no impact" has been stated, this indicates that the maintenance scheduled is expected to have no adverse effect on the ASEP capability.

The capability volumes shown for the individual ASEPs are indicative only, but do represent a consistent operational view.

On any given day, the amount of capability that may be available at any ASEP will depend upon the level and distribution of the demand and the level of supplies at other terminals. In cases where scheduled maintenance has an adverse effect on an ASEP's capability, National Grid may be able to make additional capability available at other ASEPs.

	Apr	May	Jun	Jul	Aug	Sep	Oct
St Fergus	100	83	76	75	64	77	No
	(1100)	(913)	(836)	(825)	(704)	(847)	impact
Teesside	No						
	Impact						
Barrow	No						
	Impact						
Easington	No						
	Impact						
Theddlethorpe	No						
	Impact						
Bacton (including IUK)	No						
	impact						
Isle of Grain	No						
	impact						
Milford Haven	66	64	62	60	57	60	No
	(726)	(704)	(682)	(660)	(627)	(660)	impact

Values in millions of cubic metres & (GWh)

(Conversion from millions of cubic metres to GWh using Calorific Value of 39.6 MJ/m³)

4. Maintenance Affected Exit Points

We aim to minimise the impact of our maintenance on customers through transparency, aligning our work with their outages as appropriate and facilitating customer needs for flexibility.

Outages

Each year we ask when our customers' outages are to enable alignment of works. If your outages move, please get in touch as early as possible so that we can consider whether we can also realign our works to reduce any impact of these works. Please contact us to advise of any change to outage periods via email at NTSaccessplanning@nationalgrid.com.

Where possible, work is co-ordinated with the end user to avoid supply disruption, however in certain circumstances it may be necessary to schedule work at a time which may require disrupting the supply to an Exit Point whilst the NTS maintenance is undertaken.

Shippers, End-Users and Distribution Networks will be advised, in accordance with the Uniform Network Code (UNC) requirements and timescales, of any required disruptions to supply at an Exit Point by the issuing of a Maintenance Day(s) to the relevant party.

Maintenance Day notifications will be issued by February 1st each year to all relevant parties where our maintenance will impact gas flows for the period April to October. Where work is aligned to customer outages, or there is no anticipated impact, we will issue an Advice notice for your convenience to confirm these arrangements. Should any changes or additions to the requested Maintenance Days be required, all relevant parties will be notified in line with the timescales detailed in the UNC.

Minor Works Agreement

We recognise that sometimes standard maintenance approaches may not be optimal for our customers. Where this is the case the Minor Works Agreement can enable parties to agree different maintenance approaches through a bilateral contract with directly connected customers. Customers can pay the incremental costs of working flexibly outside normal working practices where we are able to accommodate these requests. For any questions relating to Minor Works Agreements, please contact the Business and Operations Planning Team on 01926 655625 or email via box.SCM.GTO@nationalgrid.com.

General Queries

Further information on the maintenance activities undertaken by us is available on our website¹.

If you have any queries or questions regarding the information contained within this document, please contact:

Network Access & Short-Term Risk Team

National Grid

Gas System Operation

National Grid House

Gallows Hill

Warwick

CV34 6DA

NTSaccessplanning@nationalgrid.com

We would welcome any feedback from you in relation to the maintenance programme or the way in which this information is provided. If you would like to provide feedback please contact us via email at: NTSaccessplanning@nationalgrid.com

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¹ https://www.nationalgridgas.com/data-and-operations/maintenance

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