

**APRIL MAINTENANCE  
&  
CAPACITY EXPANSION  
PROGRAMME**

**Summer 2008**

**Final**  
Version 1

**National Grid**

Published 15<sup>th</sup> March 2008

# Contents

1. Introduction
2. Map of National Transmission System – Key Projects for 2008
3. Drivers for Maintenance & Capacity Expansion Work in Summer 2008
4. ASEP Capability Profiles
5. Maintenance Work by Month
6. Maintenance Affected Exit Points

# 1 Introduction

This Final version of the Maintenance Programme has been produced by National Grid NTS to satisfy its obligations under Section L: 1.5 of the UNC – Transportation Principal Document (TPD) and Section G of the UNC- Offtake Arrangements Document (OAD).

The document details the proposed Summer 2008 Maintenance Programme and the expected impact on the Gas Transmission System Entry and Exit Points. Therefore, meeting the requirements for National Grid NTS to publish a Final Maintenance Programme under Section L: 1.5 of the UNC and Section G – Annex G2 of the UNC Offtake Arrangements Document.

In accordance with Section L: 3.2 “Content of Programme” the document includes tables for each Aggregate System Entry Point (ASEP), detailing the maintenance work in proximity to that ASEP and how it has been scheduled during the planned maintenance period, 1st April 2008 to 31st October 2008. The maintenance work includes that which is scheduled at compressor stations and on the National Transmission System (NTS) pipelines. An explanation of the compressor station or pipeline work has been provided.

Notification of affected NTS System Exit points will be through Maintenance Day notices sent directly to affected parties.

The included graphs show indicative capability for each ASEP, both excluding and including the effect of the annual maintenance schedule. The profiles are displayed in monthly tranches and are based on appropriate Seasonal Normal Conditions.

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

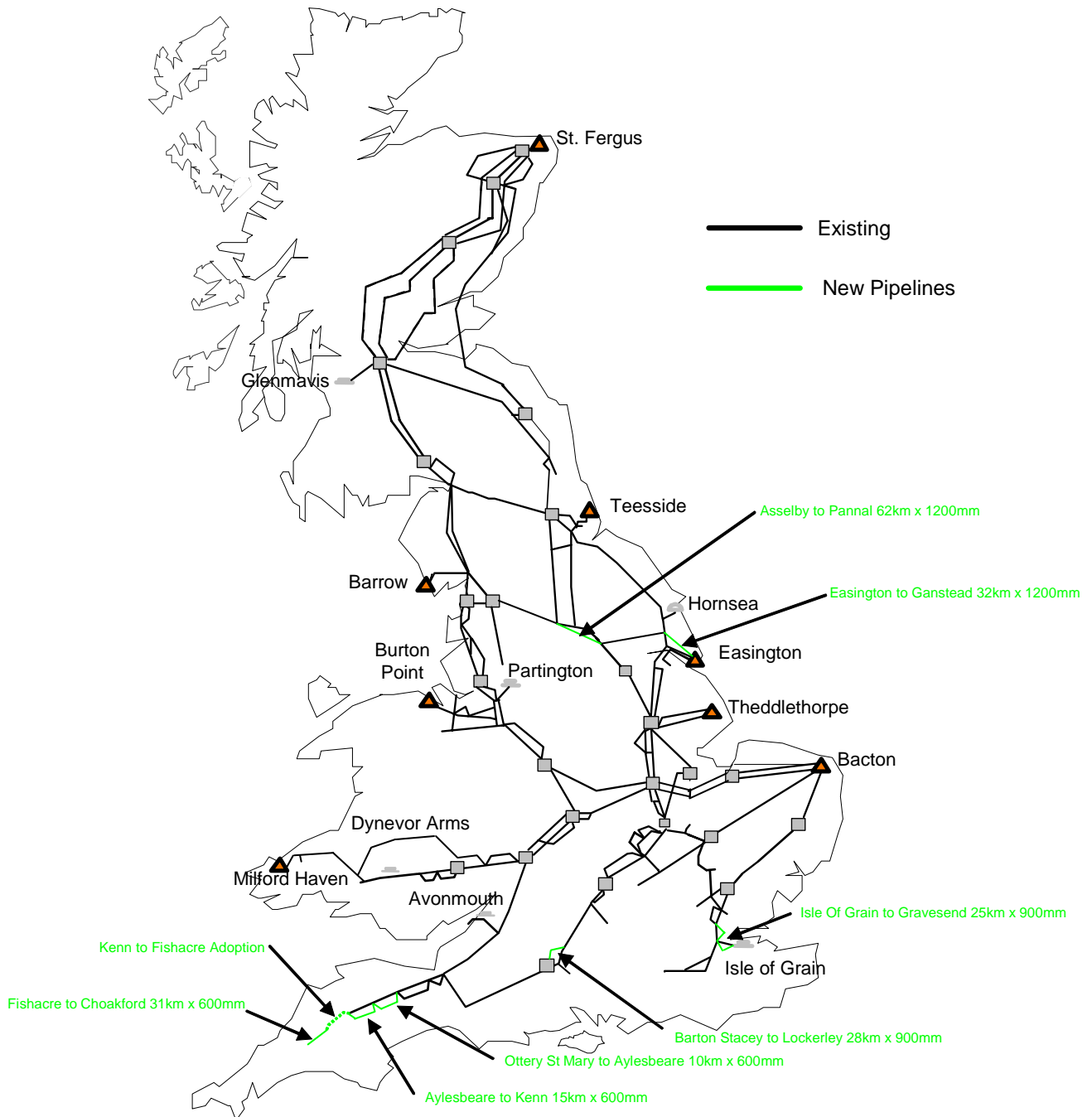
The capability profiles shown for the individual ASEP’s are indicative only. The amount of capability that may be available at any ASEP, on any given day, will depend on the level and distribution of demand and the level of supplies at other terminals.

This document only includes maintenance activities on the NTS, which are to be undertaken by National Grid NTS, as defined in Section L: 1.1.4 of the UNC (TPD) and UNC (OAD) Section G 1.2

It does not include maintenance carried out upstream of the NTS by Delivery Facility Operators (DFO’s) / Producers or downstream of the NTS by the Distribution Networks.

Any comments should be sent to Andy Barwick, Physical Operations Team, National Grid, Gas Operations, National Grid House, Gallows Hill, Warwick, CV34 6DA (Tel: 01926 653235).

## 2 Map of National Transmission System – Key Projects for 2008



### **3. The primary investment drivers for the NTS**

The primary investment drivers for the NTS

- Increased peak entry capacity for supplies.
- Increased peak exit capacity for generic growth, interconnectors and large specific loads.
- Ongoing serviceability of the network to ensure supply security and meet legislative requirements.
- Projects to deliver additional flexibility and security.

The maintenance outages, which have been scheduled for Summer 2008, are for routine and non-routine compressor maintenance, pipeline work and reinforcement. Together these meet the drivers outlined above.

## 4 ASEP Capability Profiles

The included graphs show indicative capability for each ASEP up to the obligated baseline capacity level, both excluding and including the effect of the Summer 2008 Maintenance Programme. The profiles are displayed in monthly tranches and are based on appropriate Seasonal Normal Conditions.

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

### Maximum Monthly ASEP Capability - Excluding Maintenance

The green bar represents this figure.

This is the potential maximum ASEP capability for each month. It is based on Seasonal Normal Demand conditions for the week in the month that has scheduled maintenance that most adversely affects the particular ASEP's capability. The maximum figure has been generated by National Grid and assumes the particular ASEP is favoured at the expense of other terminals. The figure excludes any effect of the Summer 2008 Maintenance Programme.

### Monthly ASEP Capability - Including Maintenance

The blue bar represents this figure.

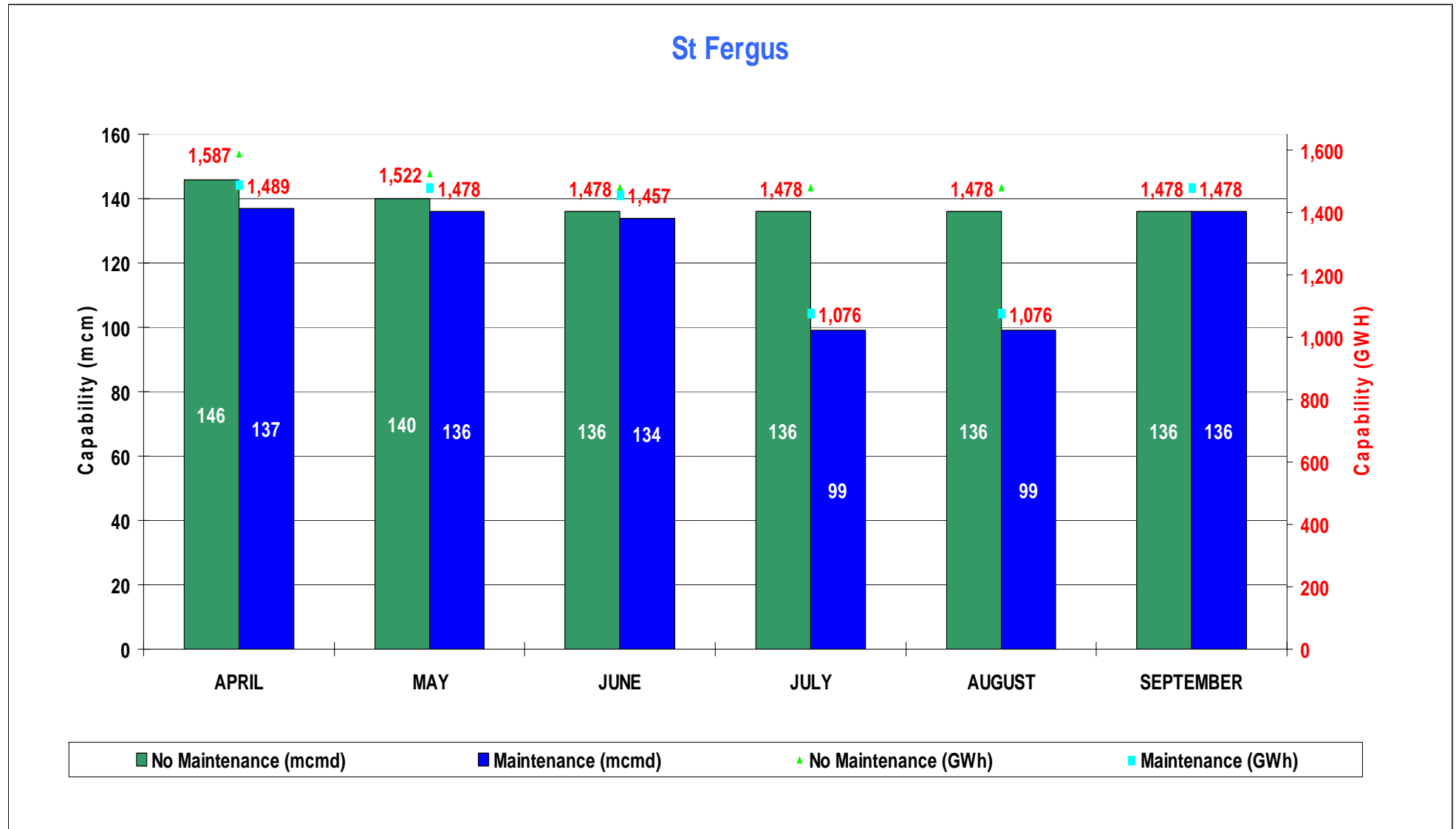
This is the ASEP capability for each month that includes any effect of the Summer 2008 Maintenance Programme. It is based on Seasonal Normal Demand conditions for the week in the month that has scheduled maintenance that most adversely affects the particular ASEP's capability. The figure has been generated by National Grid and assumes the particular ASEP is favoured at the expense of other terminals.

In cases during the maintenance period where the blue and green bars have the same value, this indicates that the maintenance scheduled for the time has no adverse effects on the ASEP capability.

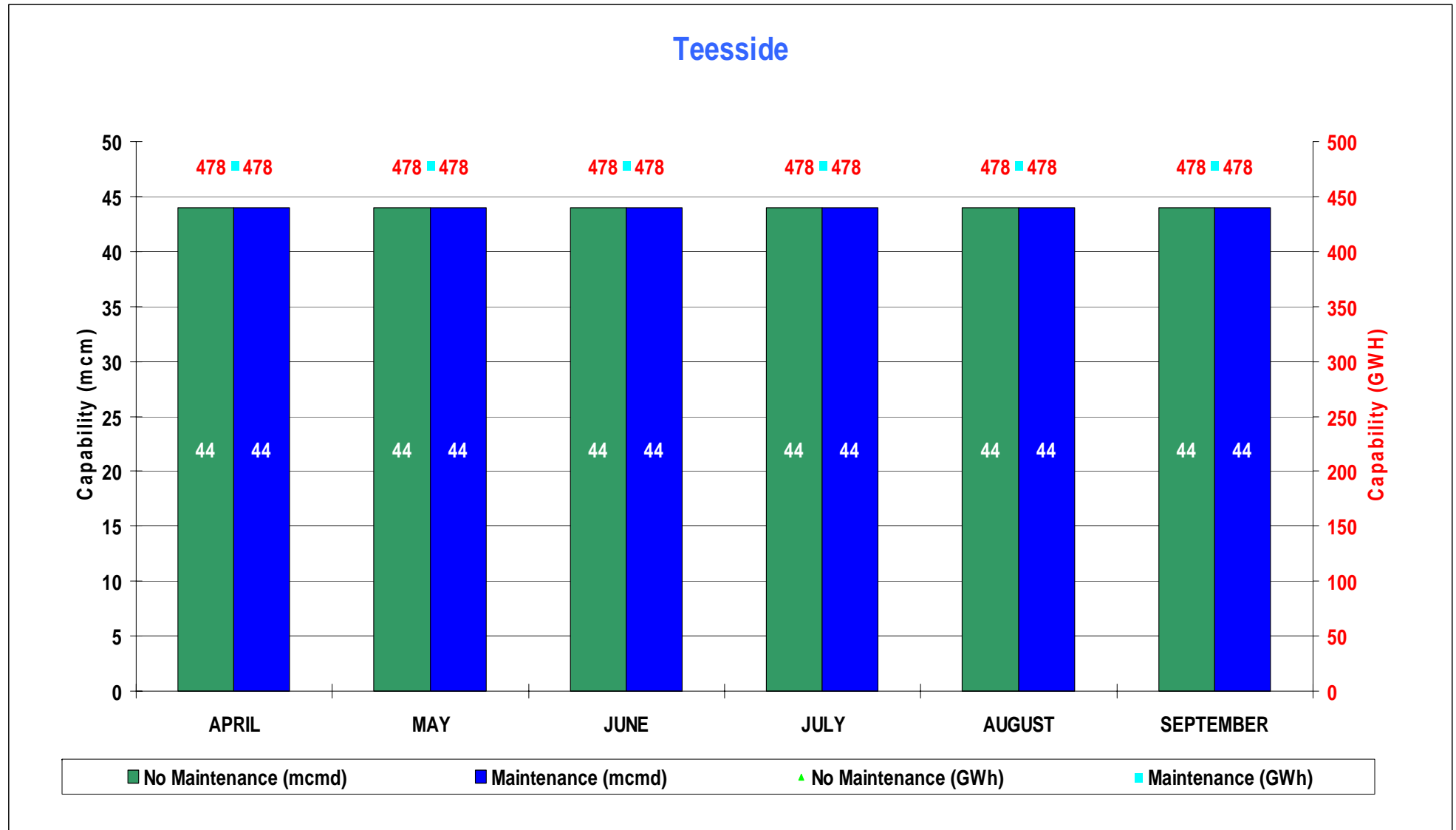
The capability profiles shown for the individual ASEP's are indicative only, but do represent a consistent operational view.

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 up to the Maximum Capability - Excluding Maintenance.

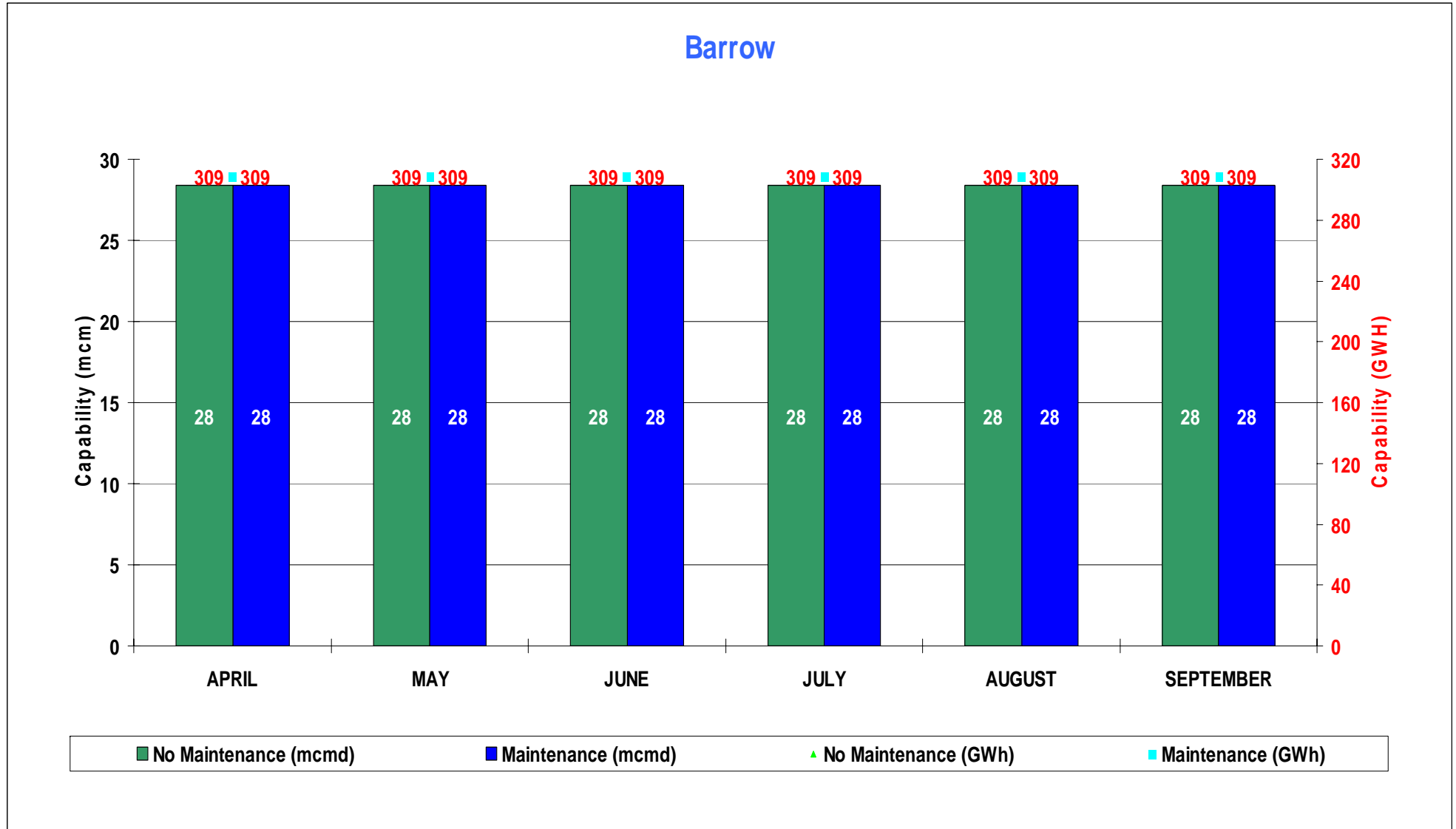
# St Fergus



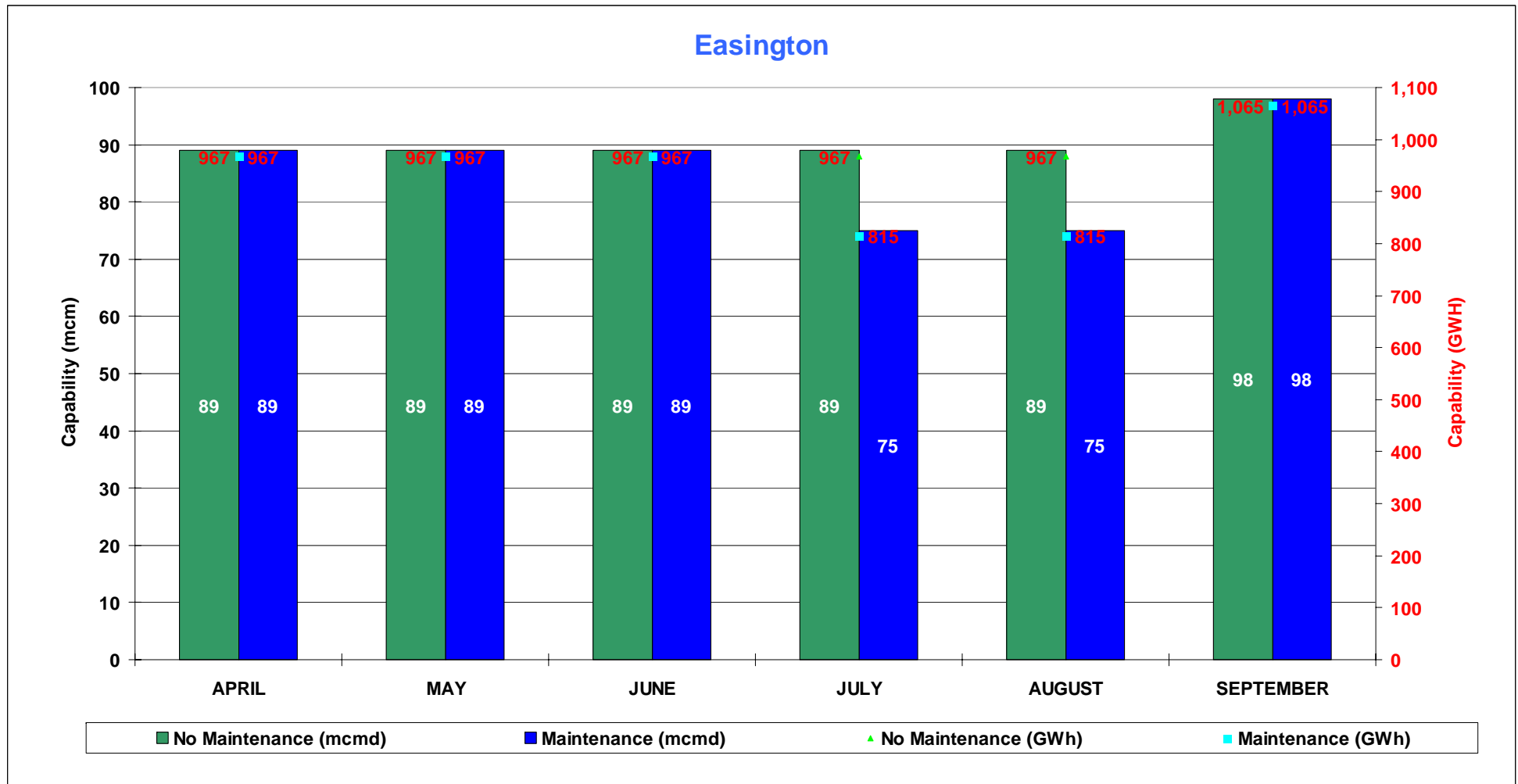
# Teesside



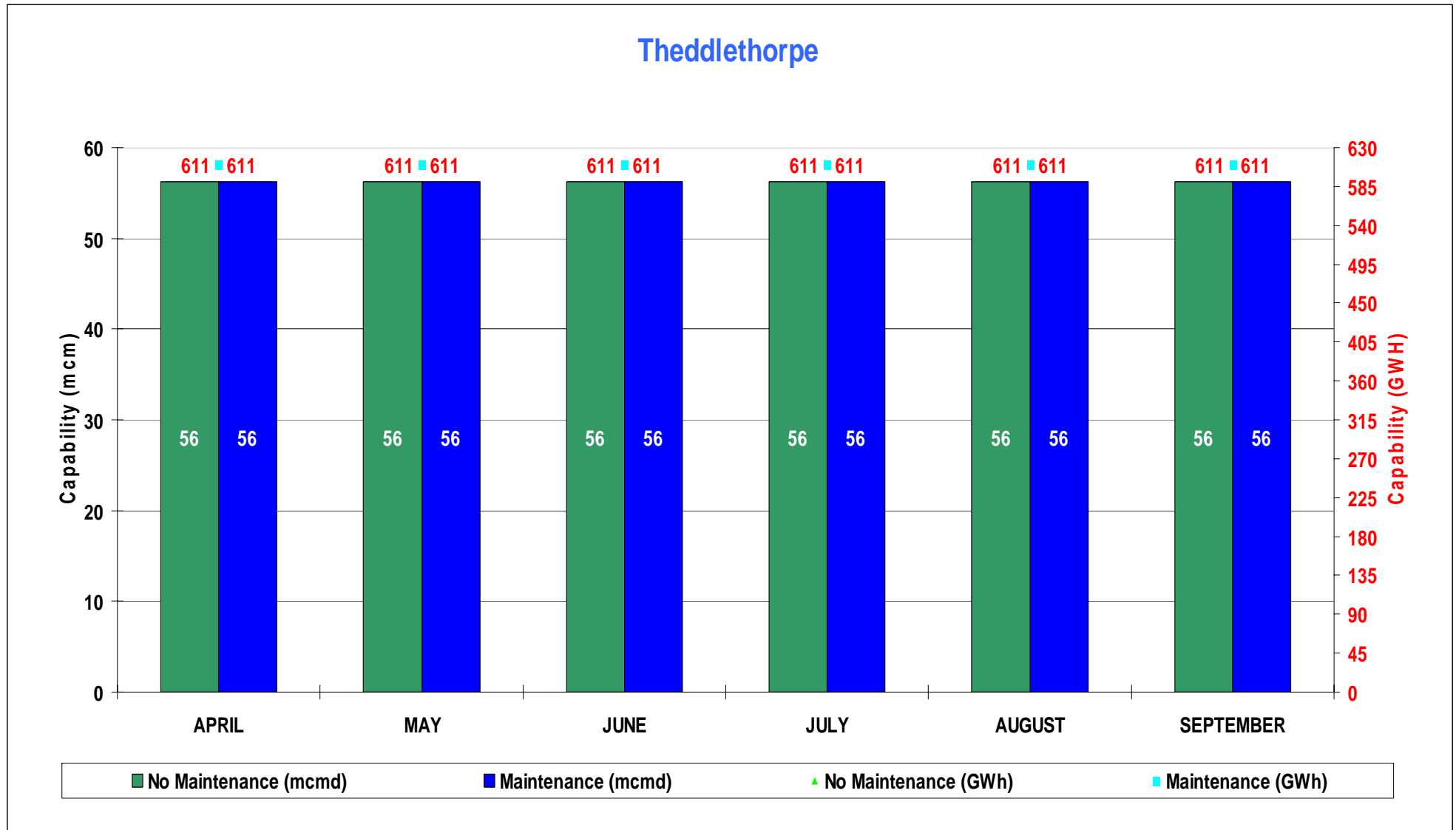
# Barrow



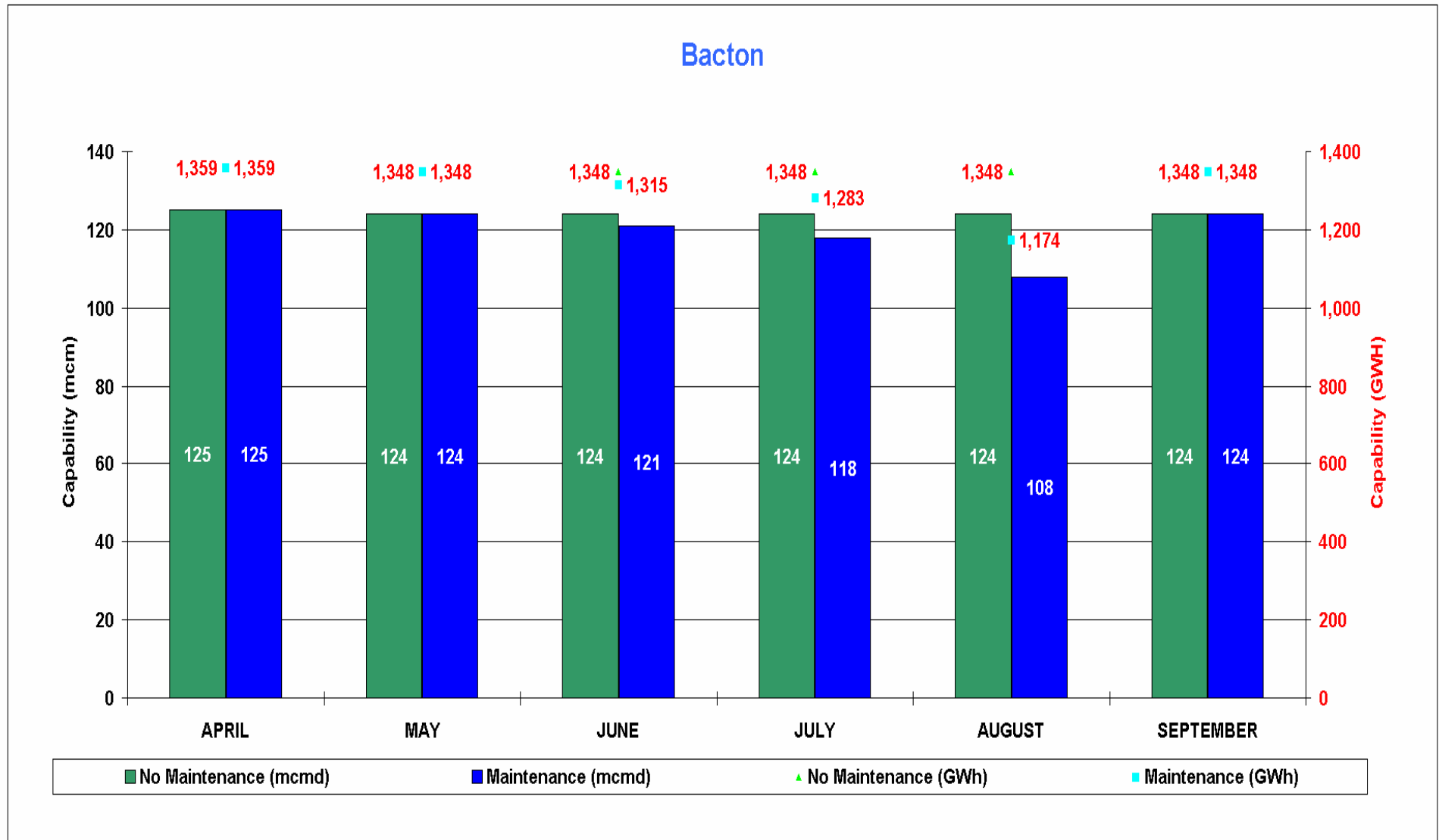
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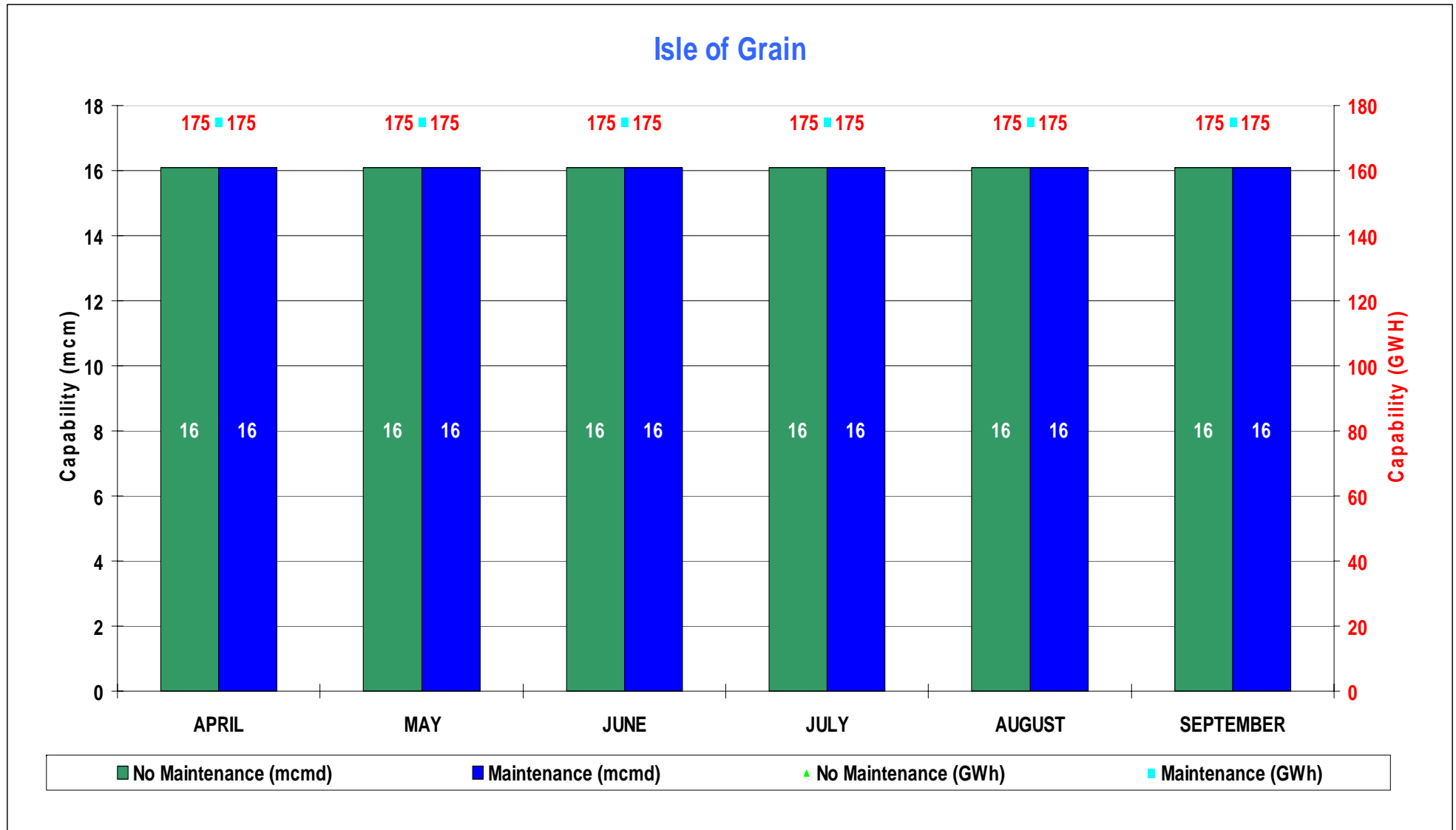
# Theddlethorpe



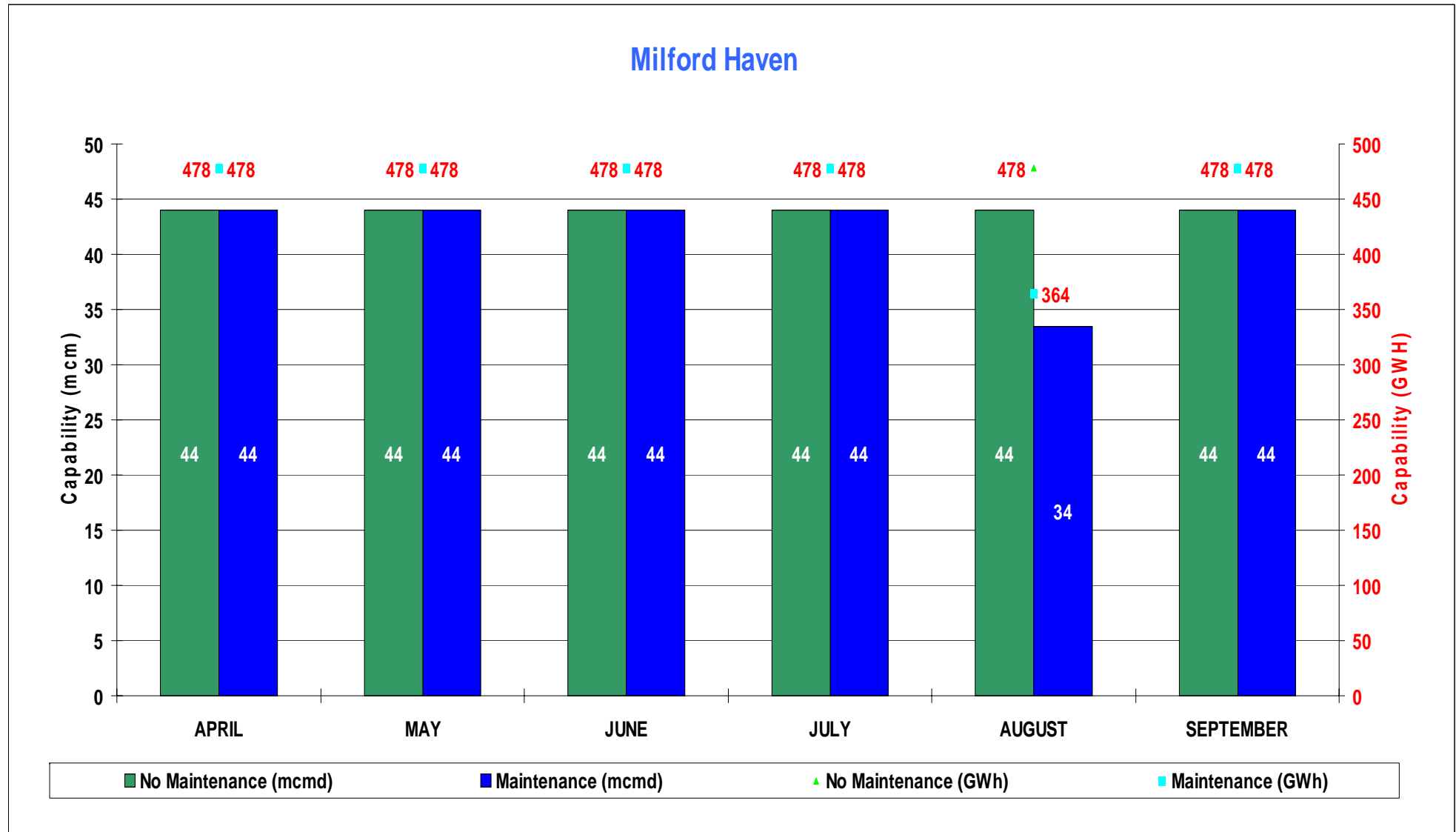
# Bacton



# Isle of Grain



# Milford Haven



## 5. Maintenance Work by Month

### April 2008

<b>Compressor Station Outages</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Warrington	01/04 – 30/09	<b>NW</b>	Routine Maintenance and Control System Replacement
Kirriemuir	07/04 – 18/05	<b>SC</b>	Routine Maintenance

<b>Pipeline Work</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Feeder 14	10/04 – 13/04	<b>SW</b>	Tie in at Aylesbeare
Feeder 28	14/04 – 20/04	<b>WS</b>	Herbranston AGI - Tie in South Hook LNG

<b>On Line Inspections</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Feeder 16	28/04 – 04/05	<b>NW</b>	Barrow to Lupton

## May 2008

<b>Compressor Station Outages</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Warrington	01/04 – 30/09	NW	Routine Maintenance and Control System Replacement
Kirriemuir	07/04 – 18/05	SC	Routine Maintenance
Aylesbury	05/05 – 18/05	SO	Routine Maintenance
Cambridge	12/05 – 25/05	EA	Routine Maintenance

<b>Pipeline Work</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Feeder 5	01/04 – 04/06	EA	A14 Diversion works
Feeders 2 & 23	05/05 – 31/05	SW	Peterstow MJ - Construct & commission header linking Feeders 2 and 23
Feeder 2	12/05 – 23/06	SW	Treaddow PRI - Feeder 2 shutdown for tie-in works
Feeder 18	06/05 – 08/05	SE	Gravesend – hot tap connection
Feeder 7	19/05 – 31/05	SO	Lockerley compressor tie ins
Feeder 7	19/05 – 31/05	SO	Lockerley minimum offtake connection
Feeder 20	19/05 – 25/06	SW	Aylesbeare – validate new block valve and perform RVOs

<b>On Line Inspection</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Feeder 16	21/04 – 04/05	NW	Barrow to Lupton
Feeder 15	05/05 – 18/05	NW	Lupton to Bretherton
Feeder 15	19/05 – 01/06	NW	Bretherton to Warburton

## June 2008

<b>Compressor Station Outages</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Warrington	01/04 – 30/09	<b>NW</b>	Routine Maintenance and Control System Replacement
Chelmsford	02/06 – 15/06	<b>EA</b>	Routine Maintenance
Peterstow	02/06 – 22/06	<b>SW</b>	Routine Maintenance
Carnforth	02/06 – 15/06	<b>NW</b>	Routine Maintenance
Avonbridge West	09/06 – 22/06	<b>SC</b>	Routine Maintenance
Wisbech	09/06 – 22/06	<b>EA</b>	Routine Maintenance
Avonbridge East	16/06 – 29/06	<b>SC</b>	Routine Maintenance
Churchover	16/06 – 29/06	<b>WM</b>	Routine Maintenance and Junction Rebuild
Scunthorpe	23/06 – 13/07	<b>EM</b>	Routine Maintenance
Diss	23/06 – 06/07	<b>EA</b>	Routine Maintenance
Alrewas	30/06 – 13/07	<b>WM</b>	Routine Maintenance

<b>Pipeline Work</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Feeder 5	01/04 – 04/06	<b>EA</b>	A14 Diversion works
Feeder 2	12/05 – 23/06	<b>SW</b>	Treaddow PRI - Feeder 2 shutdown for tie-in works
Feeder 2	09/06 – 30/06	<b>SW</b>	Treaddow AGI construction, tie in and commission
Feeder 14 & 20	09/06 – 15/06	<b>SW</b>	Kenn re-routing for 14 to Kenn South / Tie in Kenn North
Feeder 18	09/06 – 13/06	<b>SE</b>	Isle of Grain Link - Hot tap
Feeder 20	16/06 – 18/06	<b>SW</b>	Aylesbeare - tie in to new feeder 20
Feeder 20	19/06 – 21/06	<b>SW</b>	Ottery St Mary – tie in to new feeder 20
Feeder 20	23/06 – 24/06	<b>SW</b>	Ottery to Aylesbeare feeder commissioning
Feeder 20	25/06 – 30/06	<b>SW</b>	Kenn & Aylesbeare – Tie in new feeder 20

## June 2008 cont..

<b>On Line Inspection</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Feeder 22	02/06 – 15/06	<b>EM</b>	Goxhill to Hatton

## July 2008

<b>Compressor Station Outages</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Warrington	01/04 – 30/09	<b>NW</b>	Routine Maintenance and Control System Replacement
Scunthorpe	23/06 – 13/07	<b>EM</b>	Routine Maintenance
Diss	23/06 – 06/07	<b>EA</b>	Routine Maintenance
Alrewas	30/06 – 13/07	<b>WM</b>	Routine Maintenance
Peterborough	07/07- 20/07	<b>EA</b>	Routine Maintenance
Aberdeen	21/07 – 31/08	<b>SC</b>	Routine Maintenance
Bishop Auckland	21/07 – 27/07	<b>NO</b>	Routine Maintenance
Hatton	21/07 – 24/08	<b>EM</b>	Routine Maintenance
Moffat	28/07 – 10/08	<b>SC</b>	Routine Maintenance

<b>Pipeline Work</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Feeder 5 & 18	14/07 – 27/07	<b>SE</b>	Shorne – Hot tap connections
Feeder 10	21/07 – 03/08	<b>SC</b>	Shutdown between St. Fergus and Aberdeen defect inspection
Feeder 29	23/07 – 30/07	<b>NE</b>	Asselby tie ins
Feeder 18	28/07 – 03/08	<b>SE</b>	Gravesend – hot tap connection

<b>On Line Inspection</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Feeder 18	07/07 – 14/07	<b>EA</b>	Matching Green to Ryehouse
Feeder 4	21/07 – 27/07	<b>WM/NW</b>	Audley to Shocklach
Feeder 6	28/07 – 10/08	<b>NE</b>	Pickering to Burton Agnes

## August 2008

<b>Compressor Station Outages</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Warrington	01/04 – 30/09	<b>NW</b>	Routine Maintenance and Control System Replacement
Hatton	21/07 – 24/08	<b>EM</b>	Routine Maintenance
Aberdeen	21/07 – 31/08	<b>SC</b>	Routine Maintenance
Moffat	28/07 – 10/08	<b>SC</b>	Routine Maintenance
Wormington	04/08 – 24/08	<b>SW</b>	Routine Maintenance
Nether Kellet	11/08 – 24/08	<b>NW</b>	Routine Maintenance
Bathgate	25/08 – 07/09	<b>SC</b>	Routine Maintenance
Huntingdon	25/08 – 28/09	<b>EA</b>	Routine Maintenance
Lockerley	25/08 – 14/09	<b>SO</b>	Routine Maintenance
Kings Lynn	25/08 – 07/09	<b>EA</b>	Routine Maintenance

<b>Pipeline Work</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Feeder 4	04/08 – 17/08	<b>EM</b>	Edingale Minimum Offtake Connection
Feeder 11	11/08 – 24/08	<b>NW</b>	Grayrigg to Salmesbury defect inspection
Feeder 29	11/08 – 21/08	<b>NE</b>	Easington & Ganstead tie ins
Feeder 28	18/08 – 31/08	<b>SW</b>	Treadow PRI commissioning and tie-in
Feeder 29	22/08	<b>NE</b>	Easington to Ganstead pipeline commissioning
Feeder 29	23/08 – 30/08	<b>NE</b>	Pannal tie ins

<b>On Line Inspection</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Feeder 3	11/08 – 24/08	<b>EA</b>	Whitwell to Peters Green
Feeder 7	18/08 – 31/08	<b>EM</b>	Eastoft to Keadby
Feeder 6	28/07 – 10/08	<b>NE</b>	Pickering to Burton Agnes

## September / Oct 2008

<b>Compressor Station Outages</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Warrington	01/04 – 30/09	<b>NW</b>	Routine Maintenance and Control System Replacement
Bathgate	25/08 – 07/09	<b>SC</b>	Routine Maintenance
Huntingdon	25/08 – 28/09	<b>EA</b>	Routine Maintenance
Lockerley	25/08 – 14/09	<b>SO</b>	Routine Maintenance
Kings Lynn	25/08 – 07/09	<b>EA</b>	Routine Maintenance
Wooler	08/09 – 21/09	<b>NO</b>	Routine Maintenance

<b>Pipeline Work</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Feeder 9	30/09 – 12/10	<b>SO</b>	Barton Stacey to Lockerley pipeline commissioning
Feeder 21	01/09 – 30/09	<b>NW/WA</b>	A5117 Diversion works – Bypass Mickle Trafford to Deeside
Feeder 21	01/09 – 12/10	<b>NW</b>	Holdford minimum connection
Feeder 18	08/09 – 28/09	<b>SE</b>	Isle of Grain interconnecting pipework commissioning
Feeder 4	08/09 – 14/09	<b>WM</b>	A47 diversion - Shutdown between Blaby and Alrewas
Feeder 29	22/09 – 29/09	<b>NE</b>	Asselby to Pannal pipeline Commissioning
Feeders 11 & 15	24/09 – 30/10	<b>NO</b>	Longtown regulators commissioning

<b>On Line Inspection</b>	<b>Dates</b>	<b>LDZ</b>	<b>Maintenance Description</b>
Feeder 14	15/09 – 21/09	<b>WM</b>	Churchover to Wormington
Feeder 25	20/10 – 31/10	<b>NE</b>	Pannal to Nether Kellet

## **6 Maintenance Affected Exit Points**

Some Exit Points may have short duration supply disruptions whilst NTS maintenance is being completed.

Where possible, maintenance at exit points are co-ordinated with the end user maintenance to avoid supply disruption.

Shippers, End-Users and Distribution Networks will be advised in accordance with the Unified Network Code timescales.

Maintenance day(s) notifications have been issued to all relevant parties for the work detailed in this Draft April 2008 Maintenance plan.

Should any changes or additions to the requested Maintenance days be required, all relevant parties will be notified as per the timescales detailed in the Unified Network Code.