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Tees CCPP Project

The Tees Combined Cycle Power Plant Project
Land at the Wilton International Site, Teesside

Volume 2 - Annex C

Regulations – 6(1)(b) and 8(1)

Applicant: Sembcorp Utilities UK
Date: November 2017

C1 ANNEX D4 FLOOD RISK ASSESSMENT

C1.1 INTRODUCTION AND OBJECTIVES

C1.1 ERM Ltd was appointed by Sembcorp to prepare a site-specific Flood Risk Assessment (FRA) to support the DCO application for The Project at the Wilton International Industrial Site, Teesside.

C1.2 A review of indicative flood maps available from the Environment Agency (EA) website indicates that the Project Site is located within the low risk Flood Zone 1. The EA standing advice on flood risk states that a FRA will be required to support the planning application for all developments that are greater than 1 hectare (ha) located in Flood Zone 1. Review of the application boundary confirms that the Project Site area is greater than 1 ha, hence a FRA is required.

C1.3 The FRA has been conducted in accordance with National Planning Policy Framework (NPPF), the flood risk and coastal change section of the Planning Practice Guidance (PPG) 2014 and Overarching National Policy Statement for Energy (EN-1) to provide a predominantly qualitative analysis of flood risk to support the Development Consent Order (DCO) application. The assessment includes the following:

- confirmation of the sources of flooding which may affect the site;
- a predominantly qualitative assessment of the risk of flooding to the site and to adjacent sites as a result of the Project;
- demonstration of how the Project and any occupants will be kept safe from flooding;
- identification of other measures to reduce flood risk to acceptable levels and cause no significant increase in flood risk elsewhere as a result of the Project; and
- proposals for the sustainable management of surface water runoff.

C1.4 The FRA considers risks for the present day situation and over the lifetime of the Project, taking climate change allowances into consideration.

C1.2 DEVELOPMENT PROPOSALS

C1.2.1 Main Structures and Layout

C1.5 The Project will comprise a natural gas fired CCGT generating station with an output capacity of up to 1,700 MWe. The station will include two gas turbine

units, two steam turbine units, ancillary plant and equipment located in the main power island in the western part of the Project Site. The northern part of the site will include hybrid cooling towers and, in accordance with policy requirements for new generating infrastructure, an area of land for possible future carbon capture equipment has been set aside in the eastern part of the site.

C1.6 The Project Site also includes land provision for connections to gas transmission infrastructure, connections to the national grid and routes for pipelines to mains water supply and disposal points.

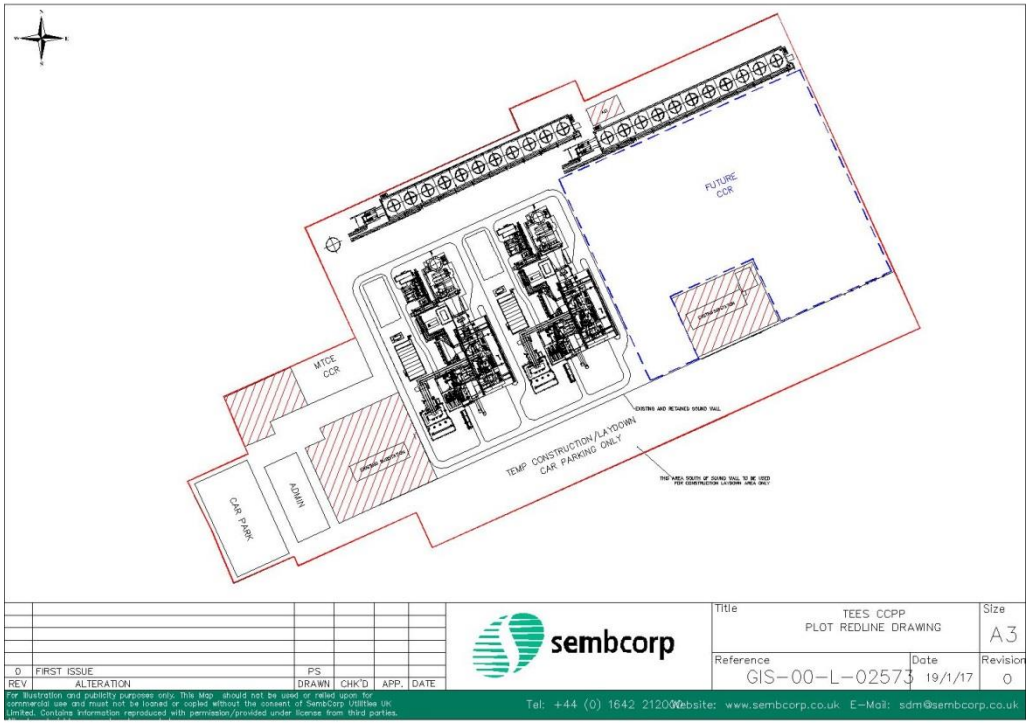
C1.7 The dimensions for the main components are list in *Table C1.1.*

Table C1.1 Dimensions for the Main Structures of the Project

Item	Length	Width	Height
Gas turbine building	73 m	30 m	23 m
Heat recovery steam generator building	47 m	30 m	34 m
Stacks	-	10 m Ø	Up to 75 m
Cooling towers	150 m x 2	18 m	25 m
Control and office building	50 m	25 m	9 m
Workshop	40 m	30 m	12 m

C1.8 The proposed layout of the Project is shown in *Figure C1.1.*

Figure C1.1 Layout of Main Structures

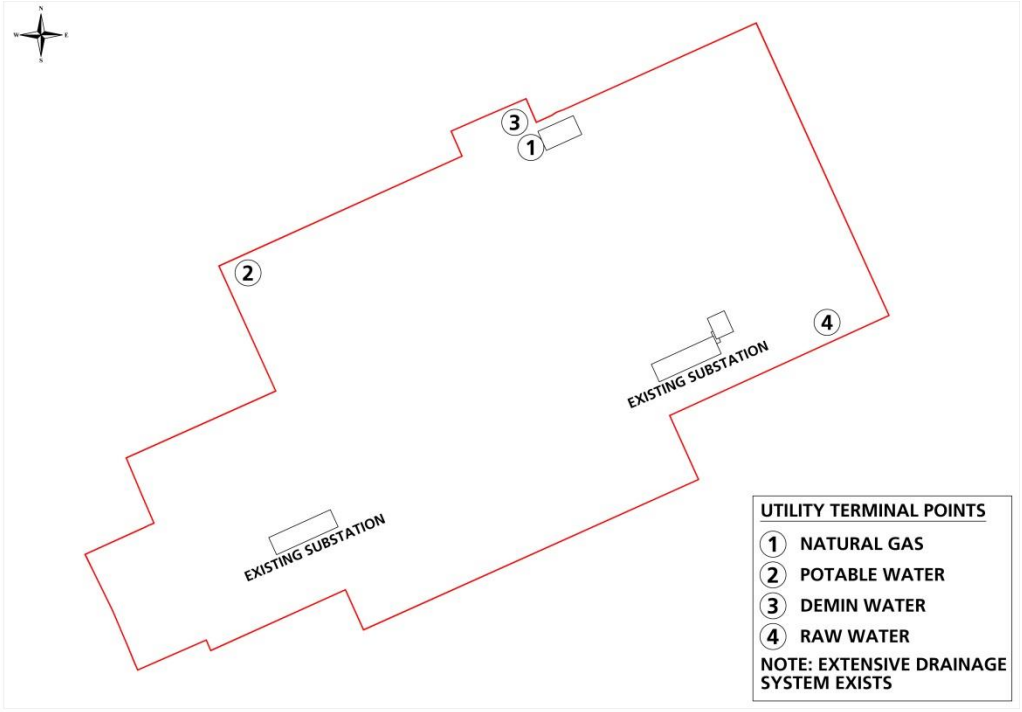


C1.2.2 Connections and Utilities

Connection to Gas Transmission System

C1.9 There are two existing gas pipelines supplying the former power station: a 0.2 m line and a 0.6 m line. The 0.6 m line connects to national transmission system via and Above Ground Installation (AGI) at Billingham, Teesside and connects within the red line plan shown on *Figure C1.2.* This will be the primary supply route to the station. The 0.2 m pipeline may optionally be used as a back-up connection to an on-shore gas processing plant at Seal Sands, Teesside.

Figure C1.2 Connections to Utilities



C1.10 Subject to engineering confirmation being undertaken by National Grid (Gas), it is not expected that any upgrades will be required to deliver the necessary gas supply to the Project.

C1.11 A gas connection application to National Grid will be undertaken in due course.

Connection to National Grid Electricity Transmission System

C1.12 There are two existing substations within the Project Site. These substations are capable of exporting the indicated site capacity. The substations are shown on *Figure C1.2.*

C1.13 An electricity connection application to National Grid will be undertaken in due course.

Cooling Water System

C1.14 An existing raw water connection which will be used for cooling is currently in service providing water to the existing electrical substations stated above. This water pipeline has sufficient capacity to supply the requirements of the Project without variation to existing agreements.

Other Utilities

C1.15 All other utilities will be connected within the limits of the Project Site and in turn connect to the existing Sembcorp infrastructure.

C1.3 CONSULTATION

C1.16 A Scoping Opinion was received from key consultees via The Planning Inspectorate in April 2017 in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009. A summary of key responses relevant to this FRA is summarised in *Table C1.2.*

Table C1.2 Summary of Scoping Opinion relevant to this Flood Risk Assessment

Source	Consultee Comment	Response
Secretary of State (SoS)	It is proposed to scope out cumulative flood risk impacts on the basis that residual flood risk to and from the Proposed Development is anticipated to be low and would be entirely managed within the site. The SoS agrees that this matter can be scoped out on this basis but recommends ongoing dialogue with the EA regarding flood risk matters.	
SoS	The SoS welcomes the intention to provide a Flood Risk Assessment (FRA) (Section 6.2.1 of the Scoping Report), and notes that it is not anticipated that the sequential or exception tests will need to be applied on the basis of the location of the Proposed Development site within Flood Zone 1 and on the site of a former power station surrounded by similar development. The SoS recommends that this approach is agreed with the EA and RCBC prior to the submission of the DCO application. The SoS notes that it is intended to submit the FRA as a separate document with the DCO application, and advises that it should instead form an appendix to the ES.	This FRA has been prepared as a standalone document to append to the PEIR.

Source	Consultee Comment	Response
Redcar and Cleveland Borough Council (RCBC)	Emerging Development Plan Publication Local Plan (2016): SD7 Flood and Water Management	A summary of the relevant provisions within SD7 are presented in this FRA, and have been considered in the production of the FRA and design of the Proposed Development. With regards to the requirement for brown field developments to limit runoff to 50% of that previously discharged, this requirement is considered impractical on this site, which is made up of 100% impermeable surfaces. Such a requirement would require significant works to the Wilton International surface water drainage system, which is beyond the scope of this development. This is not addressed at PEIR and will be discussed with the local authority further during the consultation stage.

C2 ASSESSMENT METHODOLOGY

C2.1 INTRODUCTION

C1.17 This FRA has been conducted in accordance with NPPF and Overarching National Policy Statement for Energy (EN-1). These documents provide guidance on how new developments must take into account flood risk, including making allowance for climate change impacts. Specifically, they encourage decision makers to:

- steer new development to lower risk locations that are appropriate to the proposed use and ensure development is safe;
- prevent any increase in flood risk elsewhere and reduce flood risk through the layout and form of the development and the appropriate application of sustainable drainage systems;
- reduce flood risk by making space for water by creating flood flow paths and by identifying, allocating and safeguarding space for flood storage; and
- use regeneration to help relocate development to lower risk locations when climate change is expected to mean that some existing development may not be sustainable in the long-term.

C1.18 The FRA also take into account the requirements of the Redcar and Cleveland Borough Council Draft Local Plan (May 2016): SD7 Flood and Water Management. This plan states that:

"Flood risk will be taken into account at all stages in the planning process to avoid inappropriate development in areas at current or future risk" and that "All development proposals will be expected to be designed to mitigate and adapt to climate change, taking account of flood risk by:

- ensuring opportunities to contribute to the mitigation of flooding elsewhere are taken;
- prioritising the use of sustainable drainage systems (SuDs);
- ensuring the full separation of foul and surface water flows; and
- ensuring development is in accordance with the Redcar and Cleveland Strategic Flood Risk Assessment.

C1.19 For previously developed sites, the peak runoff rate from the development to any drain, sewer or surface water body for the 1-in-1 year rainfall event and the 1-in-100 year rainfall event, must be as close as reasonably practicable to the greenfield runoff rate from the site for the same rainfall event. Discharge rates into surface water and combined sewers resulting from the

redevelopment of brownfield sites will be limited to a maximum of 50% of flows consented for previous uses.

C1.20 The drainage system must be designed and constructed so surface water discharged does not adversely impact the water quality of receiving water bodies, both during construction and when operational. New development should seek to improve water quality where possible, as well maintaining and enhancing the biodiversity and habitat of watercourses.

C2.2 METHODOLOGY

C2.2.1 Overview

C1.21 The methodology adopted in this FRA is as follows:

- review of available flood risk data to identify existing flood risk from fluvial, tidal, groundwater, overland flow and artificial sources;
- consideration of existing ground conditions on-site to determine groundwater levels, soil permeability, groundwater vulnerability and contamination risks;
- review of the Project in terms of flood risk vulnerability and flood zone compatibility;
- consideration of how the Project may affect flood risk to the site and surrounding land; and
- proposals for the appropriate management of flood risks to facilitate development whilst not increasing risks elsewhere.

C1.22 Data regarding flood risk relevant to the Project have been obtained from the following sources:

- Environment Agency Flood Maps for Planning (1);
- Environment Agency updated flood map for surface water flooding (uFMfSW) (2);
- Environment Agency Risk of Flooding from Reservoirs Mapping;
- British Geological Survey, Hydrogeology of the UK 1:625k scale map; and
- Envirocheck Report (ref. 111168878_1_1 20/01/2017) (*Annex D2* to *Chapter 6*)

(1) https://flood-map-for-planning.service.gov.uk/summary/456635/520047
(2) https://flood-warning-information.service.gov.uk/long-term-flood-risk/map#RiversOrSea_1-ROFRS

C2.2.2 Definition of Flood Risk

C1.23 Flood risk is the product of the likelihood or chance of a flood occurring (flood frequency) and the consequence or impact of the flooding (flood consequence).

C2.2.3 Flood Frequency

C1.24 Flood frequency is identified in terms of the return period and annual probability. For example, a 1 in 100 year flood event has a 1% annual probability of occurring. *Table C2.1* provides a conversion between return periods and annual flood probabilities.

Table C2.1 Flood Probability Conversion

Return Period (years)	**2**	**5**	**10**	**20**	**50**	**100**	**200**	**1000**
Annual Flood Probability (%)	50	20	10	5	2	1	03.5	0.1

C1.25 NPPF identifies Flood Zones in relation to flood frequency. The zones refer to the probability of river (fluvial) and sea (tidal) flooding, whilst ignoring the presence of defences. *Table C2.2* summarises the relationship between Flood Zone category and the identified flood risk.

Table C2.2 Flood Zones

Flood Zone	Identification	Annual Probability of Fluvial Flooding	Annual Probability of Tidal Flooding
Zone 1	Low Probability	<0.1%	<0.1%
Zone 2	Medium Probability	1% - 0.1%	0.5% - 0.1%
Zone 3a	High Probability	>1%	>0.5%
Zone 3b	Functional Floodplain	>5%	>5%

C2.2.4 Flood Consequences

C1.26 The consequence of a flood event describes the potential damage, danger and disruption caused by flooding. This is dependent on the mechanism and characteristics of the flood event and the vulnerability of the affected land and land use.

C1.27 The Environment Agency has identified five classifications of flood risk vulnerability and provides recommendations on the compatibility of each vulnerability classification with the Flood Zones, as shown in *Table C2.3*.

C1.28 Full details of the EA flood zones and flood risk vulnerability classifications can be found in the Planning Practice Guidance (PPG) 2014.

Table C2.3 Flood Risk Vulnerability Classification

Flood Zone	Essential Infrastructure	Highly Vulnerable	More Vulnerable	Less Vulnerable	Water Compatible
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	Exception Test Required	✓	✓	✓
Zone 3a	Exception Test Required	×	Exception Test Required	×	✓
Zone 3b	Exception Test Required	×	×	×	✓

✓ Development considered acceptable
× Development considered unacceptable

C2.2.5 Potential Sources of Flooding

C1.29 In accordance with NPPF, the following sources of flooding are considered in this assessment:

- fluvial flood risk from nearby watercourses;
- overland surface water flooding from adjacent sites;
- site generated surface water runoff;
- surcharging of sewers;
- groundwater flooding; and
- tidal flooding.

C2.2.6 Potential Effects of Climate Change

C1.30 Scientific consensus is that the global climate is changing as a result of human activity. While there remain uncertainties in how a changing climate will affect areas already vulnerable to flooding, it is expected to increase risk significantly over time. For the UK, projections of future climate change indicate that more frequent short-duration high-intensity rainfall events and more frequent periods of long-duration rainfall could be expected.

C1.31 The Planning Practice Guidance (PPG) 2014 provides recommended national precautionary sensitivity ranges for possible peak rainfall, river flow and sea level rise intensities resulting from climate change for the next 100 years (based on a 1990 baseline), as shown in *Table C2.4*.

Table C2.4 Peak River Flow Allowances for the Northumbria River Basin District (use 1961 to 1990 Baseline)

River basin district	Allowance category	Total potential change anticipated for the '2020s' (2015 to 2039)	Total potential change anticipated for the '2050s' (2040 to 2069)	Total potential change anticipated for the '2080s' (2070 to 2115)
Northumbria	Upper end	20%	30%	50%

River basin district	Allowance category	Total potential change anticipated for the '2020s' (2015 to 2039)	Total potential change anticipated for the '2050s' (2040 to 2069)	Total potential change anticipated for the '2080s' (2070 to 2115)
	Higher central	15%	20%	25%
	Central	10%	15%	20%
Applies across all of England	Upper end	10%	20%	40%
	Central	5%	10%	20%

Table C2.5 Sea Level Allowance for Each Epoch in Millimetres (mm) per year with Cumulative Sea Level Rise for Each Epoch in Brackets (use 1990 baseline)

Area of England	1990 to 2025	2026 to 2055	2056 to 2085	2086 to 2115	Cumulative rise 1990 to 2115 / metres (m)
Northwest, northeast	2.5 (87.5 mm)	7 (210 mm)	10 (300 mm)	13 (390 mm)	0.99 m

C2.2.7 The Flood and Water Management Act 2010

C1.32 The Flood and Water Management Act 2010 (FWMA) introduced new responsibilities for designated Risk Management Authorities with regards to flood risk and sustainable drainage. The most notable features of the FWMA with regards to the Project are discussed below.

C1.33 Under the FWMA, the unitary authority or county council for an area, in this case Redcar and Cleveland Borough Council, is designated the 'Lead Local Flood Authority' (LLFA), with responsibility for managing flood risk from surface water, ground water and ordinary watercourses within their area.

C1.34 Schedule 3 of the FWMA introduced new National Standards for Sustainable Drainage Systems (SUDS) against which proposed drainage systems should comply.

C1.35 Under Schedule 3 of the FWMA, LLFAs will become the SUDS Approving Body (SAB) for surface water drainage systems for new development and approval from the SAB for drainage proposals must be agreed prior to construction.

C3 SITE DESCRIPTION

C3.1 SITE LOCATION

C3.1.1 Introduction

C1.36 The Project Site is located on the south edge of the Wilton International Industrial Site, located to the south of the River Tees estuary in Middlesbrough.

C1.37 The extent of the Project (order limit) is entirely within Sembcorp owned land within the Wilton International site, as shown on Figure 1.1.

C3.1.2 Site Description

C1.38 The Project Site is characterised by 100% hard standing area, as the site of a former power station which was recently decommissioned and demolished. The site itself is predominantly flat, with topography generally falling to the north in the direction of the Tees Estuary. The immediate surroundings include further industrial structures of the Wilton International site, including access roads, pipe gantries, drainage ditches and large industrial buildings.

C1.39 Immediately to the south and west of the Project Site, the area is made up of agricultural land, before reaching the residential areas of Grangetown and Lazenby.

C3.1.3 Drainage and Surface Water Features

C1.40 There are a number of small surface water features within the close vicinity of the Project Site. The most notable of these is the Kettle Beck that is located immediately adjacent to the western site boundary and flows in a northerly direction towards the River Tees. There are also four other small drainage ditches within close proximity of the Project Site, one of which is understood to be culverted underneath the southern extent of the site and discharges into the Kettle Beck to the west of the site.

C1.41 These drainage features are labelled on *Figure C3.1* below.

NORTH SEA

SITE LOCATION

0 1 2 3 4 5
kilometres

N

SCALE: 1:250,000	VERSION: A01
SIZE: A3	DRAWN: WB
PROJECT: 0375193	CHECKED: RE
DATE: 04/05/2017	APPROVED: RE

Figure C3.1
Site Location

ERM

sembcorp

PROJECTION: British National Grid

Path: \\ukbrsdc02\Data\Bristol\Confidential Projects\0375193 TLP2 DCO Support.RE\2. Working Folders\2. GIS\MAPS\PEIR\Fig04.01_0375193_SiteLocation_A01.mxd

C1.42 Further from the site, there are a number of surface water bodies identified within the study area:

- River Tees / Tees Estuary approximately 3.5 km northwest of the Project Site boundary;
- two reservoirs located at approximately 900 m south of the Project Site boundary adjacent to the A174 / A1053 roundabout; and
- a series of reservoirs approximately 1.5 km east of the Project.

C1.43 The whole of the Project Site is also serviced by the existing Wilton International surface water drainage system. This system includes a series of buffer tanks which intercept flows to allow monitoring prior to free discharge into the Dabholm Gut, and subsequently the Tees Estuary.

C3.2 EXISTING FLOOD RISK

C3.2.1 Introduction

General Considerations

C1.44 This section of the report provides an overview of any existing flood risk to the Project or surrounding land from fluvial, tidal, groundwater, overland flow and artificial sources. Consideration is also given to the potential effects of climate change on existing flood risk. All data have been sourced through desk-based review of published documents and no additional quantitative analysis or modelling has been undertaken to inform this assessment.

Fluvial Flood Risk

C1.45 Review of the Environment Agency flood risk maps, as illustrated in Figure 1.3, indicates that the whole of the Project Site is located within the low risk Flood Zone 1. The Project is therefore not considered to be at risk from fluvial flooding.

Tidal Flood Risk

C1.46 The site is located 3.8 km from the Tees Estuary and over 5 km from the North Sea coast. As the site is approximately 20 m above ordnance datum, and outside of the Tidal Flood Zone, the Project Site and surrounding land is not in an area deemed to be at risk of tidal flooding.

Surface Water Flood Risk

C1.47 Within this FRA, surface water flood risk encompasses flooding associated with ordinary watercourses (not mapped as fluvial flood risks as discussed above), surface water runoff that has not yet entered the surface water

drainage system and/or watercourse, and flooding associated with the surcharging of the below ground sewerage network.

C1.48 The uFMfSW indicates that there are some areas of surface water flood risk within the site itself and the surrounding Wilton International area. However, Environment Agency Historic Flood Maps (1) show no records of surface water flooding at the site. Sembcorp do not hold any records of historic flooding at the site.

C1.49 It is considered likely that the areas of surface water flooding shown on the uFMfSW are artefacts of the Digital Elevation Model (DEM: a type of topographic model) used in the production of the mapping, and not a true reflection of the flood risk itself.

Groundwater Flood Risk

C1.50 Groundwater flooding occurs when water stored below ground reaches the ground's surface, causing flooding of below ground structures and often leading to overland flow. Groundwater flooding is commonly associated with porous underlying geology, such as chalk, limestone and gravels.

C1.51 The geology underlying the Project Site is relatively impermeable, being made up of bedrock from the Mesozoic Lias Group, overlain by Quaternary Till deposits. Both of these are classed as secondary B (undifferentiated) aquifers, which are defined as predominantly lower permeability layers that may store and yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. However, the BGS Flood GFS Data (2) (*Annex D2* to *Chapter 6*) illustrates that the eastern extent of the Project Site has the potential for groundwater flooding to occur at the surface, although no evidence of surface water flooding has been observed during 20m years of operations at the site, and no records have been identified.

Artificial Sources of Flood Risk

C1.52 Artificial sources of flooding are considered to be sources such as canals, reservoirs and lakes.

C1.53 Review of Environment Agency indicative flood maps indicates that the Project Site and a small portion of the surrounding land has the potential to be at risk of flooding should the dam at the reservoir to the east of Greystones Road fail.

(1) https://data.gov.uk/data/map-preview?url=http%3A%2F%2Fenvironment.data.gov.uk%2Fds%2Fwms%3FSERVICE%3DWMS%26INTERFACE%3DENVIRONMENT--889885c0-d465-11e4-9507-f0def148f590%26request%3DGetCapabilities&url=http%3A%2F%2Fenvironment.data.gov.uk%2Fds%2Fwfs%3FSERV

(2) Envirocheck Report (ref. 111168878_1_1 20/01/2017)

C1.54 Although the site is identified to be within the potential maximum extent of flooding from this reservoir, the level of risk associated with these sources of flooding is considered to be very low. The requirements for inspection and maintenance of reservoirs set out under the Reservoirs Act 1975 ensure that the risk of failure is almost negligible.

C1.55 There are no canals or significant lakes within close proximity of the Project Site that are considered to pose flood risk to the area.

C3.2.2 Potential Effects of Climate Change

C1.56 As discussed in *Section CC2.2.6*, climate change is predicted to increase rainfall intensity and peak river flow, thus exacerbating existing flood risk in the future.

C1.57 With regards to fluvial flood risk, this may increase the extent and frequency of flooding associated with main rivers and ordinary watercourses, although this is not predicted to increase flood risk to the Project Site.

C1.58 An increase in rainfall intensity could increase the frequency of surface water flooding within parts of the Wilton International Site. This increase in flood risk is unlikely to pose an increased risk to flooding within the Project Site, but any increase in discharge to the watercourse (ie from the Project) may increase flood risk elsewhere.

C1.59 Climate change is not considered likely to increase flood risks associated with tidal, groundwater, or artificial sources within the vicinity of the Project Site.

C3.2.3 Summary of Existing Flood Risk

C1.60 The Project Site is not considered to be at significant risk from any source of flooding, namely fluvial, tidal, groundwater, overland flow and artificial sources.

C1.61 The greatest risk of flooding to adjacent land is likely to be associated with surface water runoff from areas of hard standing within and immediately around the Project Site.

C3.3 POST DEVELOPMENT FLOOD RISK

C3.3.1 Introduction

C1.62 This section of the report provides a summary of the potential impacts that identified flood risk could have on the Project, as well as the potential impacts that the Project could have on people and property elsewhere. Where appropriate, mitigation measures to manage any identified risks are proposed. This includes a description of the proposed surface water management strategy.

C3.3.2 Development Vulnerability

C1.63 Review of existing flood risks (and any increased risk associated with climate change effects) has identified that the Project Site is located within the low risk Flood Zone 1 and is not considered to be at significant risk from any source of flooding, namely fluvial, tidal, groundwater, overland flow and artificial sources.

C1.64 With reference to Planning Practice Guidance (PPG) 2014, the Project is classified as Essential Infrastructure in terms of its flood risk vulnerability classification (namely 'electricity generating power stations and grid and primary substations', paragraph 66). As per the NPPF, this type of development is classified as appropriate for development within Flood Zone 1.

C3.3.3 Assessment of Flood Risk

C1.65 *Section C3.2.1* of this FRA has identified that the greatest risk of flooding to adjacent land is associated with surface water runoff. However, as presented in *Section C3.1.1*, the Project will be constructed and operated on brown field land consisting of existing hardstanding which is already served by a comprehensive surface water drainage system which is owned, operated and maintained by Sembcorp.

C1.66 As the Project will not result in any increase in the area of hard standing, it will not result in any increase in the generation of surface water runoff from the site.

C1.67 As such, the risk of flooding to the Project and the risk of increased flooding elsewhere as a consequence of construction and operation of the project is considered negligible.

C4 SEQUENTIAL TEST AND EXCEPTION TEST

C4.1 THE SEQUENTIAL TEST

C1.68 NPPF recommends that the risk-based Sequential Test should be applied by the Local Planning Authority when considering applications for new development. Its aim is to steer new development to areas at the lowest risk of flooding (Flood Zone 1). Where this is not possible, higher risk flood zones can be considered, but in the context of Flood Risk Vulnerability Classification and the possible application of the Exception Test.

C1.69 With reference to paragraph 66 of the Flood and Coastal Change section of the Planning Practice Guidance (PPG) 2014, the Project is classified as Essential Infrastructure in terms of its flood risk vulnerability classification. With reference to Table 3 of the NPPF (reproduced in *Table C2.3* in *Section C2.2.3* of this FRA), this type of development is classified as appropriate in Flood Zone 1.

C1.70 Paragraph 33 of the Flood and Coastal Change section of the Planning Practice Guidance (PPG) 2014, states that is should not normally be necessary to apply the Sequential Test to development proposals in Flood Zone 1 (land with a low probability of flooding from rivers or the sea), unless the Strategic Flood Risk Assessment for the area, or other more recent information, indicates there may be flooding issues now or in the future (for example, through the impact of climate change).

C4.2 THE EXCEPTION TEST

C1.71 With reference to Table 3 of NPPF (reproduced in *Table C2.3* in *Section C2.2.3* of this FRA), the Exception Test does not need to be applied to the Project as the Project lies within Flood Zone 1 and passes the Sequential Test, as discussed above.

C5 CONCLUSIONS

C5.1 EXISTING FLOOD RISK

C1.72 The Project Site is not considered to be at significant risk from any source of flooding, namely fluvial, tidal, groundwater, surface water, or artificial sources.

C5.2 POST-DEVELOPMENT FLOOD RISK

C1.73 The Project will be constructed on existing brownfield land which is served by an existing comprehensive surface water drainage system. As the Project will not result in any increase in hardstanding area, and thus surface water runoff, the risk of flooding from the Project is considered to be negligible.