Rampion 2 WIND FARM

Rampion 2 Wind Farm

Category 6: Environmental Statement

Volume 4, Appendix 4.3: Proposed Development Parameters (tracked)

Date: August 2024

Revision B

Document Reference: 6.4.4.3
Pursuant to: APFP Regulation 5 (2) (a)
Ecodoc number: 004883048-02

Document revisions

Revision	Date	Status/reason for issue	Author	Checked by	Approved by
A	04/08/2023	Final for DCO Application	WSP	RED	RED
B	01/08/2024	Update to substation parameters to m AOD in line with draft DCO and correction of errata.	WSP	RED	RED

Contents

List of Tables

Page intentionally blank

1. Proposed Development Parameters

1.1.1 This Appendix provides a summary of the parameters that are detailed in **Table 4.2** to **Table 4.27 in Chapter 4: The Proposed Development, Volume 2** of the Environmental Statement (Document Reference 6.2.4).

Table 1-1 Proposed Development assessment Parameters

Parameter	Value
WTG maximum design parameters	
Maximum number of WTG	**90** (for smaller WTG type)
Rotor diameter	**295m** (for larger WTG type)
Minimum air gap above Mean High Water Springs (MHWS)	**22m** (for both WTG types)
Maximum blade tip height above Lowest Astronomical Tide (LAT)	**325m** (for larger WTG type)
Minimum turbine spacing	**830m** (for both WTG types)
Maximum WTG monopile foundation parameters	
Diameter of monopile	**13.5m** (for larger WTG type)
Total number of structures	**Up to 90 WTGs** (for smaller WTG type)
Maximum WTG multi-leg foundation with pin piles foundation parameters	
Number of legs per multi-leg foundation	**Up to 4** (for both WTG types)
Number of pin piles per multi-leg foundation	**Up to 4** (for both WTG types)
Pin pile diameter	**Up to 4.5m** (for larger WTG type)
Maximum WTG multi-leg foundation with suction buckets foundation parameters	
Number of legs per WTG	**Up to 4** (for both WTG types)
Suction bucket diameter	**Up to 15m** (for both WTG types)
Scour protection volume (WTG project total maximum)	**1,215,000 m^3**
Area of seabed take including scour protection (WTG project total maximum)	**405,000 m^2**

Parameter	Value
Maximum offshore substation parameters	
Maximum number of offshore substations	Up to 3
Topside: main structure length and width	80m x 50m
Topside: height (excluding helideck or lightning protection) T	65m above LAT
Height of lightning protection & ancillary structures	115m above LAT
Diameter of monopile	13.5m
Number of legs per multi-leg foundation (Substation)	Up to 6
Number of pin piles per multi-leg foundation (Substation)	Up to 12
Pin pile diameter	Up to 4.5m
Scour protection volume (3 substations)	65,700m^3
Maximum array cable parameters	
Total length of array cables	250km
Maximum offshore interconnector cable parameters	
Number of cables	2
Total cable length	40km
Maximum export cable assessment parameters	
Number of high voltage alternating current (HVAC) offshore cables	4
Total length of export cables	170km
Maximum array cable installation parameters	
Cable protection area	300,000m^2
Cable protection volume	175,000m^3
Number of crossings (estimate)	4
Cable/pipe crossings: total impacted area	10,000m^2

Parameter	Value
Cable/pipe crossings: pre-lay rock berm volume	10,000m^3
Cable/pipe crossings: post-lay rock berm volume	10,000m^3
Maximum offshore interconnector cable installation parameters	
Cable protection area	122,000m^3
Cable protection volume	110,500m^3
Maximum export cable installation parameters	
Cable protection area	517,000m^2
Cable protection volume	470,000m^3
Maximum export cable landfall parameters	
Number of HDD drills	Up to four
Number of transition joint bays	Up to four
HDD cable ducts	Up to four
HDD exit pits number	Up to four
Maximum onshore cable corridor parameters	
~~Corridor width: permanent (easement)~~	~~Up to 25m[1]~~
Corridor width: temporary (construction corridor width)	Up to 40m [2]
~~Number of cables (including fibre optics)~~	~~Up to 20~~
~~Number of ducts (including fibre optics)~~	~~Up to 20~~
~~Number of trenches~~	~~Up to 4~~
~~HVAC: number of cable circuits~~	~~Up to 4~~

~~[1] A typical corridor easement is likely to be 20m, but this may vary according to local conditions. A maximum value of 25m (excluding HDD crossing locations) has been assessed as a reasonable worst case scenario.~~

[2] At discrete locations this will be expanded to accommodate the works including at trenchless crossings as defined in Outline Code of Construction Practice.

Parameter	Value	
~~HVAC: number of cables~~	~~2 Fibre Optic Cables (FOCs) in each circuit, up to 8 FOCs in total, with up to 12 power cables – maximum 20 individual cables~~	
Joint Bay, Link Box and Fibre Optic Cable Junction Box design parameters		
Number of JB locations	Up to 66	
Number of JBs per location	Up to 4	
Number of LBs	264	
Number of FOCJBs	264	
Construction compounds maximum parameters		
Trenchless crossing compounds (length and width)	Up to 50m x 75m	
Trenchless crossing compound at landfall (length and width)	Up to 120m x 100m	
Maximum parameters for the onshore substation		
Permanent area of site for all infrastructure	Up to 6ha	
Maximum main operational building and other infrastructure height	~~12.5~~28.75 m AOD	
Maximum height of fire walls	~~10m~~26.25 m AOD	
Lightning protection mast height	~~18m~~34.25 m AOD	
Maximum number of buildings	12	
Maximum length of main operational building	70m	
Maximum width of main operational building	20m	
~~**Maximum HGV and abnormal loads parameters for the onshore substation**~~		
~~Abnormal Indivisible Loads (two-way)~~	~~Up to 10~~	
Maximum parameters for the extension to Bolney NG substation		
	AIS value	**GIS value**

Parameter	Value	
Permanent area of site for all infrastructure	**0.63ha**	**0.35ha**
Maximum building height	**3m**	**12m**
Maximum number of buildings	**2**	**1**
Maximum length building	**12m**	**35m**
Maximum width of building	**3m**	**20m**
Maximum height of other infrastructure	**12m (busbars)**	**6m (interface asset to take the existing busbars into the GIS)**

Page intentionally blank

2. Glossary of terms and abbreviations

Table 2-1 Glossary of terms and abbreviations

Term (Acronym)	Definition
Air Insulated Switchgear (AIS)	Consist of components where active parts on high voltage are located outside open to the atmosphere.
Environmental Statement (ES)	The written output presenting the full findings of the Environmental Impact Assessment.
DCO Application	An application for consent under the Planning Act 2008 to undertake a Nationally Significant Infrastructure Project made to the Planning Inspectorate who will consider the application and make a recommendation to the Secretary of State, who will decide on whether development consent should be granted for the Proposed Development.
Development Consent Order (DCO)	This is the means of obtaining permission for developments categorised as Nationally Significant Infrastructure Projects, under the Planning Act 2008.
FOC	Fibre optic cable
FOCJB	Fibre optic cable joint bay
Gas Insulated Switchgear (GIS)	Consists of components where active parts on high voltage potential are insulated in pipes filled with gas and located within a building.
Horizontal Directional Drill (HDD)	A trenchless crossing engineering technique using a drill steered underground without the requirement for open trenches. This technique is often employed when crossing environmentally sensitive areas, major water courses and highways. This method is able to carry out the underground installation of pipes and cables with minimal surface disruption.

Term (Acronym)	Definition
HGV	Heavy goods vehicle
HVAC	High Voltage Alternating Current
JB	Joint bay
LAT	Lowest Astronomical Tide
LB	Link box
MHWS	Mean High Water Springs
Proposed Development	The development that is subject to the application for development consent, as described in **Chapter 4: The Proposed Development, Volume 2** of the ES (Document Reference: 6.2.4).
RED	Rampion Extension Development Limited (The Applicant).
Wind Turbine Generators (WTGs)	The components of a wind turbine, including the tower, nacelle, and rotor.

Page intentionally blank

Rampion 2
WIND FARM