



Wheelabrator
TECHNOLOGIES



Regulation 6 - Grid Connection Statement

Wheelabrator Kemsley (K3 Generating Station) and Wheelabrator Kemsley North (WKN) Waste to Energy facility Development Consent Order

PINS Ref: EN010083

Planning Act 2008
The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009
Regulation: 6(1)(a)(i)

Document 4.5
September 2019 - Submission Version





Regulation 6 – Grid Connection Statement

Client: **Wheelabrator Technologies Inc**

Project: **Wheelabrator Kemsley (K3
Generating Station) and
Wheelabrator Kemsley North (WKN)
Waste to Energy Facility DCO**

Date: **September 2019**

Reference: **EN010083 – Document 4.5**

Author: **David Harvey**
BA(Hons) MA MRTPI PIEMA

DHA
Eclipse House
Eclipse Park
Sittingbourne Road
Maidstone
Kent
ME14 3EN

Tel: 01622 776226
Email: info@dhaenvironment.co.uk
Web: www.dhaenvironment.co.uk
Twitter: www.twitter.com/dhagroup

Part of the DHA Group
Planning | Urban Design | Transport | Environment

Contents

1	INTRODUCTION	2
1.1	Purpose of this document	2
1.2	The Applicant	2
2	PROPOSED DEVELOPMENT	3
2.2	Proposed Development	3
2.3	The Site(s)	3
2.4	The Works Proposed	5
3	POLICY CONTEXT	7
3.1	EN-1	7
3.2	EN-3	7
4	ELECTRICITY GRID CONNECTION STATEMENT	8
4.2	K3	8
4.3	WKN	8
4.4	Summary	8

1 Introduction

1.1 Purpose of this document

1.1.1 This Statement has been prepared on behalf of Wheelabrator Technologies Inc (WTI) in support of an application for a Development Consent Order (a 'DCO'), that has been submitted to the Secretary of State (the 'SoS') for Business, Energy and Industrial Strategy, via the Planning Inspectorate, under The Planning Act 2008.

1.1.2 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.

1.1.3 The proposal in question is for the construction and operation of the K3 and WKN onshore generating stations. Regulation 6(1)(a)(i) therefore applies. Both the K3 and WKN generating stations are fuelled by the incineration of waste and therefore Regulation (1)(a)(ii) does not apply in this case.

1.2 The Applicant

1.2.1 WTI is the second largest US waste-to-energy business and is an industry leader in the conversion of everyday residential and business waste into clean energy. WTI currently has a platform of 25 strategically located assets across the US and UK – 19 waste-to-energy facilities (three under construction), two waste fuel facilities as well as four ash monofills. WTI also recover metals for recycling at two advanced metals recovery systems and one central upgrade facility.

1.2.2 WTI currently has an annual waste processing capacity of over 7.2 million tonnes (8 million tons), and a total combined electric generating capacity of 732 megawatts—enough energy to power more than 671,100 US homes. WTI also recovers metals for recycling into commercial products. The company's vision to develop, deliver and realize the potential of clean energy speaks to WTI's ongoing commitment to the development of clean energy solutions for its customers and local communities. WTI is owned by Macquarie Infrastructure and Real Assets, a business within the Macquarie Asset Management division of Macquarie Group and a global alternative asset manager focused on real estate, infrastructure, and agriculture and energy assets.

2 Proposed development

2.1.1 This section briefly sets out the background to the proposed development, describes the site and outlines the development proposals. Further details are available in the 2019 Environmental Statement [Document 3.1], the Planning Statement [Document 4.2] and the Design and Access Statement [Document 4.3] submitted in support of the DCO application.

2.2 Proposed Development

2.2.1 WTI has made an application to the SoS for a DCO for the construction and operation of the Wheelabrator Kemsley Generating Station ('K3') and for the construction and operation of a new waste-to-energy facility on adjacent land called Wheelabrator Kemsley North ('WKN').

2.2.2 Planning permission was granted under the Town and Country Planning Act 1990 by Kent County Council in 2012 for a sustainable waste-to-energy facility (K3). Construction of the plant began in July 2016 and is expected to be completed with the plant operational by late 2019. As consented K3 will have two 102 megawatt thermal (MWth) lines, be capable of processing 550,000 tonnes of waste per annum and have a generating output of up to 49.9 megawatts (MW).

2.2.3 This application seeks a DCO which, in practical terms, would permit K3 as constructed to operate to an upgraded power generation level of up to 75MW and to process an additional 107,000 tonnes of waste per annum ("the K3 Proposed Development"). In order to properly categorise and consent those increases under the Planning Act 2008 consent is being sought for the construction and operation of K3 with a generating capacity of up to 75MW and an annual tonnage throughput of 657,000 tonnes.

2.2.4 Development Consent is also being sought for the proposed new WKN waste-to-energy facility, which would be a single 125MWth line facility capable of processing 390,000 tonnes of waste per annum, with a generating capacity of 42MW ("the WKN Proposed Development").

2.2.5 Consent for the K3 and WKN Proposed Developments is being sought via a single DCO through a single application to the SoS via PINS.

2.3 The Site(s)

Wheelabrator Kemsley (K3) Site

2.3.1 The site is located on land immediately to the east of the Kemsley Paper Mill, located 0.8km east of Kemsley, a residential suburb in the north of Sittingbourne in Kent (hereafter the 'K3 Site'). It lies adjacent to the Swale Estuary to its east, with the Isle of Sheppey beyond and within the administrative areas of Kent County Council (KCC) and Swale Borough Council (SBC). To the south of the K3 Site lies a capped former landfill site which lies adjacent to the confluence between Milton Creek and the Swale Estuary. To the north lies an area of reedbed known as Kemsley Marshes. Access to the K3 Site is obtained from Barge Way to

the north via an existing access road forming the eastern boundary of the Kemsley Paper Mill and shared with the mill operator DS Smith Ltd. The K3 Site lies in proximity to the A249 which links to both the M2 and M20 motorways to the south and with the Isle of Sheppey to the north.

Wheelabrator Kemsley North (WKN) Site

- 2.3.2 The site is located on land immediately north of the permitted K3 facility (hereafter the “WKN Site”). The WKN Site is currently being used by the Applicant as a laydown and parking area for the construction of the adjacent K3 facility. It has been cleared of vegetation and laid to concrete or hardcore with a perimeter fence.
- 2.3.3 To the east of the WKN Site lies the Swale Estuary with the Isle of Sheppey beyond. Immediately to the north lie the Kemsley Marshes beyond which lies the Kemsley Paper Mill anaerobic digester treatment works (under construction) and to the north east a jetty operated by Knauf for the import of gypsum by barge.
- 2.3.4 The location of the K3 and WKN sites is shown in Figure 1.



Figure 1: Location of the K3 and WKN sites

2.4 The Works Proposed

2.4.1 The K3 and WKN Proposed Developments are split into a number of key works within the DCO boundary. The different elements of the works pertaining to the K3 and WKN Proposed Developments are set out in the Table below and their spatial location illustrated in Figures 2 and 3.

Table 2.1: Works No.
1 - An electricity generating station (the K3 generating station) with a gross installed generating capacity of up to 75MW, comprising the specific works listed in the DCO.
1a - Installation of grid connection for Work No 1
1b - Installation of steam connection for Work No 1
1c - Alteration of existing private access road to construction, use and maintain Work No 1
1d - Creation of a temporary construction compound and laydown area for the construction of Work No 1.
1e - Construction and operation of a surface water outfall for Work No 1
2- An electricity generating station (the WKN Waste-to-energy facility) with a gross installed generating capacity of up to 42MW, comprising the specific elements listed in the DCO.
3- Installation of a new grid connection for Work No 2.
4- Alteration of existing private access road to construct, use and maintain Work No 2.
5- Temporary construction or alteration of existing private haul road for the construction of Work No 2.
6- Creation of a temporary construction compound and laydown area for the construction of Work No 2.
7- Construction and operation of a new surface water outfall for Work No 2.

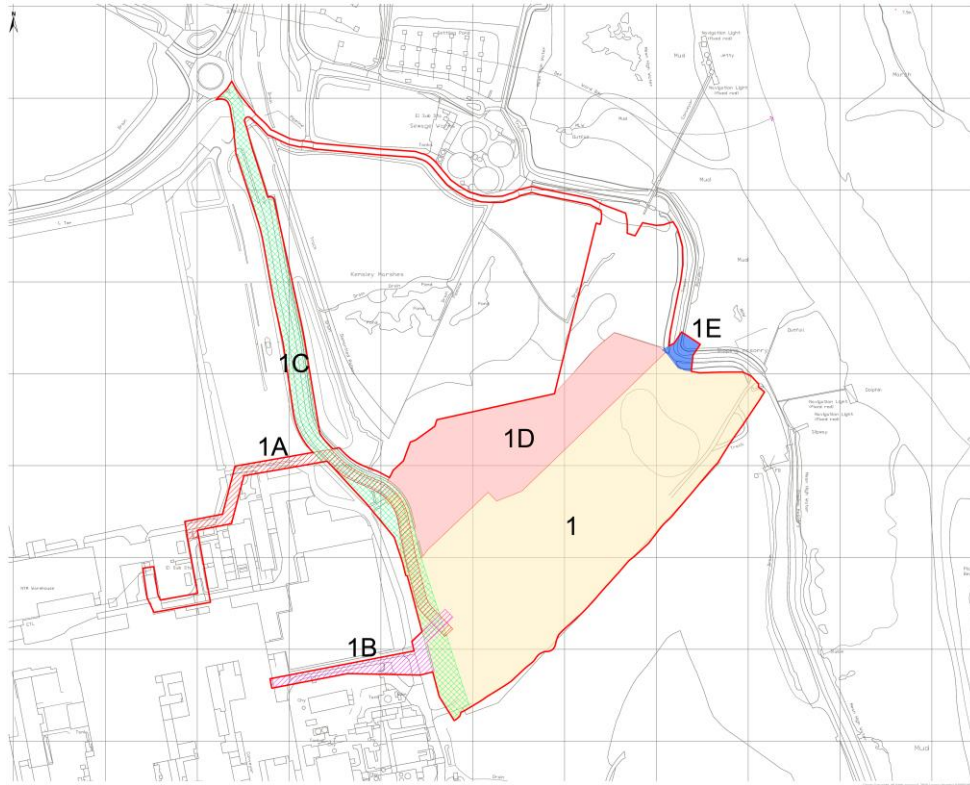


Figure 2: K3 Works Plan

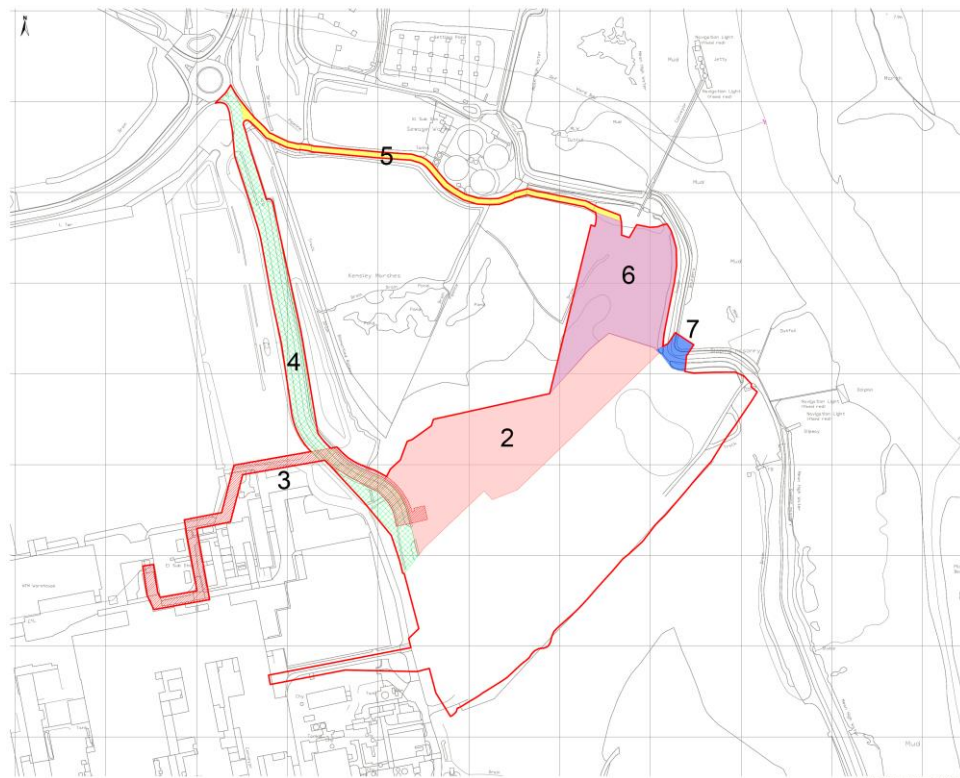


Figure 3: WKN Works Plan

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-3

3.2.1 At Paragraph 2.5.22 EN-3 recognises that EFW electricity generating stations will need to connect into a transmission network and that the technical feasibility of exporting electricity will be dependent on the capacity of the grid network to accept the likely electricity output together with the voltage and distance of connection. Paragraph 2.5.23 notes that applicants should satisfy themselves that a viable connection exists prior to making an application, and to provide details of how the generating station is to be connected and any environmental impacts which may arise from that connection.

4 Electricity Grid Connection Statement

4.1.1 Reference is made to Document 5.9; the Connection and Tie-In Plan, which is also included as Appendix A to this document.

4.2 K3

4.2.1 Development consent is being sought for the construction and operation of the K3 facility and Work No1a of the draft DCO provides for the Installation of a grid connection for Work No1 (with Work No1 being the K3 generating station). As demonstrated by the K3 Works Plan (Figure 2) Work No1a extends from the location of the K3 to the grid connection point which is an existing substation which sits within the DS Smith Paper Mill to the west of the K3 and WKN sites

4.2.2 In reality K3 is currently being constructed and is expected to be completed and operational in late 2019, as per its current planning consent. A connection is therefore already constructed between K3 and the existing substation. The K3 connection takes the form of a buried duct & cable which connects into the existing 132kV UK Power Network operated substation. The current connection will be capable of taking the additional electrical output proposed with the increase of K3 from a generating capacity of 49.9MW to 75MW.

4.3 WKN

4.3.1 It is proposed that the grid connection for the WKN facility would connect into the same substation by connecting into the existing K3 duct from the WKN site boundary. Work No. 3 within the draft DCO makes provision for the Installation of a new grid connection for Work No.2 (which is the construction of the WKN generating station) and as demonstrated by the WKN Works Key Plan (Figure 3) provision is made for that connection to run from WKN to the existing electrical substation along the route of the existing K3 duct.

4.3.2 Any upgrade works required to the substation arising from either the K3 generating capacity upgrade or from the construction and operation of WKN would be undertaken by UK Power Networks.

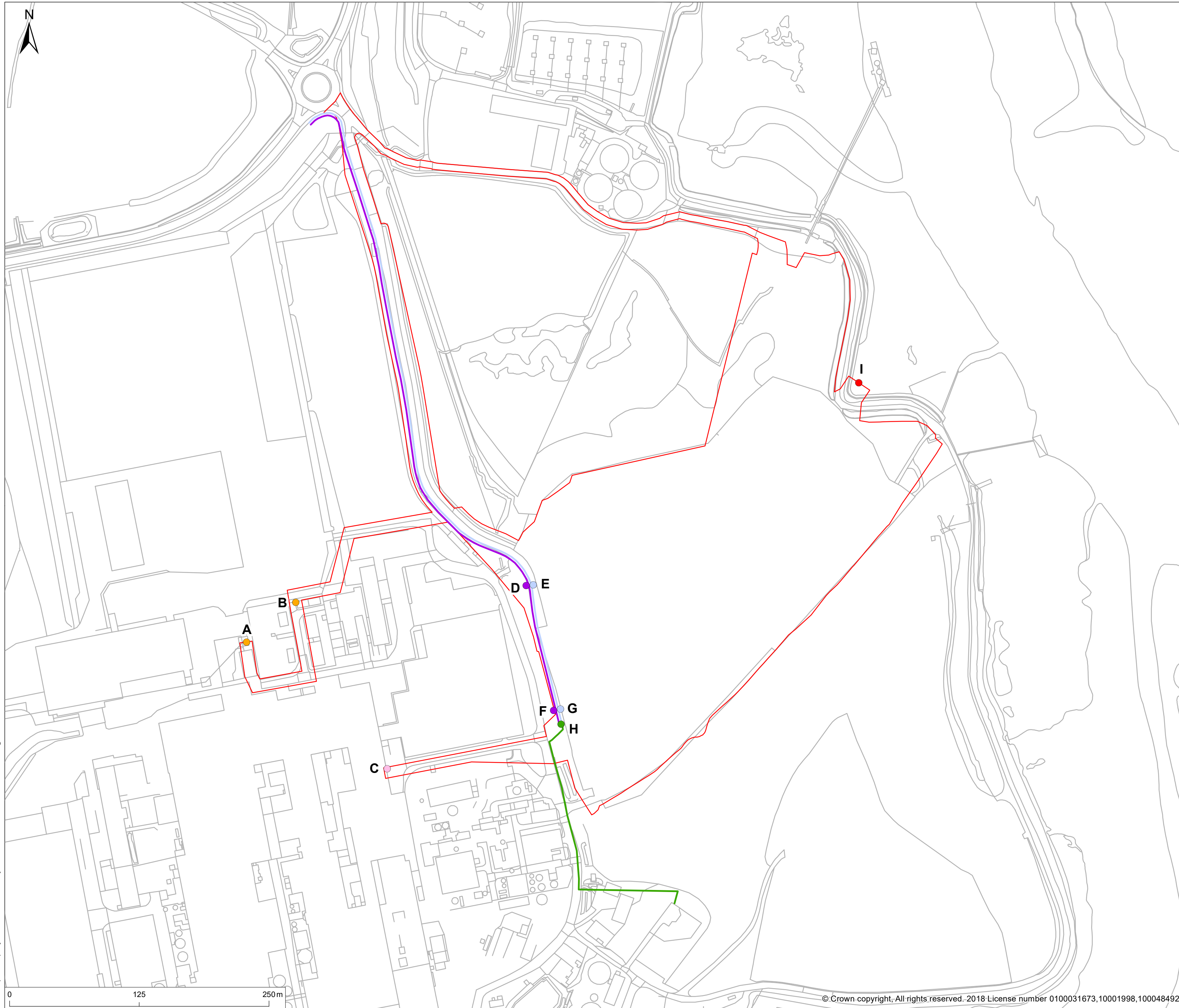
4.4 Summary

4.4.1 In accordance with EN-1 and EN-3 the applicant has therefore satisfied themselves that provision is made within the DCO for a grid connection to serve the K3 facility, with that grid connection already having been constructed in reality. That grid connection is capable of continuing to serve K3 operating to 75MW of electricity generation.

4.4.2 Provision is made within the draft DCO for works to create the WKN connection and as such those works have been assessed within the Environmental Statement. However the nature of the connection and the works required is such that any environmental impacts of that connection works alone will be minimal.

Appendix A

Document 5.9 - Connection and Tie In Plan



EN010083
 Planning Act 2008
 The Infrastructure Planning (Applications: Prescribed forms
 and Procedure) Regulations 2009
 Regulation: 5(2)(o)

Legend

- ▭ DCO Boundary
- Existing BT
- Existing Towns Water
- Existing Foul Sewage
- A - WKN Tie in for Electricity Grid
- B - K3 Tie in for Electricity Grid
- C - K3 Tie in for Low Pressure Stream Connection
- D - WKN Tie in for BT data
- E - WKN Tie in for Towns Water
- F - K3 Tie in for BT data
- G - K3 Tie in for Towns Water
- H - K3 and WKN Tie in for Foul Sewage
- I - K3 and WKN Tie in for Surface Water Outfall

© 2019 RPS Group

Notes
 1. This drawing has been prepared in accordance with the scope of RPS's appointment with its client and is subject to the terms and conditions of that appointment. RPS accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided.
 2. If received electronically it is the recipients responsibility to print to correct scale. Only written dimensions should be used.



20 Western Avenue, Milton Park, Abingdon, Oxfordshire, OX14 4SH
 T: +44(0)1235 821 888 E: rps@rpsgroup.com F: +44(0)1235 834 698

Client **Wheelabrator Technologies Inc**

Project **K3 and WKN DCO**

Title **K3 and WKN – Connection and Tie-In Plan**

Status **SUBMISSION** Drawn By: **CR** PM/Checked By: **TS**

Job Ref **OXF9812** Scale @ A2: **1:2,500** Date Created: **SEPT 2019**

Document Reference **9812-0051-005** Document Number **5.9**

© Crown copyright. All rights reserved. 2018 License number 0100031673,10001998,100048492