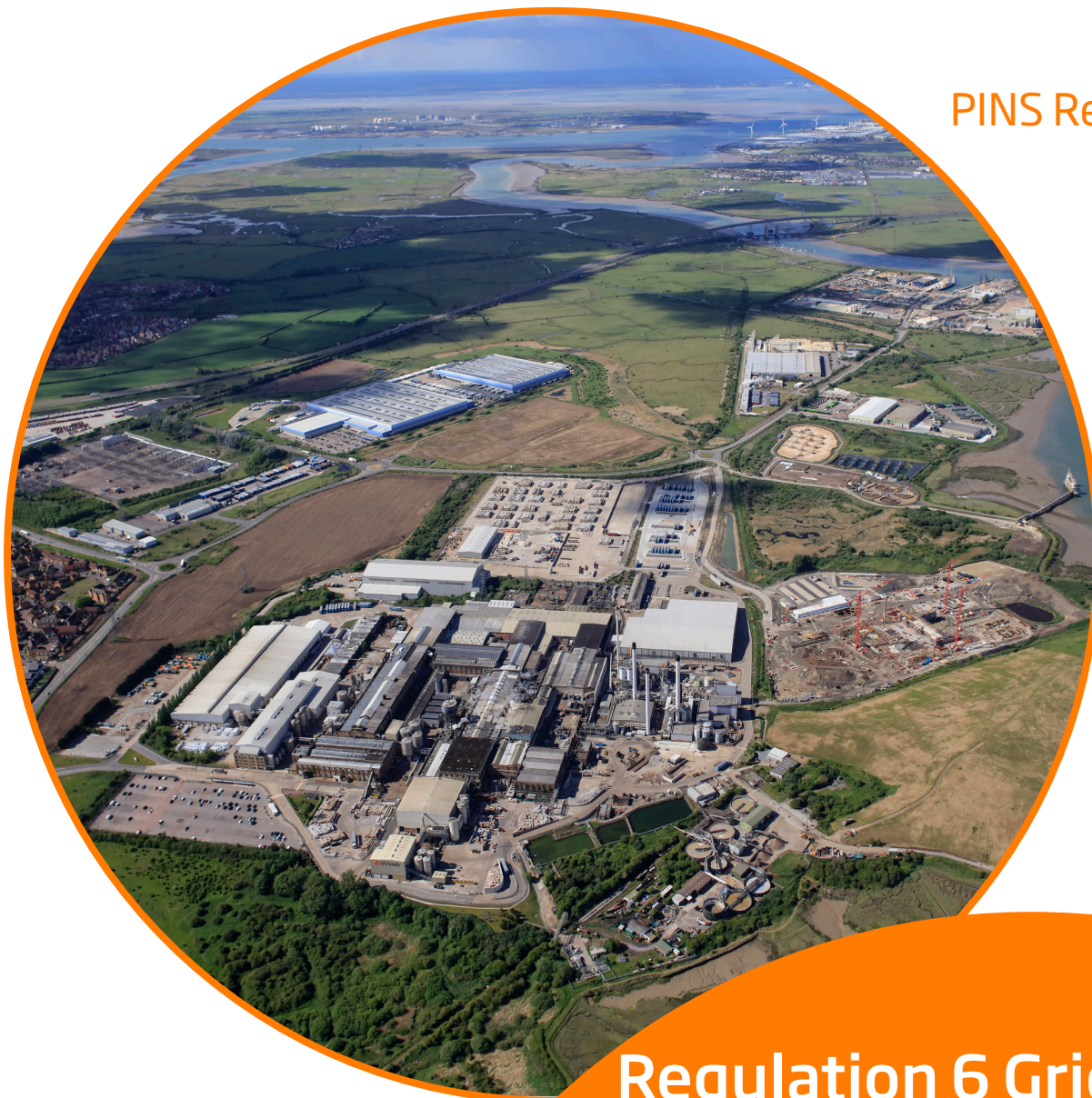




The Kemsley Mill K4 Combined Heat and Power Generating Station Development Consent Order

PINS Ref: EN010090



Regulation 6 Grid and Gas Connection Statement

Document 5.5

Author: DHA Planning

Planning Act 2008
The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009
Regulation: 5(2)(p)



April 2018 - Submission Version

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Appendix A – Tie In Plan [Document 4.13]

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Glossary

CHP – Combined Heat and Power Plant

DCO – Development Consent Order

DECC – Department of Energy and Climate Change

EIA – Environmental Impact Assessment

ES – Environmental Statement

EN-1 – Overarching National Policy Statement for Energy

EN-2 – National Policy Statement for Fossil Fuel Electricity Generating Infrastructure

MW – Megawatts (a measure of electrical energy)

MWth – Megawatt thermal (a measure of thermal energy)

NSIP – Nationally Significant Infrastructure Project

NTS – Non Technical Summary of the Environmental Statement

SoS – Secretary of State

1 Context

- 1.1.1 DS Smith Paper Ltd are seeking consent to construct and operate 'K4', a replacement gas fuelled Combined Heat and Power Plant at the Kemsley Paper Mill in Sittingbourne, Kent.
- 1.1.2 The K4 CHP plant will supply electricity and steam to the mill and will comprise a gas turbine of 52-57 MW nominal power output, waste heat recovery boilers providing 105 MWth steam and steam turbine technology of 16MW nominal power output.
- 1.1.3 The Planning Act 2008 states, at Sections 14 and 15, that the construction or extension of an onshore generating station with a thermal capacity of more than 50 megawatts comprises a nationally significant infrastructure project. Development Consent is therefore required, under the provisions of the 2008 Act, which in practice requires an application for a Development Consent Order to be made to the Planning Inspectorate, with a final decision on the application to be taken by the Secretary of State.
- 1.1.4 Regulation 6 (1) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 states the following:
- (1) If the application is for the construction or extension of a generating station the application must be accompanied by –
 - (a) If the application is for a generating station, that is not an offshore generating station –
 - (i) A statement of who will be responsible for designing and building the connection to the electricity grid; and
 - (ii) If a gas fuelled generating station, a statement of who will be responsible for designing and building the gas pipeline connection to the generating station.
- 1.1.5 This Statement forms the Grid and Gas Connection Statement for the proposed K4 CHP plant as required by Regulation 6 (1).
- 1.1.6 This Statement should be read in conjunction with the Environmental Statement and NTS and Design and Access Statement in particular which accompany the DCO application.
- ### 1.2 E.ON and Costain
- 1.2.1 DS Smith Paper Ltd is the applicant for the purposes of the DCO application.
- 1.2.2 DS Smith has entered into an exclusivity agreement with E.ON, who would be responsible for the construction and operation of the proposed K4 CHP plant. E.ON has set up a special purpose vehicle for that purpose, which is 'Kemsley CHP Limited'.

- 1.2.3 Costain are employed by E.ON (Kemsley CHP Ltd) to act as their advisors in respect of the technical design of K4 and would be the main site contractor for the construction of K4. Costain are one of the largest engineering solution providers within the UK.

2 Proposal Summary

- 2.1.1 A full description of the proposed development is provided in Chapter 2 of the ES (and summarised within the Non Technical Summary) [Documents 3.1 and 3.2] and is also provided within the Design and Access Statement [Document 5.3].
- 2.1.2 The Kemsley Paper Mill is operated by DS Smith Paper Ltd and is capable of producing up to 800,000 tonnes of recycled paper and packaging case materials each year.
- 2.1.3 The process requires significant amounts of electricity and heat (the latter to produce steam). Currently the energy infrastructure of the paper mill comprises the following:
- K1 – a gas turbine CHP plant and 6 ancillary package boilers located within the mill site which provides electricity and steam to the mill;
 - K2 – a steam generator located within the mill site which uses waste plastic and sludge as a source to provide steam to the mill;
 - K3 – an energy from waste plant currently under construction to be operated by Wheelabrator Technologies to the east of the main mill complex which from 2019 will provide steam to the mill.
- 2.1.4 K1, the existing gas turbine CHP plant, is operated under a contract by E.ON (Business Heat and Power). The plant is 22 years old and some components require significant investment as they are reaching the end of their operational life. In addition the K1 plant is oversized in terms of operational capacity, as it was originally designed to serve both the Kemsley and Sittingbourne paper mills, with the latter no longer in existence. K1 would also need modification in order to be able to operate under the more stringent limitations to be imposed in 2020 by the Industrial Emissions Directive.
- 2.1.5 It is therefore proposed to replace K1 with a new CHP plant, 'K4', which would be designed to meet the specific needs of the Kemsley Paper mill and which would supply both electricity and heat for use within the paper making process. K4 would be located on a parcel of land within the south-eastern part of the Kemsley Paper mill site, to the south of the existing K1 plant.

3 Policy Context

3.1 EN-1

3.1.1 Paragraph 4.9.1 states that the grid connection of an electricity generation plant to the electricity network is an important consideration for applicants. EN-1 expects, wherever possible, applications for new generating stations and relating infrastructure to be contained in a single application or submitted in tandem if contained within different applications.

3.2 EN-2

3.2.1 Paragraph 2.2.11 states that applicants will usually have satisfied themselves that a viable connection exists before submitting an application for determination and that any application must include information on how the generating station is to be connected and any environmental issues likely to arise from that connection.

4 Electricity Grid Connection Statement

- 4.1.1 As demonstrated by the Tie-Ins Plan (Document 4.13 – provided in Appendix A), there is a cable tray for an electrical connection to 33kV switch yard to grid connection point (Plan reference 2(t)) and an existing 132kV local Distribution Network Operator (DNO) grid connection (Plan reference 2(i)) located within the Kemsley Paper Mill site, to the north-west of the construction zone for the proposed K4 CHP.
- 4.1.2 The existing K1 CHP plant connects to the existing 132kV grid connection facility, allowing for the export of electricity to the grid when levels of electricity generation exceed the operational requirements of the mill. The DNO connection also allows for electricity to be imported in the event of K1 being shutdown, for instance for scheduled maintenance.
- 4.1.3 The proposed K4 CHP plant would replace K1 and would therefore tie-in to the DNO grid connection as per the current arrangement, via the cable tray electrical connection and would only require a new switchgear to be installed within the existing substation. K4 would then function in exactly the same way as K1; exporting electricity if the requirements of the mill fall below generation levels, but with the ability to import electricity in the event of a K4 shutdown.
- 4.1.4 Provision is made within Work No.2 of the draft DCO for the retention of, connection into and continued use of the 33kV cable tray and DNO 132kV electricity grid connection. No other consents are required to allow that connection to be made.
- 4.1.5 The responsibility of designing and building the connection to the electricity grid would therefore fall to Costain, working on behalf of E.ON (Kemsley CHP Limited), or another appropriate contractor should the current exclusivity agreement alter.

5 Gas Grid Connection Statement

- 5.1.1 Gas is supplied to the Kemsley paper mill site via a gas main owned by Southern Gas Networks which runs through the southern part of the Kemsley paper mill site, as per the plan attached at Appendix B, before terminating at an existing gas metering station.
- 5.1.2 As illustrated by the Tie In Plan [Document 4.13 – Appendix A] from that point the gas is transferred by a DS Smith pipeline (reference 2(m)) to an existing gas station (reference 2(e)) located within the Kemsley Paper Mill site, at the north-eastern corner of the K4 proposal construction site and included within the DCO application boundary. That gas station currently supplies gas to K1 and K2.
- 5.1.3 The proposed K4 CHP plant would connect to that existing gas station, with all works taking place within the Kemsley mill complex and within the DCO boundary.
- 5.1.4 Provision is made within Work No.2 of the draft DCO for the retention of, connection into and continued use of the gas pipeline and gas station. No other consents are required to allow those connections to be made.
- 5.1.5 The responsibility of designing and building the connection to the gas grid would therefore fall to Costain, working on behalf of E.ON (Kemsley CHP Limited), or another appropriate contractor should the current exclusivity agreement alter.

Appendix A

Tie-Ins Plan [Document 4.13]

**Legend**

- Application boundary
- Proposed buildings (Illustrative)

Work No.2

- 2(a) Potable water
- 2(b) K1 Package Boilers (6 off)
- 2(c) Old water treatment plant (WTP)
- 2(d) Feed water tanks
- 2(e) Gas stations
- 2(f) New WTP
- 2(g) Pumping station (Process water)
- 2(h) Low & medium pressure steam manifolds
- 2(i) DNO 132kV electricity grid connection
- 2(j) Waste water treatment plant connection
- 2(k) Surface water outfall
- 2(l) Control room
- 2(m) Gas pipeline to grid connection point
- 2(n) Diesel & electric fire water pumps
- 2(o) Fire water tank
- 2(p) Fire water ring main
- 2(q) Condensate return system including storage tank
- 2(r) Steam recovery system
- 2(s) Three air compressors
- 2(t) Cable tray for electrical connection to 33kV switch yard to grid connection point
- 2(u) Process effluent piping system including monitoring devices
- 2(v) Roadways and walkways including lighting

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Notes

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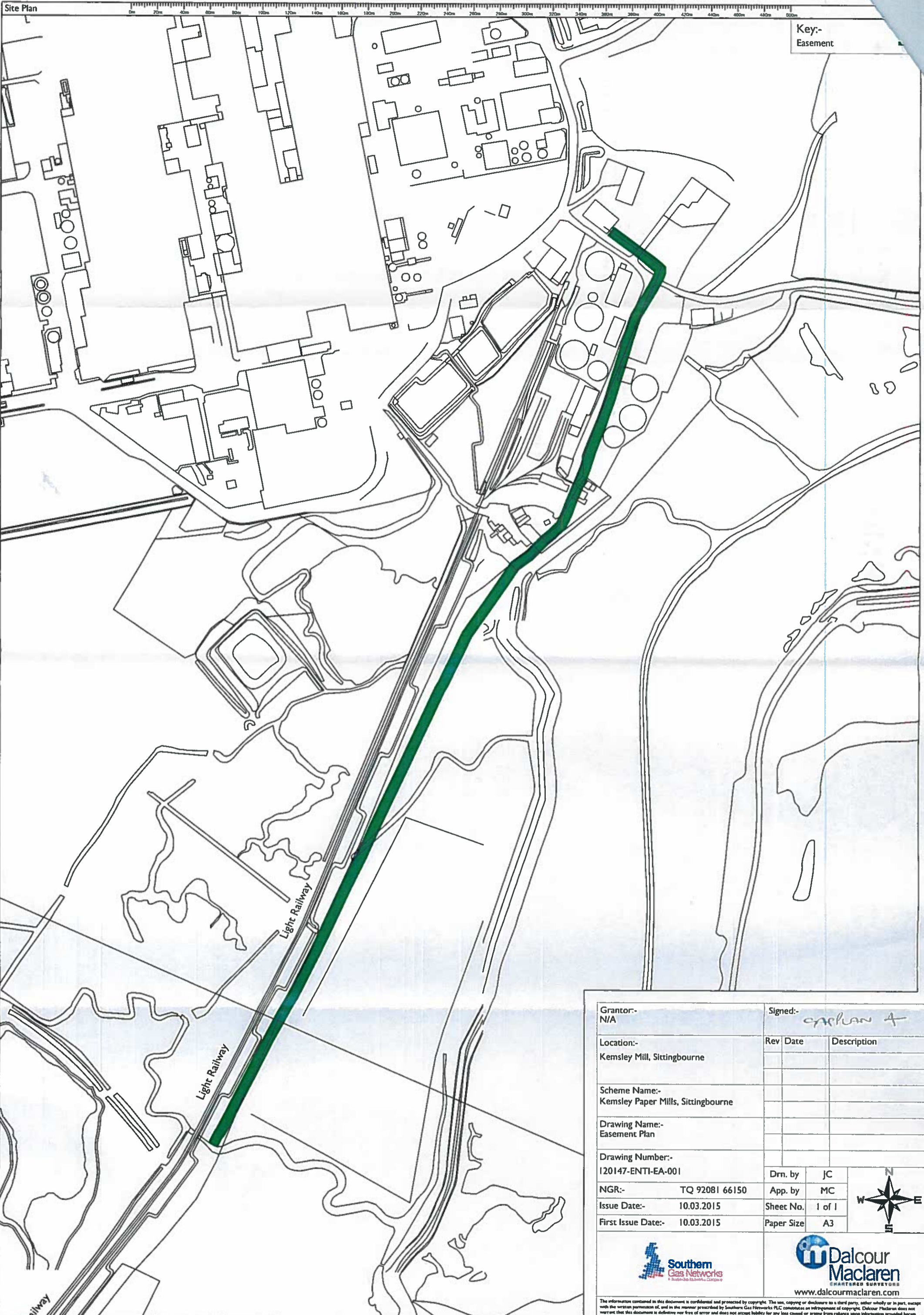


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The Kemsley Mill K4 Combined Heat and Power Generating Station Development Consent Order**Title: Work No.2 - Tie-ins to existing site facilities (Illustrative)**Scale 1: 1,000 @ A1
Date: Mar 2018
Author: R.MasseyDoc reference
10392-0027-007Document number
4.13

Appendix B

Plan showing location of Southern Gas Networks Pipeline



| | | |
|---|------------------------------|-------------|
| Grantor:- N/A | Signed:- <i>CAROLAN A</i> | |
| Location:- Kemsley Mill, Sittingbourne | Rev Date | Description |
| Scheme Name:- Kemsley Paper Mills, Sittingbourne | | |
| Drawing Name:- Easement Plan | | |
| Drawing Number:- 120147-ENTI-EA-001 | Drn. by | JC |
| NGR:- TQ 92081 66150 | App. by | MC |
| Issue Date:- 10.03.2015 | Sheet No. | 1 of 1 |
| First Issue Date:- 10.03.2015 | Paper Size | A3 |



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