SCHEME FOR THE REPROFILING OF THE MOUND

Supporting the discharge of the following:

- Condition 40: Landscaping and Creative Conservation.

Intended for
InterGen

Document Type
Scheme for the Reprofiling of the Mound

Date
16 August 2021

SPALDING ENERGY EXPANSION

REPROFILING OF THE MOUND



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RAMBOLL Bright ideas. Sustainable change.

SPALDING ENERGY EXPANSION

REPROFILING OF THE MOUND

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CONTENTS

1 INTRODUCTION 7
1.1 Overview / Background on the Spalding Energy Expansion 7
1.2 Proposed Preliminary Works: Reprofiling of the Mound 7
1.3 Purpose of this Document 8
2 RELEVANT BACKGROUND INFORMATION 9
2.1 Overview 9
2.2 The Site 9
3 THE PROPOSED PRELIMINARY WORKS 10
3.1 Overview 10
3.2 Proposed Preliminary Works: Reprofiling of the Mound 10
4 SCHEME FOR THE REPROFILING OF THE MOUND 11
4.1 Overview 11
4.2 Current Status of the Site 11
4.3 Material Balance for the Reprofiling of the Mound 11
4.4 Programme of Works for the Reprofiling of the Mound 12
4.5 Proposed 'Development-Ready' Status for the Site 12

FIGURES

1 INTRODUCTION

1.1 Overview / Background on the Spalding Energy Expansion

1.1.1 In November 2010, a Consent was granted under Section 36 of the 1989 Electricity Act[1] for the Spalding Energy Expansion generating station. The Consent was accompanied by a direction that Deemed Planning Permission be granted under Section 90 of the 1990 Town and Country Planning Act[2].

1.1.2 Subsequently, two variations to the Consent have been granted under Section 36C of the 1989 Electricity Act. The varied consents were accompanied by directions that the Deemed Planning Permission be varied under Section 90(2ZA) of the 1990 Town and Country Planning Act. In October 2015, the first variation was granted, and in January 2018, the second variation was granted. The second variation comprises the existing Consent for the Spalding Energy Expansion.

1.1.3 Condition 2 of the existing Consent provides that the Spalding Energy Expansion shall be up to 945 MW capacity and shall comprise:

- One Combined Cycle Gas Turbine (CCGT) unit (including: a gas turbine; a heat recovery steam generator (HRSG); steam turbine plant; and, associated equipment);
- Open Cycle Gas Turbine (OCGT) units (including for each OCGT unit: a gas turbine; and, associated equipment) of less than 300 MW capacity; and
- A Battery Energy Storage System (BESS) (including: batteries; associated containers / enclosures; control and protection systems; temperature regulation systems; power conversion systems; and, associated equipment).

1.1.4 The first phase of the development of the Spalding Energy Expansion comprised the commencement of the Spalding Energy Expansion OCGT generating station (an OCGT unit and associated equipment) of less than 300 MW capacity. Following discharge of the relevant Conditions, construction commenced in Q1 2018 and commercial operation commenced in Q2 2019.

1.2 Proposed Preliminary Works: Reprofiling of the Mound

1.2.1 Between 2001 and 2004 (during the construction of the existing Spalding Energy CCGT generating station), sugar beet washings were relocated to the Site, and these washings comprise Made Ground that is present in variable thickness across the Spalding Energy Expansion Site (the Site), with a Mound forming a distinct area approximately 4 m higher than the remainder of the Site.

1.2.2 In order to allow for further development of the Site, InterGen / Spalding Energy Expansion Limited (SEEL) are proposing to undertake some preliminary works comprising the reprofiling of the Mound.

1.2.3 In order to allow for the reprofiling of the Mound, InterGen / SEEL are submitting a further application for a non-material amendment to the Deemed Planning Permission under the 1990 Town and Country Planning Act. Predominately, this further application seeks to make the following non-material amendments, *shown in red, italic, underlined text*, to the Deemed Planning Permission:

- For Condition 1:

  (Under Definitions) "Permitted Preliminary Works" means:

  (i) landscaping and creative conservation, providing these do not require the delivery or removal of bulk filling materials to or from the Site and have been approved pursuant to Condition (39);

  (ii) the removal *and / or the reprofiling* of the mound in accordance with the requirements of Condition (6);

  (iii) installation and diversion of utility services within the Site;

[1] The 1989 Electricity Act. Available at: https://www.legislation.gov.uk/ukpga/1989/29/contents
[2] The 1990 Town and Country Planning Act. Available at: https://www.legislation.gov.uk/ukpga/1990/8/contents

(iv) surveys and geotechnical surveys;

(v) provision of wheel cleansing facilities required pursuant to Condition (4); and

(vi) provision for temporary contractors' facilities necessary for (i) to (v) above within the Site;

- For Condition 6:

(Under) Removal *and / or Reprofiling* of Mound

(6) Unless otherwise approved in writing by the Council, the removal of the Mound from the Site *and / or the reprofiling of the Mound on the Site* shall take place in accordance with the environmental mitigation measures detailed in Chapter 6 of the *"Spalding Energy Expansion* Environmental Statement*" prepared by Spalding Energy Expansion Limited March 2009*.

The reason stated for imposing Condition 6 is: "*To allow for the Site to be prepared prior to the start of the construction of the Development*".

1.3 Purpose of this Document

1.3.1 Condition 40 of the Deemed Planning Permission provides that: "*The commencement of each phase of the Development shall not take place until a scheme of landscaping and creative conservation which shall accord with the approach outlined in the landscape and ecology chapters and appendices of the Environmental Statement, has been submitted to and approved in writing by the Council, in consultation with Natural England and the Environment Agency. The specified phase of the Development shall be completed in accordance with the approved scheme unless otherwise agreed in writing by the Council*".

1.3.2 This Document is submitted to support the partial discharge of Condition 40 to allow for the reprofiling of the Mound, and, following the reprofiling of the Mound, to seek approval for the temporary condition of the Site (as part of a 'development-ready' status for the Site) to facilitate further development being undertaken.

1.3.3 Table 1-1 provides a summary of the discharge of Conditions.

Table 1-1: SUMMARY OF DISCHARGE OF CONDITIONS

Condition		*Type*	*Action*
40	Landscaping and Creative Conservation	For Discharge	To Discharge for Part (ii) Permitted Preliminary Works (Reprofiling of the Mound)

2 RELEVANT BACKGROUND INFORMATION

2.1 Overview

2.1.1 This Section provides relevant background information on the Site.

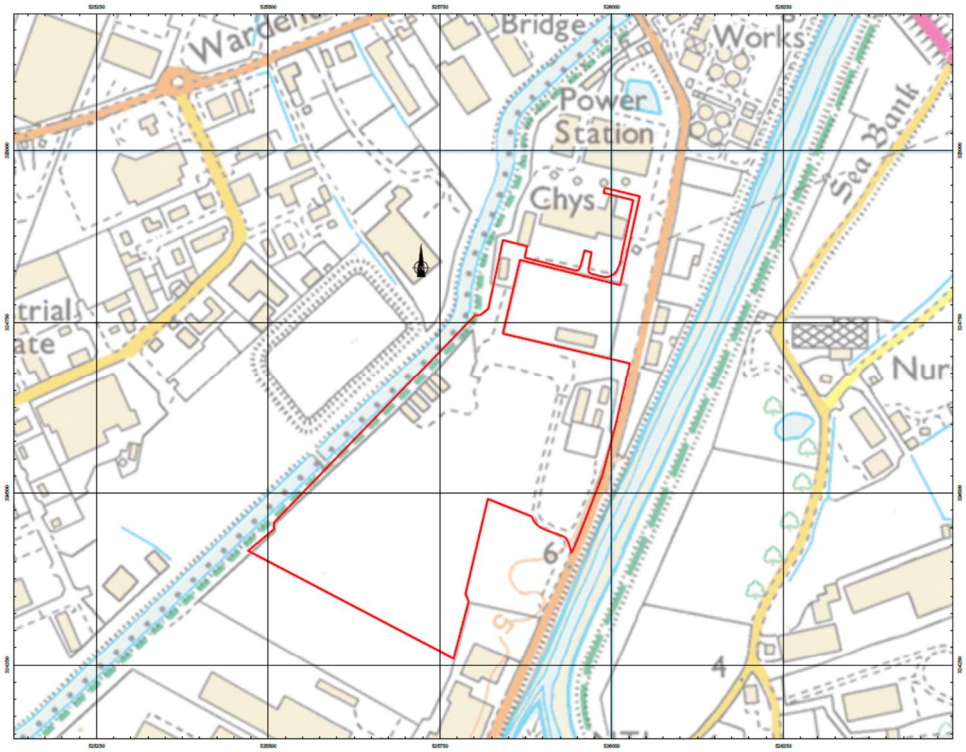
2.2 The Site

2.2.1 Condition 1 of the Consent / Condition 2 of the Deemed Planning Permission provides that the Site is the area of land edged red on Drawing Number 1620002349-009-01A (Rev P.03) (dated 22/02/2017). The Site occupies a total area of approximately 14 ha.

2.2.2 The Ordnance Survey (OS) Grid Reference for the centre of the Site is approximately 525950, 324950.

2.2.3 Insert 2-1 presents the location of the Site (based on Drawing Number 1620002349-009-01A (Rev P.03) (dated 22/02/2017)).

Insert 2-1: LOCATION OF THE SITE



2.2.4 The Site is located on West Marsh Road, to the south of the existing Spalding Energy CCGT generating station.

3 THE PROPOSED PRELIMINARY WORKS

3.1 Overview

3.1.1 This Section provides a summary of the proposed preliminary works.

3.2 Proposed Preliminary Works: Reprofiling of the Mound

3.2.1 In order to allow for the further development of the Site, InterGen / SEEL are proposing to undertake some preliminary works comprising the reprofiling of the Mound.

3.2.2 Insert 3-1 presents the approximate location of the Mound (shown highlighted blue).

Insert 3-1: APPROXIMATE LOCATION OF THE MOUND
(BASED ON GOOGLE EARTH PRO (© 2021))



3.2.3 To ensure compliance with the appropriate / relevant legal, environmental, ecological and other obligations and requirements, and to raise awareness of existing and emerging risks, the proposed preliminary works comprising the reprofiling of the Mound will be undertaken in line with specific control measures / management plans. Further details are provided in the Construction Environmental and Transport Management Plan (submitted to support the discharge of Condition 14, Condition 21, Condition 4 and Condition 16 to allow for the reprofiling of the Mound).

4 SCHEME FOR THE REPROFILING OF THE MOUND

4.1 Overview

4.1.1 This Section provides a summary of the scheme for the reprofiling of the Mound.

4.2 Current Status of the Site

4.2.1 Historically, the Site (and adjacent / surrounding areas) was used as a sugar beet factory, including railway lines and sidings, and settlement lagoons.

4.2.2 In 1989, the sugar beet factory closed, and between 2001 and 2004 (on land to the north of the Site), there was development and construction of the existing National Grid 400 kV Spalding North Substation, and the existing Spalding Energy CCGT generating station.

4.2.3 As a result, between 2001 and 2004, sugar beet washings from the sugar beet factory's settlement lagoons were relocated from the Spalding Energy CCGT site to the Site, and these washings comprise the Made Ground that is present in variable thickness across the Site, with the Mound forming a distinct area approximately 4 m higher than the remainder of the Site.

4.2.4 Figure 1 presents a topographical survey demonstrating the current status (levels) of the Site. However, it is noted that (due to the presence of dense vegetation in the south of the Site), the topographical survey does not fully extend to the southern boundary of the Site.

4.2.5 Previous ground investigations have indicated that the Site is not significantly contaminated, and does not exhibit concentrations of contaminants / pollutants in excess of the commercial and industrial criteria.

4.2.6 In addition, (during the previous ground investigations) the collection of groundwater samples has indicated that the groundwater is not significantly contaminated, in particular noting that the metal concentrations were low and were considered to be indicative / representative of local background levels.

4.2.7 Further, ground gas is being generated by the Made Ground, with previous ground gas monitoring investigations indicating that the ground gas concentrations and flows are reducing, as would be expected for the decomposition of the Made Ground material.

4.2.8 Further details are provided in Consideration of Contaminated Waste during the Reprofiling of the Mound (submitted to support the discharge of Conditions 33 – 35 to allow for the reprofiling of the Mound).

4.3 Material Balance for the Reprofiling of the Mound

4.3.1 In order to support the preliminary works comprising the reprofiling of the Mound, an initial material balance calculation has been undertaken.

4.3.2 Whilst there remains a number of variables (in particular the existing levels in the southern part of the Site, and the compressibility of the Made Ground material), this initial calculation has indicated that a significant proportion of the Made Ground material could be re-used for:

- The raising to the design site levels; and,
- Landscaping / screening (i.e. landscape bunds).

4.3.3 Specifically, regarding the raising to the design levels, Table 4-1 provides a summary of the calculation. Within the Table, negative values indicate a need to export material, and positive values indicate a need to import material. In addition, within the Table, no allowance has been added for landscaping / screening.

Table 4-1: SUMMARY OF THE MATERIAL BALANCE CALCULATION

		Compressibility of the Made Ground Material		
		20%	*30%*	*40%*
Levels in Southern Area of the Site	5.5 mAOD	-9,625 m^3	1,375 m^3	+12,375 m^3
	5.75 mAOD	-22,750 m^3	-11,750 m^3	-750 m^3
	6.0 mAOD	-35,875 m^3	-24,875 m^3	-13,875 m^3

4.4 Programme of Works for the Reprofiling of the Mound

4.4.1 Noting the material balance, the proposed programme of works for the reprofiling of the Mound comprises:

- Vegetation clearance and site grubbing; and,
- Spreading and levelling of the Made Ground material across the Site, as relevant, to provide a 'development-ready' (platform) status for the Site.

4.5 Proposed 'Development-Ready' Status for the Site

4.5.1 Figure 2 (16181-WDN-D-ZZ-DR-A-0300) presents the proposed 'development-ready' status for the Site (noting the proposed reprofiling area extents) to facilitate further development being undertaken.

4.5.2 In addition, with regards to design site levels for the further development of the Site, it is noted that Condition 44 of the Deemed Planning Permission provides that the main Site shall be no less than 6.5 m Above Ordnance Datum (m AOD). The proposed preliminary works will take cognisance of Condition 44.

4.5.3 To maintain and support the 'development-ready' status for the Site, a number of control measures will be implemented / undertaken, including regular vegetation clearance and maintenance.

4.5.4 In addition, the Made Ground is likely to be classed as a waste. Therefore, as required to support the 'development-ready' status for the Site, an appropriate regulatory process will need to be followed to demonstrate that the material can legally be reused (i.e. via a Material Management Plan approach).

FIGURES

The following Figures are provided:

- Figure 1: Topographical Survey demonstrating the Current Status (including site levels) of the Site.
- Figure 2 (16181-WDN-D-ZZ-DR-A-0300): Proposed 'Development-Ready' Status for the Site / Proposed Re-Profiling Area Extents.



NOTES

ABBREVIATIONS & SYMBOLS

AV	AIR VALVE	OHC	OVERHEAD CABLE
BH	BORE HOLE	PB	POST BOX
BOL	BOLLARD	PINV	PIPE INVERT LEVEL
CATV	CABLE TV MH	PM	PARKING METER
CCTV	SECURITY CAM	PO	POST
CL	COVER LEVEL	PT	PIPE TOP LEVEL
CH	CHANNEL	P/R	POST & RAIL FENCE
COL	COLUMN	P/W	POST & WIRE FENCE
DC	CABLE TV LID	RD	EDGE OF ROAD/NO KERB
DP	DOWN PIPE	RE	RODDING EYE/POINT
DR	DRAIN	RL	RIDGE LEVEL
EL	EAVES LEVEL	RP	REFLECTIVE POST
EP	ELECTRIC POLE	RS	ROAD SIGN
ER	EARTH ROD	SLVL	STONE LEVEL
FB	FLOWER BED	SOFF	SOFFIT LEVEL
FH	FIRE HYDRANT	SV	VALVE
FFL	FINISHED FLOOR LEVEL	SW	SURFACE WATER
FP	FLAG POLE	Tac	TACTILE PAVING
FW	FOUL WATER	TH	TRIAL HOLE
GV	GAS VALVE	TL	TRAFFIC LIGHTS
HW	HEADWALL	TLVL	TARMAC LEVEL
IC	INSPECTION COVER	TOW	TOP OF WALL LEVEL
IL	INVERT LEVEL	TP	TELEGRAPH POLE
KB	KERB BOTTOM	TRK	TRACK
KO	KERB OFFLET	UTL	UNABLE TO LIFT
KT	KERB TOP	VP	VENT PIPE
LP	LAMP POST	WL	WATER LEVEL
LC	LIGHT COLUMN	WLVL	WATER LEVEL
MH	MANHOLE	WM	WATER METER
MP	MARKER POST	WO	WASH OUT POINT

FENCE, HEDGE, ELECTRIC, BANK EDGE, STORM LINE, FOUL LINE, TELECOM LINE, GAS LINE, LARSON PILES, CHANNELS, WATER MAIN

TREE, BOREHOLE, STATION, TBM, MANHOLE, GULLY, BATTER, WATER LVL, GATE

1. THE POSITION OF THIS SURVEY IS BASED ON GPS OSTN15 GRID.
2. ALL LEVELS RELATE TO GPS DATA ACQUIRED WITH TRIMBLE VRS.
3. TREES SPREADS ARE DRAWN TO SCALE AND SHOW THE GENERAL/AVERAGE CANOPY SPREAD.
4. ALL BELOW GROUND LEVEL INFORMATION INCLUDING VOIDS, DRAINAGE & SERVICES HAVE BEEN IDENTIFIED FROM THE SURFACE LEVEL ONLY, THEREFORE PIPE SIZES ETC ARE ESTIMATIONS ONLY. ALL CRITICAL DIMENSIONS SHOULD BE CHECKED PRIOR TO THE COMMENCEMENT OF ANY SITE WORKS
5. EVERY EFFORT HAS BEEN MADE TO LOCATE AND SURVEY ALL VISIBLE FEATURES, IT SHOULD BE NOTED THAT SOME ITEMS MAY HAVE BEEN OBSCURED AT THE TIME OF THE SURVEY AND THEREFORE NOT SHOWN ON THIS DRAWING.
6. PHYSICAL BOUNDARY FEATURES SHOWN ON THIS DRAWING DO NOT NECESSARILY REPRESENT THE ACTUAL LEGAL BOUNDARIES. THIS INFORMATION SHOULD BE CONFIRMED WITH THE RELEVANT DOCUMENTATION.
7. THE CONTRACTOR MUST CHECK AND VERIFY ALL SITE LEVELS, DIMENSIONS, UTILITIES AND DRAINAGE DETAILS PRIOR TO THE COMMENCEMENT OF ANY SITE WORKS. ANY DISCREPANCIES MUST BE NOTIFIED TO DANIEL CHARLES SURVEYS LTD.
8. ALL SURVEY STATION CONTROL POINTS MUST BE CHECKED BY THE CONTRACTOR PRIOR TO STARTING ANY SITE WORKS.

SURVEY CONTROL POINT INFORMATION.

Point	Easting	Northing	Elevation
9000	525942.356	324437.437	5.734
9002	525889.642	324467.096	6.821
9003	525928.318	324663.769	6.016
9004	525828.525	324704.224	4.859
9006	525872.600	324690.645	5.242
9007	525948.047	324436.129	5.885
9008	525932.470	324393.362	5.779

SURVEY DATE 08+09/06/2021 INITIALS CLR/MJW

Rev	Amendments	Drn	Date

Client: MR GRAHAM AKRILL

Project Title: LAND AT - SPALDING POWER STATION

Drawing Title: TOPOGRAPHICAL SURVEY

Scale @ A0: 1:500 | Date: 11/06/2021

Drawing No: 21 - 95 - 01 | Rev:

C.A.D.Title: graham akrill spalding power station\topo master (21-95-01).mjo

Drawn By: MJW | Checked By: MJL

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A0

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Figured dimensions only to be taken from this drawing. All contractors must visit the site and be responsible for taking and checking all dimensions relative to their work. Any discrepancy to be advised of any variation between drawings and site conditions. Refer and print in colour as required. ..... IF IN DOUBT ASK.
DO NOT SCALE OFF THIS DRAWING

GENERAL NOTES

1. All topography, site boundaries, ground levels and existing elements to be validated with a site survey.

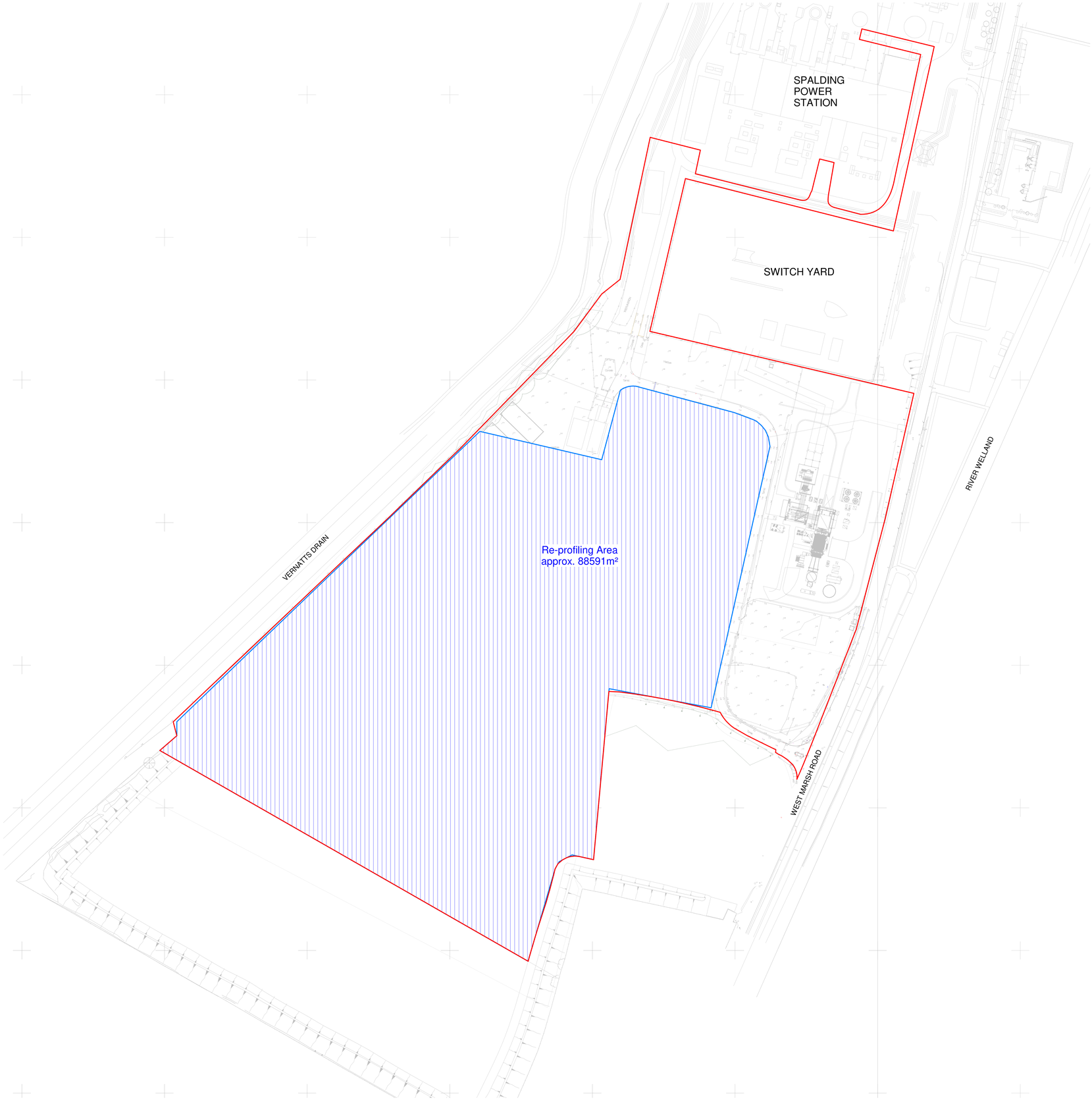
2. All areas shown are subject to further design development and may change.

3. Any discrepancies found on this drawing are to be queried / raised with the relevant people. CHECK & ASK.

SITE PLAN KEY

Re-profiling Area extents

Site Boundary to:
- Ramboll drawing 1620002349-009-01A / 22.02.17 for North & East Boundaries
- Stirling Maynard drawing 5033-01-15 / 29.04.19 for South & West Boundaries





Site Location - Google maps image

Land @ Spalding Power Station
1 : 1000

PL01 NR 12.08.21 First Issue for Planning
Rev Drawn Date Comment

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Project
SPALDING ENERGY EXPANSION

Drawing Title
PROPOSED RE-PROFILING AREA EXTENTS

Date AUG 21 Drawn NR
Scale 1 : 1000@A0 Checked MD
Status PLANNING
Drawing Number 16181- WDN- XX- XX- DR- A- 0300 Revision PL01