

SSE Tarbert Next Generation Power Station

Environmental Impact Assessment Report (EIAR)
Volume I
Chapter 21 Summary of Mitigation

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21. Summary of Mitigation

21.1 Introduction

This Chapter of the Environmental Impact Assessment Report (EIAR) outlines the conclusions of the technical assessments on the Proposed Development. This chapter includes a summary of those adverse and beneficial environmental effects described throughout each of the technical chapters (Chapters 7 to 19) of this EIAR, which will be implemented during the demolition, construction, operational and decommissioning phases of the Proposed Development, refer to Table 21.2.

This chapter also presents a Schedule of Environmental Commitments presented in Table 21.3 which summarises all the impact avoidance, mitigation, and enhancement measures that the Applicant is committed to delivering as part of the Proposed Development.

21.1.1 Summary of Significant Environmental Effects

The Planning and Development Act 2000 requires an EIAR to contain: “A description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment”. For the purposes of this EIAR design mitigation and embedded mitigation are defined as:

- Design Mitigation: this identifies mitigation that has been incorporated into the design of the Proposed Development (e.g., a key part of the design concept was to mitigate the visual impact of the proposal. It obtained inspiration from the adjoining industrial and power generating infrastructure and the design was developed in a way that would allow the proposed plant and structures to sit easily against this backdrop).
- Embedded Mitigation: measures will be identified in order to avoid, reduce and, if possible, offset significant adverse effects identified during the EIA process. Where possible, these mitigation measures will be incorporated into the form or design of the Proposed Development. Once these measures are incorporated into the design, they are termed ‘embedded mitigation’. Embedded mitigation relevant to the construction phase will be described within the CEMP (CEMP). For the operational phase, such embedded mitigation will be represented primarily in the design. Embedded mitigation measures are therefore either incorporated into the design from the outset or identified through the assessment process.

Table 21.2 provides a summary of the significant environmental effects of the Proposed Development that have been identified, following implementation of the embedded mitigation or impact avoidance measures included in the design of the Proposed Development (as detailed in Chapters 7 to 19, where relevant).

Table 21.3 provides a summary of the schedule of environmental commitments. that have been identified in the EIAR technical assessments to mitigate significant environmental effects.

Effects have been assessed for the construction phase, operational phase (including maintenance) and decommissioning phase scenarios.

For the purposes of this EIAR (as outlined in EIAR Chapter 1) an effect is considered to be ‘significant’ if it is assessed to be moderate (adverse or beneficial) or major (adverse or beneficial). Minor and negligible effects are only referenced in this chapter where a ‘significant’ (moderate or major) effect has been reduced to a ‘not significant’ effect following mitigation.

To provide further clarification on the nature of the effects, each has been identified for the purposes of this EIAR Chapter 21 Conclusion summary as:

Table 21.1: Description of Nature of Effects

Effect	Description
Long term (Lt)	Effects occurring throughout the operation of the Proposed Development (and potentially beyond), e.g., due to a change in land use as a result of the development;
Medium term (Mt)	Effects occurring for a period of approximately five to fifteen years, e.g., a visual effect from a development that is removed when mitigation planting has matured;
Short term (St)	Effects occurring only over a relatively short period of time (less than five years), e.g., an effect that only lasts for the duration of the construction period;
Temporary (T)	Effects that are not permanent because the effect would no longer occur if the impact was removed, e.g., a disturbance effect that ceases when the source of the disturbance is no longer present;
Permanent (P)	Effects that are permanent and cannot be readily reversed, e.g., the loss of an ecological habitat that cannot be replaced;
Direct (D)	Effects that occur as a direct result of an impact caused by a development, e.g., a change in noise level as a result of development-related activity; or
Indirect (In)	Also known as secondary effects, effects that occur as a result of a pathway of impacts, e.g., socio-economic benefits due to construction workers spending money at local businesses.

21.1.2 Guidance

Works will be undertaken in accordance with the following environmental management technical guidance documents:

- CIRIA¹ (2001). *Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors (C532)*.
- CIRIA (2006). *Control of water pollution from linear construction projects. Technical guidance (C648)*.

¹ Construction Industry Research and Information Association

- CIRIA (2016). *Environmental Good Practice on site pocketbook (C762)*.
- EPA (2021). *Best Practice Guidelines for The Preparation of Resource Management Plans for Construction & Demolition Projects*.

Table 21.2: Summary of Significant Environmental Effects

DEVELOPMENT PHASE	ENVIRONMENTAL IMPACT (FOLLOWING DESIGN AND MITIGATION MEASURES)	CLASSIFICATION OF EFFECT PRIOR TO MITIGATION	MITIGATION/ ENHANCEMENT (IF IDENTIFIED)	CLASSIFICATION OF RESIDUAL EFFECT AFTER MITIGATION	NATURE OF EFFECT(S) (LT/ MT/ ST AND T/ P AND D/ IN)	MITIGATION ITEM NUMBER (REFER TO TABLE 21.3)
AIR QUALITY (EIAR CHAPTER 7)						
Construction	No significant effects identified.					N/A
Operation	No significant effects identified.					N/A
Decommissioning	No significant effects identified.					N/A
CULTURAL HERITAGE (EIAR CHAPTER 8)						
Construction	No significant effects identified.					N/A
Operation	No significant effects identified.					N/A
Decommissioning	No significant effects identified.					N/A
BIODIVERSITY (EIAR CHAPTER 9)						
Construction and Decommissioning	Mortality or Injury to common lizard, hare, and hedgehog.					
	Mortality or injury to breeding birds and their eggs.					
	Breeding bird habitat loss and damage.	Significant at local / site level.	Excavations will be left with a method of escape.	Not significant	Lt / P / D	B1
	Disturbance/ displacement of breeding birds.		Safeguard Breeding Birds and nesting locations.			
	Risk of disturbance to white-tailed eagle.					

DEVELOPMENT PHASE	ENVIRONMENTAL IMPACT (FOLLOWING DEVELOPMENT DESIGN AND EMBEDDED MITIGATION MEASURES)	CLASSIFICATION OF EFFECT PRIOR TO MITIGATION	MITIGATION/ ENHANCEMENT (IF IDENTIFIED)	CLASSIFICATION OF RESIDUAL EFFECT AFTER MITIGATION	NATURE OF EFFECT(S) (LT/ MT/ ST AND T/ P AND D/ IN)	MITIGATION ITEM NUMBER (REFER TO TABLE 21.3)
		Significant at national level.				
Operation	No significant effects identified.					
LANDSCAPE AND VISUAL (EIAR CHAPTER 10)						
Construction	Effects to landscape character or visual amenity within the locality or the wider study area resulting from the visibility of temporary site infrastructure such as site traffic, machinery working on elevated ground and construction compounds.	The landscape and visual effects and their significance at construction stage will range from Not Significant to Adverse to Slight/ Neutral	Tall machinery will only be on Site for a limited period. Construction traffic will be managed to reduce visual disturbances on local residents. Lighting will be kept to essential locations only, with the position and direction of lighting being designed to minimise intrusion and disturbance to adjacent areas (see Appendix 5A, EIAR Volume II). Lighting will be minimised in terms of number of lights and the power of the lights (lux level). Directional lighting, facing and located away from any surrounding vegetation; and Lighting will be turned off where possible when not in use except to meet the minimum requirements for Health and Safety.	Range from Not Significant to Slight in close proximity to the construction site (up to approximately 500m from the Proposed Development Site). Not Significant in the wider study area (beyond approximately 500m).	St/T	LV1 and 2

DEVELOPMENT PHASE	ENVIRONMENTAL IMPACT (FOLLOWING DEVELOPMENT DESIGN AND EMBEDDED MITIGATION MEASURES)	CLASSIFICATION OF EFFECT PRIOR TO MITIGATION	MITIGATION/ ENHANCEMENT (IF IDENTIFIED)	CLASSIFICATION OF RESIDUAL EFFECT AFTER MITIGATION	NATURE OF EFFECT(S) (LT/ MT/ ST AND T/ P AND D/ IN)	MITIGATION ITEM NUMBER (REFER TO TABLE 21.3)
Operation	<p>Likely effects of the development on views and visual amenity such as the potential for the development to alter (beneficial or adverse) the composition of the view from a viewpoint.</p> <p>The main landscape and visual effects of the Proposed Development will be associated with the introduction of the air intake and emissions stack, integrating with the established industrial character of the site and its surroundings.</p>	<p>The landscape effects will range from Not Significant to Neutral</p> <p>Visual effects range from Low to None.</p>	<p>Given the scale and location of the Proposed Development, the main landscape and visual mitigation measures focus on architectural mitigation (colour and finishes of the scheme) and minimising lighting during night-time. Hence measures will be implemented immediately and come into effect following the completion of construction works.</p>	<p>The landscape effects will range from Not Significant to Neutral.</p> <p>Residual visual effects will range from Low to None.</p>	Mt/Lt	LV1 and 2
Decommissioning	As per landscape construction phase.					N/A
NOISE AND VIBRATION (EIAR CHAPTER 11)						
Construction	No significant effects identified with the exception of NSR 1 during the peak month.	Temporary / Short-Term	Selection of quieter construction plant and implementation of general mitigation measures comprising those in BS 5228-1 Table B.1	Not significant	St/T	N1
Operation	No significant effects identified with the exception of NSR1	Long Term / Reversible	Minimum acoustic requirements on the performance of an acoustic louvre and	Not significant	Lt/Reversible	N2

DEVELOPMENT PHASE	ENVIRONMENTAL IMPACT (FOLLOWING DESIGN AND EMBEDDED MITIGATION MEASURES)	CLASSIFICATION OF EFFECT PRIOR TO MITIGATION	MITIGATION/ ENHANCEMENT (IF IDENTIFIED)	CLASSIFICATION OF RESIDUAL EFFECT AFTER MITIGATION	NATURE OF EFFECT(S) (LT/ MT/ ST AND T/ P AND D/ IN)	MITIGATION ITEM NUMBER (REFER TO TABLE 21.3)
			gas turbine building envelope.			
Decommissioning	No significant effects identified.					N/A
WATER ENVIRONMENT (EIAR CHAPTER 12)						
Construction	No significant effects identified.					N/A
Operation	No significant effects identified.					N/A
Decommissioning	No significant effects identified.					N/A
LAND AND SOILS (EIAR CHAPTER 13)						
Construction	No significant effects identified.					N/A
Operation	No significant effects identified.					N/A
Decommissioning	No significant effects identified.					N/A
TRAFFIC AND TRANSPORT (EIAR CHAPTER 14)						
Construction	HGV construction traffic flow generated by the development on minor roads.	Temporary Negative	/ Implementation of the detailed Construction Traffic Management Plan	Not Significant	St/T/D	T1
Operation	No significant effects identified.					N/A
Decommissioning	No significant effects identified.					N/A
POPULATION AND HUMAN HEALTH (EIAR CHAPTER 15)						
Construction	No significant effects identified.					N/A

DEVELOPMENT PHASE	ENVIRONMENTAL IMPACT (FOLLOWING DESIGN AND EMBEDDED MITIGATION MEASURES)	CLASSIFICATION OF EFFECT PRIOR TO MITIGATION	MITIGATION/ ENHANCEMENT (IF IDENTIFIED)	CLASSIFICATION OF RESIDUAL EFFECT AFTER MITIGATION	NATURE OF EFFECT(S) (LT/ MT/ ST AND T/ P AND D/ IN)	MITIGATION ITEM NUMBER (REFER TO TABLE 21.3)
Operation	No significant effects identified.					N/A
Decommissioning	No significant effects identified.					N/A
MATERIAL ASSETS (EIAR CHAPTER 16)						
Construction	No significant effects identified.					N/A
Operation	No significant effects identified.					N/A
Decommissioning	No significant effects identified.					N/A
CLIMATE (EIAR CHAPTER 17)						
Construction	No significant effects identified.					N/A
Operation	No significant effects identified.					N/A
Decommissioning	No significant effects identified.					N/A
WASTE MANAGEMENT (EIAR CHAPTER 18)						
Construction	No significant effects identified.					N/A
Operation	No significant effects identified.					N/A
Decommissioning	No significant effects identified.					N/A
MAJOR ACCIDENTS AND DISASTERS (EIAR CHAPTER 19)						
Construction	No significant effects identified.					N/A
Operation	No significant effects identified.					N/A
Decommissioning	No significant effects identified.					N/A

Note: Lt = long term, Mt = medium term, St = short term, P = permanent, T = temporary, D = direct and In = indirect.

21.1.3 Schedule of Environmental Commitments

As described throughout each of the chapters within the EIAR, there are instances where the environmental effects associated with the Proposed Development may be of such a magnitude as to warrant mitigation measures. These measures are deemed necessary to minimise environmental impacts during the operation, construction and/ or maintenance phases of the Proposed Development.

This Schedule of Environmental Commitments (Table 21.3) provides a collective summary of the proposed mitigation measures. Specifically, the following have been tabulated:

- Mitigation measure item number.
- Approximate location of mitigation measure.
- Mitigation objective and commitment.
- Potential timing of the mitigation measure.
- Potential monitoring requirements; and
- Potential additional consultation proposed.

As described in the schedule, there may be a requirement for additional consultation to be carried out (i.e., with statutory bodies and other interested parties). Table 21.3 provides a brief summary of the overall committed mitigation measures.

Table 21.3: Schedule of Environmental Commitments

MITIGATION ITEM NO.	APPROX LOCATION	MITIGATION AND COMMITMENT	POTENTIAL MEASURE	MITIGATION MEASURE	TIMING OF MEASURE	MITIGATION MONITORING REQUIREMENTS	ADDITIONAL REQUIREMENT
AIR QUALITY (EIAR CHAPTER 7)							
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CULTURAL HERITAGE (EIAR CHAPTER 8)							
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BIODIVERSITY (EIAR CHAPTER 9)							
B1	Construction area	Safeguard breeding birds. Safeguard small mammals and reptiles.	No site clearance between March and August unless first checked by an ECoW. Excavations will be left with a method of escape.	Year round		None	None
LANDSCAPE AND VISUAL (EIAR CHAPTER 10)							
LV1	Proposed Site Location	Maximise visual integration of proposed buildings into their environment.	Selection of appropriate colours, materials and textures for built structures to minimise their visual impact and to allow buildings to be as unobtrusive as possible against their backdrop.	Planning and Operational Phase		Regular maintenance during operation	N/A
LV2	Proposed Site Location	Reduction of visual effects due to additional lighting.	Lighting will be kept to essential locations only, with the position and direction of lighting being designed to minimise intrusion and disturbance to adjacent	Operational Phase		Regular maintenance during operation	N/A

MITIGATION ITEM NO.	APPROX LOCATION	MITIGATION AND COMMITMENT	POTENTIAL OBJECTIVE MEASURE	MITIGATION MEASURE	TIMING OF MEASURE	MITIGATION MONITORING REQUIREMENTS	ADDITIONAL REQUIREMENT
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areas. Use of full cut-off lanterns are proposed to minimise light spillage and upward escape of light onto adjacent areas.

NOISE AND VIBRATION (EIAR CHAPTER 11)

N1	Site	Selection of quieter construction plant and implementation of general mitigation measures comprising those in BS 5228-1 Table B.1	All noise and vibration generating construction plant will be shut down when not in use. The loading and unloading of materials will take place away from NSRs, ideally in locations which are acoustically screened. Materials will be handled with care and placed rather than dropped where possible. Drop heights of materials from lorries and other plant will be kept to a minimum.	Construction phase		Controls to be monitored to ensure they are enforced.	N/A
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N2	OCGT building	To reduce break out noise from internal sound sources from within the OCGT building	Minimum specification provided for Gas Turbine Building wall/roof construction and gas turbine air intake louvre.	Operational phase		N/A	N/A
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WATER ENVIRONMENT (EIAR CHAPTER 12)

N/A	N/A	N/A	N/A	N/A		N/A	N/A
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SOILS AND GEOLOGY (EIAR CHAPTER 13)

MITIGATION ITEM NO.	APPROX LOCATION	MITIGATION AND COMMITMENT	OBJECTIVE	POTENTIAL MEASURE	MITIGATION MEASURE	TIMING OF MEASURE	MONITORING REQUIREMENTS	ADDITIONAL REQUIREMENT
N/A	N/A	N/A		N/A		N/A	N/A	N/A
TRAFFIC AND TRANSPORT (EIAR CHAPTER 14)								
T1	Site access Road	Control of HGV construction traffic flow generated by the development on minor roads.		Construction Traffic Management Plan.		During the Construction phase	Controls to be monitored to ensure they are enforced.	N/A
POPULATION AND HUMAN HEALTH (EIAR CHAPTER 15)								
N/A	N/A	N/A		N/A		N/A	N/A	N/A
MATERIAL ASSETS (EIAR CHAPTER 16)								
N/A	N/A	N/A		N/A		N/A	N/A	N/A
CLIMATE (EIAR CHAPTER 17)								
N/A	N/A	N/A		N/A		N/A	N/A	N/A
WASTE MANAGEMENT (EIAR CHAPTER 18)								
N/A	N/A	N/A		N/A		N/A	N/A	N/A
MAJOR ACCIDENTS AND DIASTERS (EIAR CHAPTER 19)								
N/A	N/A	N/A		N/A		N/A	N/A	N/A

21.2 References

CIRIA (2001). *Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors (C532)*.

CIRIA (2006). *Control of water pollution from linear construction projects. Technical guidance (C648)*.

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