

Industry leading expertise and capability, delivering custom engineered solutions across the gas value chain.

## Challenges

Terminal operators seek to maximise value from existing assets. Upgrading facilities to meet the ever changing economic, environmental and operational requirements in the gas sector often calls for strong process and engineering expertise. We have delivered solutions on gas terminals across the UK and internationally. Our expertise covers the delivery of both greenfield and brownfield projects including expansions and revamps in challenging live operating environments with minimum disruption to terminal operations.

We often work with clients from an early stage in the project, allowing us to identify and resolve critical issues early in the design phase and maximise value by developing solutions which meet and exceed our clients' needs.



Over 500 gas processing plants delivered globally, with recent projects including major gas receiving facilities in the UK.

**Robert Pitman** Business Development Director



✉ Robert.Pitman@costain.com

☎ +44 (0)7881090536

Costain House, 1500 Aviator Way,  
Manchester, M22 5TG, UK.

## Our approach

Costain's track record in delivering major gas terminal projects for blue chip customers is supplemented by our team of multidisciplinary specialists who are consistently at the cutting edge of the gas chain; advancing our technologies, patents and portfolio of intellectual property.

Drawing on our asset lifecycle perspective, we design and deliver proactive operational strategies on gas terminals to address integrity issues and enhance the performance of assets; helping our clients yield optimum results.

We offer extensive complex project expertise in managing site construction works with an excellent record of leadership in safety, health and environmental performance.

Our project experience includes a 15-year term services framework contract with Eni Pakistan, providing concept development, FEED, EPCm, complex project delivery and asset optimisation and support for major upgrades and development at the Bhit gas treatment plant and Badhra gas fields, resulting in record gas production levels.

### Our services

- Full life cycle capability encompassing the principles of whole life cycle options and best available techniques.
- Highest standard of safety and quality on top tier COMAH sites.
- Custom designs and value-engineered solutions tailored to our clients' needs.
- Commissioning, operational support and performance investigations.

### Benefits:

- Life cycle cost reduction.
- Collaborative working relationships with clients and subcontractors to generate solutions that deliver value.
- Robust knowledge and experience to deliver the most complex of projects.
- Bringing people, processes and technology together in an integrated approach to ensure effective project delivery.

## UK terminal experience

Costain's experience extends to substantial modifications and enhancement projects undertaken on major gas landfall/reception terminals and other gas processing assets in the UK, with projects delivered at the following major terminals:

	SCOPE					
	Brownfield / Revamp	Select / Appraise	FEED	EPC(m)	Live plant working	COMAH
Bacton	✓			✓	✓	✓
Barrow	✓	✓	✓	✓	✓	✓
Connah's Quay	✓	✓	✓	✓	✓	✓
Dimlington	✓	✓	✓	✓	✓	✓
Easington	✓	✓	✓	✓	✓	✓
Holford		✓	✓	✓	✓	✓
Huntingdon / Peterborough	✓	✓	✓	✓	✓	✓
Mossmorran	✓	✓	✓	✓	✓	
St. Fergus	✓	✓	✓	✓	✓	✓
Stublach		✓	✓	✓	✓	✓
Teesside	✓	✓	✓	✓	✓	✓



### Dimlington Terminal, UK - Freon replacement project

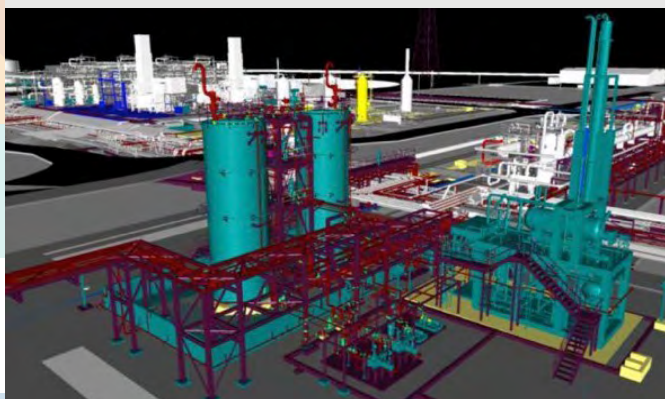
Upgrade to terminal's refrigeration system in compliance with new environmental legislation encompassing replacement of ozone depleting substances with cleaner refrigeration systems.

#### Solution

Delivered feasibility studies for optimum refrigeration system selection, novel FEED solution, detailed design, EPC and commissioning support across four process trains on an operating top tier COMAH site ahead of schedule.

#### Outcome

- Innovative process solution for dewpointing of gas combining Joule Thomson technology with R134A refrigerant.
- Technology solution eliminates the need to install new process equipment and costly plant shutdowns estimated at £3M/day in lost revenue.
- Significant savings with 60% CAPEX reduction in FEED.
- High gas production capacity retained with extended operational life of asset.
- Project success recognised both nationally and internationally, winning IChemE Industry Project of the Year.



### Centrica Energy Ltd - Barrow terminals optimisation project

Optimisation of Barrow's Morecambe terminals to improve asset utilisation, increase efficiency, and provide compliance with output gas specifications and gas safety management / environmental requirements.

#### Solution

Core engineering services encompassing front end engineering design, detailed design, procurement, construction, installation, commissioning support and project management services.

#### Outcome

- Operational performance issues addressed on a COMAH Tier 1 site.
- Innovative process involving migration to single terminal operation, processing 350 MMSCFD from a combined North and South Morecambe feed streams.
- Utilised modularisation strategy to minimise schedule and onsite work.
- Reduction in excess capacity and operating costs with improved asset life.
- Sufficient gas supply to meet the demand for 1.5 million homes in the UK, supporting the target of securing UK's future energy needs.

