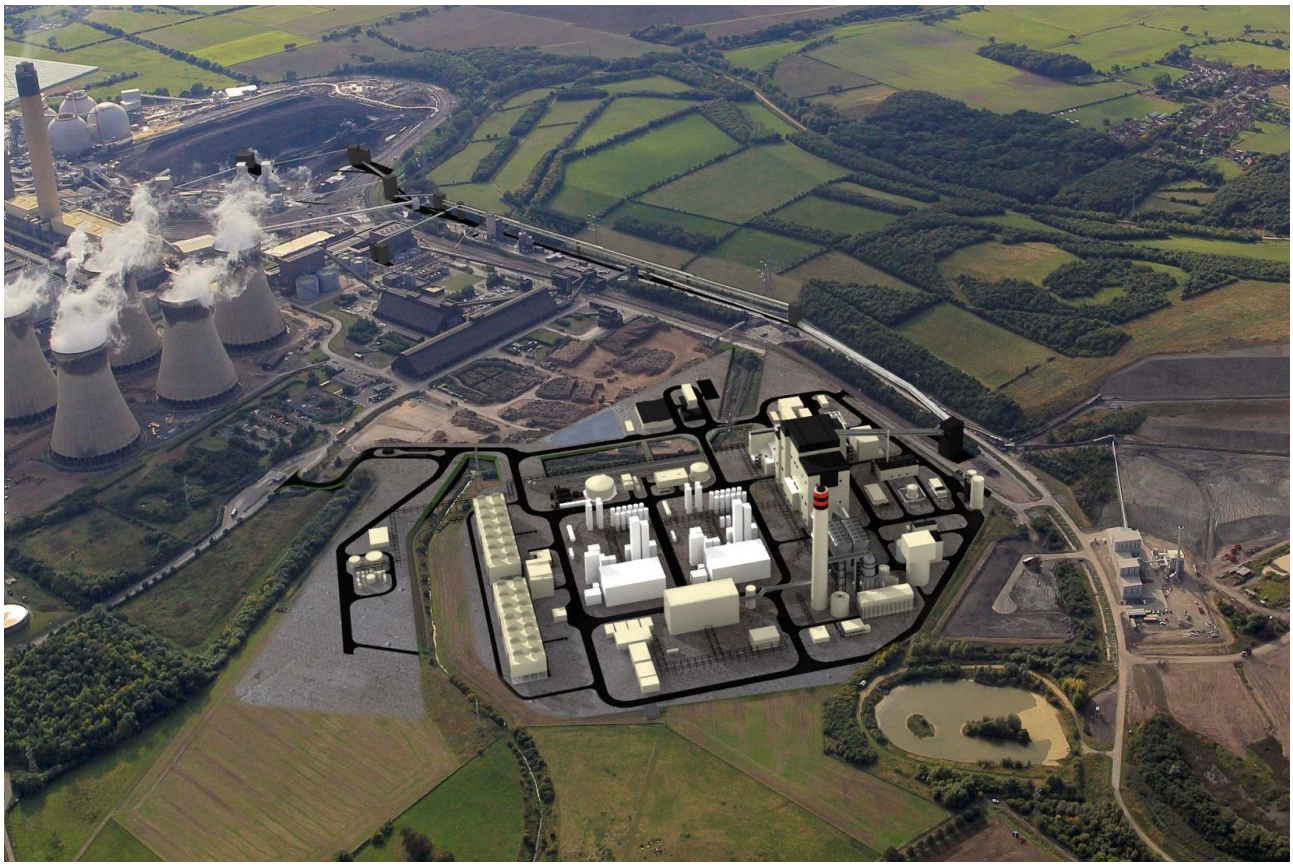
White Rose Carbon Capture and Storage (CCS) Project

Land adjacent to and within the Drax Power Station site, Drax, near Selby, North Yorkshire

Environmental Permit
Chapter III – Site Layout Plan



Applicant: Drax Power Limited
Date: April 2015

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CONTENTS

1.0 INTRODUCTION

1.1 Capture Power Ltd (CPL) plans to construct a new 448 MWe (gross output) ultra-super critical coal fired power station. The Project will have the capacity to provide electricity sufficient for 630,000 households whilst capturing two million tonnes of carbon dioxide (CO_2) per year arising from the combustion process (approximately 90% of CO_2 emissions generated by the plant). The generating station and the means to capture CO_2 together comprise the White Rose Carbon Capture and Storage (CCS) Plant.

1.2 The Project is a key part of the UK's development and commercialisation of CCS, which the Government is supporting through over £1billion of capital and research and development funding. Additionally, the Project will support the development of a CO_2 transmission pipeline (a separate project developed by National Grid Carbon Ltd (NGCL)) which it is hoped will, in the future, be used by other industries and power stations in the Yorkshire and Humber area to transport their CO_2 emissions for permanent storage in the North Sea in geological features.

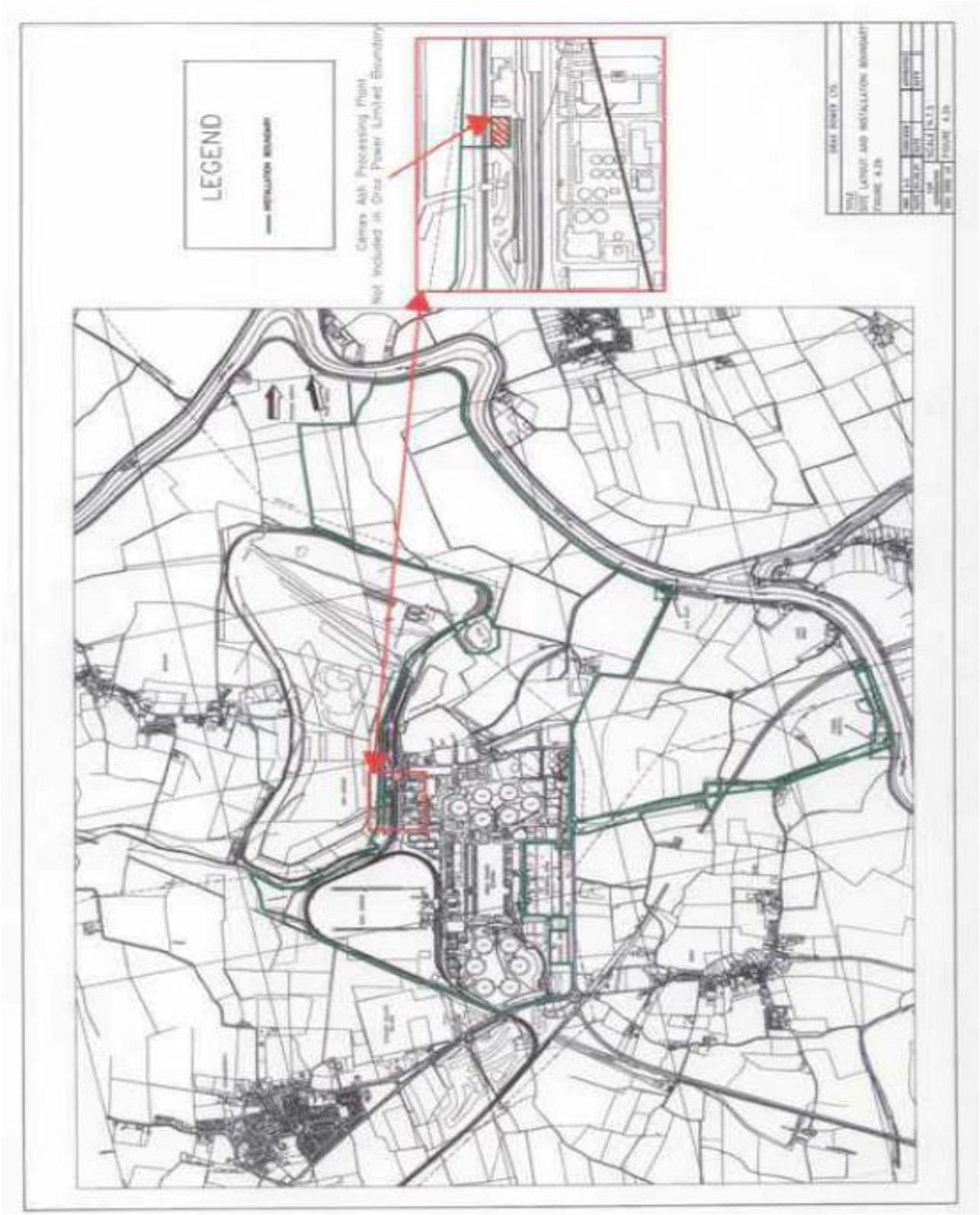
1.3 The application site (henceforth the 'Project site') is located on land adjoining the existing Drax Power Station in North Yorkshire, England. CO_2 captured will not be stored on site as the Project will link to a CO_2 transport and storage solution as noted above. The Project is in line with Government strategies (for instance the CCS Roadmap (1)) for controlling the construction / operation of new electrical generation infrastructure whilst meeting carbon reduction targets for the energy sector in the UK.

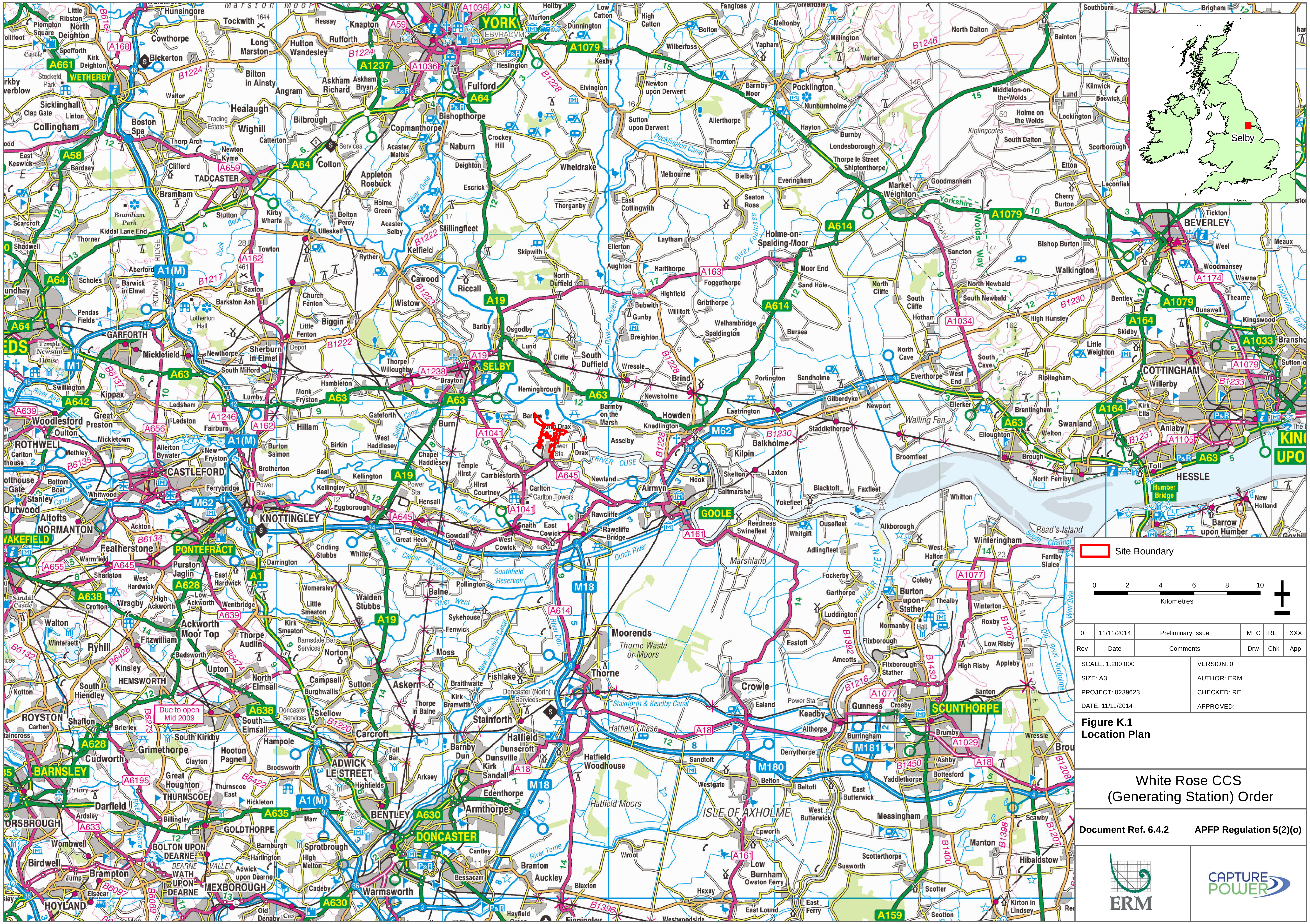
1.4 A separate Development Consent Order has been submitted to The Planning Inspectorate and was 'Accepted for Examination' on 17 December 2015 but did not include application for a deemed Environmental Permit. Due to the proposed activities of White Rose Carbon Capture and Storage it has been agreed with the Environment Agency that the current Drax Power Limited Environment Permit (VP3530LS) can be varied to accommodate the operations of the White Rose Carbon Capture and Storage Plant.

1.5 This Environmental Permit application is made in order to make a variation to the existing Drax Power limited Environment Permit (VP3530LS). The application forms and the associated chapters form the application for a variation to the Environmental Permit which will seek to add the activities of the White Rose Carbon Capture and Storage project to the existing Drax Power Limited Environmental Permit.

1.6 For the Project's site layout plan, section 2 of this report shows the operational land of Drax Power Station, in addition, Annex A shows the Generating Station Site for the Project as well as the Fuel Intake, Limestone and Gypsum and Fuel Ash Handling Transportation Infrastructure. Both these areas are within the Operational Boundary as indicated in the Site Layout Plan.

2.0 SITE LAYOUT PLAN





Site Boundary

0 2 4 6 8 10
Kilometres

0	11/11/2014	Preliminary Issue	MTC	RE	XXX
Rev	Date	Comments	Drw	Chk	App

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PROJECT: 0239623	CHECKED: RE
DATE: 11/11/2014	APPROVED:

Figure K.1
Location Plan

White Rose CCS
(Generating Station) Order

Document Ref. 6.4.2 **APFP Regulation 5(2)(o)**

PROJECTION: British National Grid

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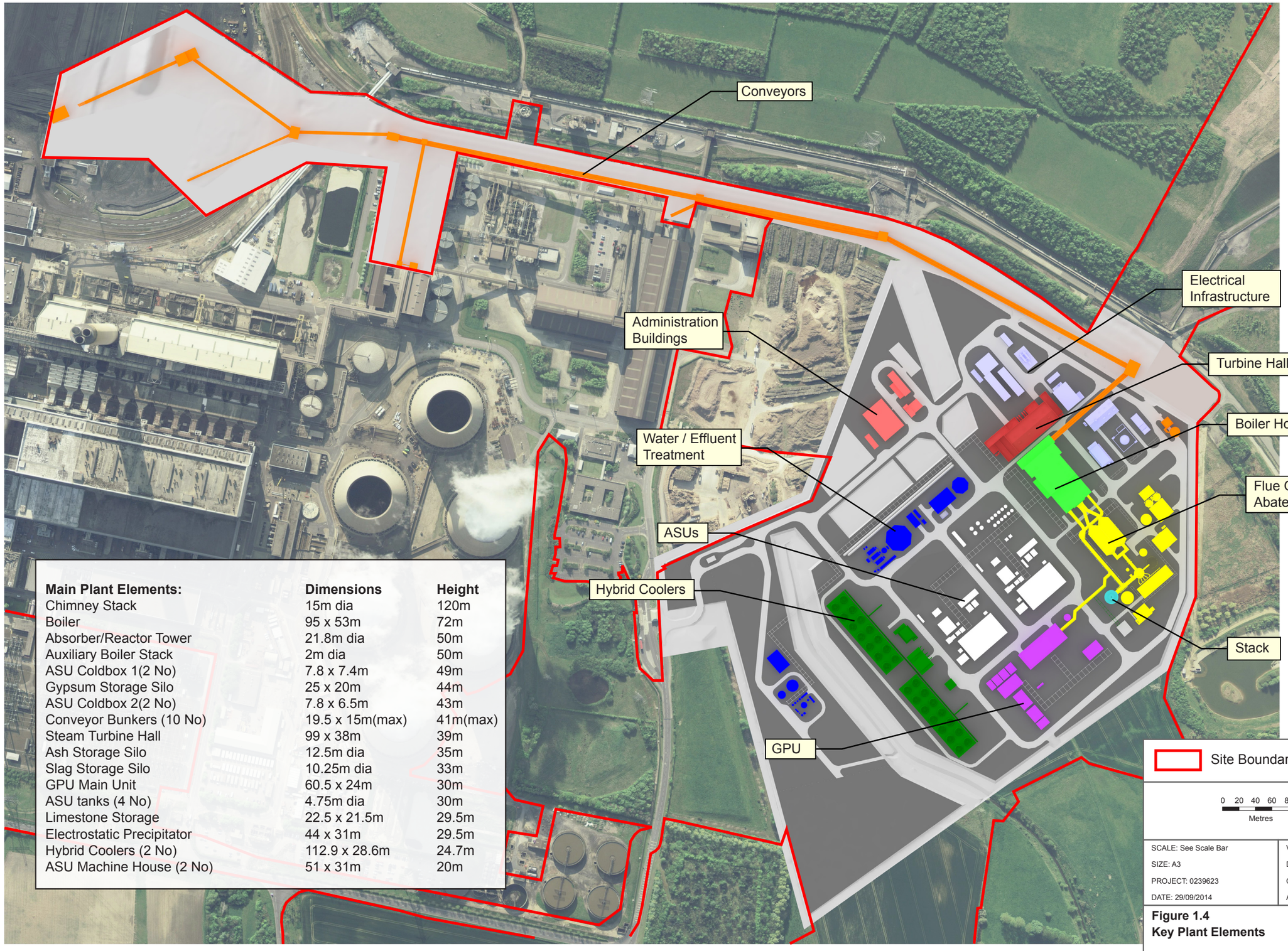

Main Plant Elements:	Dimensions	Height
Chimney Stack	15m dia	120m
Boiler	95 x 53m	72m
Absorber/Reactor Tower	21.8m dia	50m
Auxiliary Boiler Stack	2m dia	50m
ASU Coldbox 1(2 No)	7.8 x 7.4m	49m
Gypsum Storage Silo	25 x 20m	44m
ASU Coldbox 2(2 No)	7.8 x 6.5m	43m
Conveyor Bunkers (10 No)	19.5 x 15m(max)	41m(max)
Steam Turbine Hall	99 x 38m	39m
Ash Storage Silo	12.5m dia	35m
Slag Storage Silo	10.25m dia	33m
GPU Main Unit	60.5 x 24m	30m
ASU tanks (4 No)	4.75m dia	30m
Limestone Storage	22.5 x 21.5m	29.5m
Electrostatic Precipitator	44 x 31m	29.5m
Hybrid Coolers (2 No)	112.9 x 28.6m	24.7m
ASU Machine House (2 No)	51 x 31m	20m

Site Boundary

0 20 40 60 80 100
Metres

N

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PROJECT: 0239623	CHECKED: RE
DATE: 29/09/2014	APPROVED:

Figure 1.4
Key Plant Elements

ERM

CAPTURE POWER

PROJECTION: British National Grid

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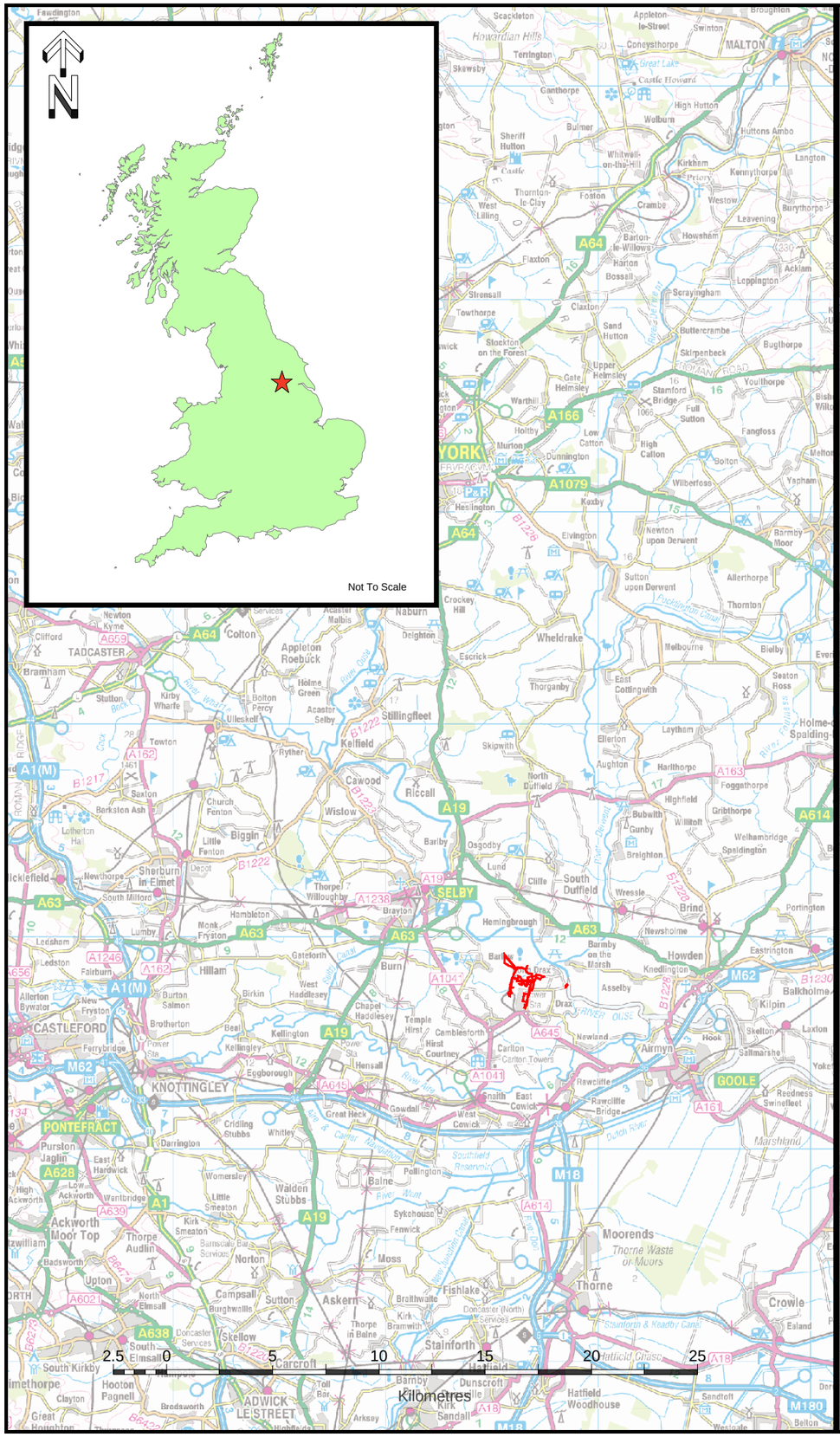

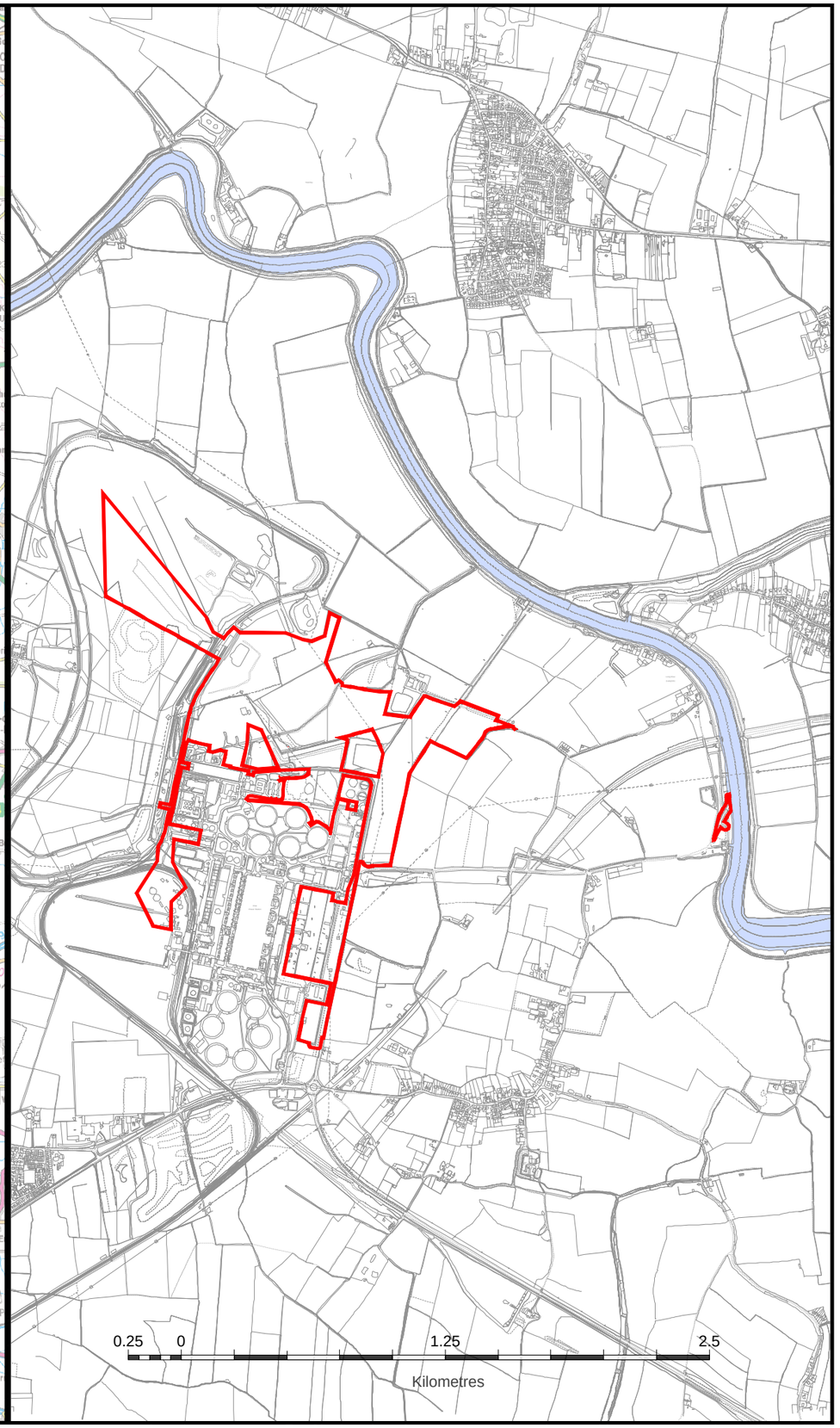

Legend:

DCO (Application Site) Red Line Boundary

DCO (Application Site) Location

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CAPTURE POWER

Title:

The White Rose CCS (Generating Station) Order - Site Location Plan

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

Regulation 5(2)(o)

Document Reference: 4.1

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Approved By:	Checked By:	Drawn By:
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