Riverside Energy Park

Environmental Statement Technical Appendices

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RIVERSIDE ENERGY

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1 Introduction

1.1.1 This report, prepared by Peter Brett Associates LLP (PBA), presents a summary of the potential effects deriving from the vulnerability of the Proposed Development to relevant major accidents and disasters.

1.1.2 The Proposed Development has the potential to be affected (and therefore has the potential to impact the environment) by the risk of major accidents or disasters. 'Accidents' are considered to be an occurrence resulting from uncontrolled developments in the course of construction and operation of a development (e.g. major emission, fire or explosion). 'Disasters' are considered to be naturally occurring extreme weather events or ground related hazard events (e.g. subsidence, landslide, earthquake).

2 Need for the Assessment

2.1.1 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended) (the Infrastructure EIA Regulations 2017), under Regulation 5, part 4 state that:

'The significant effects to be identified, described and assessed include, where relevant, the expected significant effects arising from the vulnerability of the proposed development to major accidents or disasters that are relevant to that development'.

2.1.2 Schedule 4, part 8 requires an ES to provide:

'A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned'.

2.1.3 An assessment is required of the significant effects on:

(a) population and human health;
(b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC(1) and Directive 2009/147/EC(2);
(c) land, soil, water, air and climate;
(d) material assets, cultural heritage and the landscape; and
(e) the interaction between the factors.

…which arise from the vulnerability of the Proposed Development to major accidents or disasters that are relevant to the development.

2.1.4 For such events to pose a risk to the environment, there must be a source (the event), a pathway (a process by which a receptor could be affected by the event), and a receptor.

2.1.5 The Scoping Report for REP stated that given the nature of the Proposed Development, alongside embedded mitigation measures (e.g. working within legislative requirements and best practice working methods) there is not considered to be a significant risk to REP from major accidents or disasters.

2.1.6 Although the Planning Inspectorate agreed that there would be no requirement for a standalone assessment of the risks of major accidents and disasters (Section 4.12 of **Appendix A.1**), the Applicant suggested that these should be described on a topic by topic basis, where a particular assessment has inherently considered these risks. The Planning Inspectorate agreed with this approach.

2.1.7 Table 1 therefore sets out only potential major accidents and disasters and receptors which are relevant to the Proposed Development.

3 Summary of Risks

3.1.1 **Table 1** below includes a list of potential major accidents and disasters which are relevant to the Proposed Development and describes where and how they are addressed within the EIA and reported in the ES.

Table 1 – Summary of Accidents and Disasters

Major accident / disaster (incidents)	Further description of risk	Assessment Methodology
Severe weather – storms and floods	Potential risk of flooding (tidal, fluvial and surface water). High winds placing excess loading on buildings.	A Flood Risk Assessment has been undertaken for Proposed Development (**Document Reference 5.2**). Ground investigations were undertaken in April/May 2018. This included geotechnical testing of ground conditions to inform suitable foundation design that would withstand high winds and distribute loadings.
Tidal waves / storm surges	Potential risk of flooding (tidal, fluvial and surface water).	A Flood Risk Assessment has been undertaken for Proposed Development (**Document Reference 5.2**).
Poor air quality events	Rise in levels of pollution in the vicinity of the Proposed Development which could lead to human health issues.	An Air Quality assessment has been undertaken which is presented in **Chapter 7** of this ES.
Transport incidents – road, rail, air, maritime	Risk of major incidents / accidents on transport network.	A Transport Assessment has been undertaken and is presented in **Chapter 6** of this ES.

Major accident / disaster (incidents)	Further description of risk	Assessment Methodology
		Construction and operational transport routes are described in **Chapter 6** of the ES. Contingency has been factored in to the assessments to deliver fuel / components by more than one method (e.g. road and river).
Terrorist incidents	REP could be targeted by terrorist organisations resulting in explosion / fire risk.	Security procedures, and control measures of fire and explosion risk are described in Section 3.8 and 3.9 of Chapter 3 of this ES.
Gas explosion of local gas network/infrastructure surrounding REP	Gas infrastructure in vicinity of REP could fail leading to explosion, and in turn environmental consequences from fire / chemical leak / emissions.	Utilities searches have been undertaken to identify location of gas mains in vicinity of site and all infrastructure associated with the Proposed Development has maintained a safe distance from these utilities.
Fires / explosions	Fire / explosion from plant malfunction or unexploded ordnance on site.	A Phase 1 Ground Conditions Assessment has been undertaken – Appendix I.1, **Document Reference 6.3** REP uses well established, proven energy generation technology that has an extremely good safety record and can be shut down automatically or manually in event of malfunction in accordance with set operational protocols which

Major accident / disaster (incidents)	Further description of risk	Assessment Methodology
		would be set out at the time of commissioning by the plant supplier and detailed in the Environmental Permit.
Contamination	Existing contamination posing threat to construction workers. Spillages of contamination posing threat to operational workers / sensitive sites / species	An assessment of contamination is presented in **Chapter 13** of ES.

3.1.2 Further explanation of the key risks is set out below:

- Severe weather (flooding/storm surges) is addressed within the Flood Risk Assessment (FRA) (**Document Reference 5.2**). The FRA identified that the proposed Finished Floor Level (FFL) would be set with a freeboard above the Environment Agency's forecast 1 in 200 year 2100 breach flood level. In addition, REP is located in an area benefitting from flood defences. However, should a breach of the defences occur, safe refuge would be provided for operational staff and visitors located above the flood level. Therefore, it is not considered that there is the potential for significant effects arising from the vulnerability of the Proposed Development to severe weather.

- Transport incidents is addressed through **Chapter 6,** which identified that effects would be mitigated through the final Construction Traffic Management Plan. Therefore, it is not considered that there is the potential for significant effects arising from the vulnerability of the Proposed Development to transport incidents.

- Poor air quality events is addressed through **Chapter 7,** which did not identify significant residual effects. Therefore, it is not considered that there is the potential for significant effects arising from the vulnerability of the Proposed Development to poor air quality events.

- Land contamination is addressed through **Chapter 13,** which did not identify significant residual effects. **Appendix I.1** identified that the REP site is at low risk from Unexploded Ordnance. Therefore, it is not

considered that there is the potential for significant effects arising from the vulnerability of the Proposed Development to these elements.

3.1.3 Alongside any Development Consent Order for the Proposed Development issued by the Secretary of State, would sit an Environmental Permit issued by the Environment Agency. It is anticipated that the majority of emergency response plans and contingency measures would be dealt with through the Environmental Permit. In addition, it is considered that the Health and Safety effects arising from accidents and disasters would be dealt with through relevant industry controls.

3.1.4 This would include appropriate legislative procedures which will be in place during design, construction and operation such as The Construction (Design and Management) Regulations 2015 ('the 2015 CDM Regulations'), The Health and Safety at Work Act 1974, and wayleave and easement agreements for identified utilities.

3.1.5 Additionally, mitigation measures (such as standard construction management measures to mitigate the risk of potential spillage of chemicals or pollutants during construction), as discussed in the outline Code of Construction Practice (**Document Reference 7.5**) would be implemented. A DCO requirement is included in the draft DCO (**Document Reference 3.1**), to ensure the detailed CoCP is prepared substantially in accordance with the outline CoCP.

4 Conclusion

4.1.1 The requirement for an appraisal of risks from major accidents and disasters on the Proposed Development is set out in Schedule 4, Part 8 and Schedule 5, Part 4 of the Infrastructure EIA Regulations 2017. Additionally, the Scoping Opinion for the Proposed Development, issued by the Planning Inspectorate agreed with the approach to assessment proposed by the Applicant. That is, to describe the risks from major accidents and disasters on a topic by topic basis, where a particular assessment has inherently considered these risks.

4.1.2 Potential major accidents and disasters which could affect the Proposed Development have therefore been identified and summarised in Table 1.

4.1.3 It is considered that where there is a potential risk, this has been addressed and included in the relevant part of the ES.

4.1.4 Alongside any Development Consent Order for the Proposed Development issued by the Secretary of State, would sit an Environmental Permit issued by the Environment Agency. It is anticipated that the majority of emergency response plans and contingency measures would be dealt with through the Environmental Permit. In addition, it is considered that the Health and Safety effects arising from accidents and disasters would be dealt with through relevant industry controls.

4.1.5 Additionally, mitigation measures (such as standard construction management measures to mitigate the risk of potential spillage of chemicals or pollutants during construction), as discussed in the outline Code of Construction Practice (**Document Reference 7.5**) would be implemented.

4.1.6 Therefore, no likely significant effects are anticipated, by virtue of the vulnerability of the development to major accidents and disasters.