



Chapter 18 – Summary of Residual Effects

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18. SUMMARY OF RESIDUAL EFFECTS

18.1 Introduction

This Chapter provides a summary of the residual effects associated with the construction and operational phases of the Proposed Development, as described through this EIAR. Detailed impact assessments are presented in Chapters 4 to 15 of this EIAR.

Residual impacts are defined as the final or remaining impacts that may occur once the proposed mitigation measures have been implemented. They reflect the degree of change that persists following mitigation.

Table 18-1 summarises the residual impacts and details their quality (e.g. positive, negative), significance (e.g. imperceptible, not significant, significant) and duration (e.g. short-term, long-term).

The terminology used to describe residual impact significance in this Chapter is consistent with that applied throughout the EIAR. In line with best practice, the Environmental Protection Agency's (EPA) Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA, 2022) form the primary reference, supplemented where appropriate by discipline-specific guidance.

Full details of all residual impacts can be found within the EIAR Chapters.

Table 18-1 Summary of Residual Effects

EIAR Chapter	Residual Effect Description	Effect Significance (Pre-Mitigation)	Residual Significance (Post-Mitigation)
Chapter 4 Human Health and Population	Construction Phase		
	Socioeconomic effects on support industries in the local and wider area	Positive, imperceptible, short-term	Positive, imperceptible, short-term
	Landscape and visual effects from construction activities (heavy vehicle movements, construction machinery, temporary lighting, machinery storage)	Negative, slight and short-term (landscape) Negative, moderate-slight and short-term (within 500m) not significant (beyond 500m) (visual)	Slight, negative and short-term (landscape) Moderate-slight, negative and short-term (visual)
	Reduction in soil quality resulting from historical or unmitigated pollutants entering the soil	Negative, imperceptible and short-term	Neutral, imperceptible, and short-term
	Changes to the potential for contamination of surface and groundwater	Negative, slight and short term	Neutral, imperceptible, and short-term
	Nuisance dust effect impact to sensitive receptors within 250m of the works areas.	Short-term, direct, localised, negative and slight	Short-term, direct, localised, negative and not significant
	Impact to nearby noise sensitive properties resulting from noise emissions from construction works, site traffic and other activities.	Negative - neutral, imperceptible – very significant and temporary – short term (dependant on distance from NSL)	Negative, slight to moderate and temporary
	Localised traffic delays due to traffic management and diversions.	Negative, moderate, and brief to temporary	Temporary, not significant and negative
	Operational Phase		
	Socioeconomic effects on support industries in the local and wider area	Neutral, imperceptible and long-term	neutral, imperceptible and long-term
	Local landscape and visual impacts	Neutral, imperceptible and long-term (landscape)	Slight-imperceptible, neutral-negative and permanent (landscape) Slight-imperceptible, neutral and permanent (visual)

EIAR Chapter	Residual Effect Description	Effect Significance (Pre-Mitigation)	Residual Significance (Post-Mitigation)
		neutral, imperceptible and permanent to negative, slight, and permanent (visual impact)	
	Leaks and spills of hydrocarbons	Neutral, imperceptible and long-term.	Neutral, imperceptible and long-term
	Air quality impacts from boilers and backup generator	Long-term, direct, localised, negative and not significant	Long-term, direct, localised, negative and not significant
	Operational traffic on the external road network	Long term, imperceptible, neutral	Long term in duration of imperceptible, neutral
Chapter 5 Land, Soils, and Geology	Construction Phase		
	Excavations, import/export of materials, contamination of soils and underlying geology	Negative, significant and short term	Neutral, imperceptible and short-term
	Temporary land take	Negative, imperceptible, short term	Neutral, imperceptible and short-term
	Operational Phase		
	New hardstanding areas, hydrocarbon leaks or spills	Neutral, imperceptible and long term.	Neutral, imperceptible and long term.
Chapter 6 Hydrology and Hydrogeology	Construction Phase		
	Surface water and groundwater quality (from suspended solids, hydrocarbons, cement/concrete, wastewater)	Negative, slight-significant and brief-short term	Neutral, imperceptible and short-term
	Potential impacts to surface and groundwater flow (from land clearing, earthworks, excavations, open cut crossings, trenchless crossings, flooding, temporary structures, such as temporary bridge structures)	Negative, slight-significant and brief-short term	Neutral, imperceptible and short-term
	Potential impacts to designated areas (SACs, SPAs, and NHA/pNHAs)	Negative, slight-significant and short term	Neutral, imperceptible and short-term
	Potential impacts to Water Framework Directive status of any waterbody or habitat	Neutral, imperceptible and short term	Neutral, imperceptible and short term
	Operational Phase		

EIAR Chapter	Residual Effect Description	Effect Significance (Pre-Mitigation)	Residual Significance (Post-Mitigation)
	Potential impacts to surface water and groundwater quality from new hardstanding areas, hydrocarbon leaks or spills	Neutral, imperceptible, long-term	Neutral, imperceptible and long-term
	Potential impacts to surface water and groundwater water flow and quantity from new hardstanding areas	Neutral, imperceptible and long-term	Neutral, imperceptible and long-term
	Potential impacts to designated sites (SACs, SPAs, and NHA/pNHAs)	Neutral, imperceptible and long-term	Neutral, imperceptible and long-term
	Potential impacts to Water Framework Directive status of surface water and groundwater bodies	Neutral, imperceptible and long-term	Neutral, imperceptible and long-term
Chapter 7 Biodiversity	Construction Phase		
	Loss of uncommon plant species and removal of low-to-high value hedgerows at boundary crossings	Adverse, not significant, and short-term	Adverse, not significant, and short-term
	Disturbance of badger setts and foraging areas and felling of trees with bat-roost potential	medium-adverse, significant and short-term	Negligible-adverse, neutral, not significant and short-term
	Potential impacts to breeding birds from hedgerow removals	Negative, not-significant, medium-term	low-adverse, negative, not significant and short-term
	Potential impacts to aquatic biodiversity from silt or petrochemicals via contaminated surface water runoff and open-cut installation adjacent to/through drainage ditches and minor waterbodies.	Negative, significant and short-term	Low-adverse, neutral, not significant and short-term
	Operational Phase		
Chapter 8 Air Quality	Construction Phase		
	Construction dust emissions, nuisance dust, and dust soiling	Short-term, direct, localised, negative and slight	Short-term, direct, localised, negative and not significant
	Potential impacts to ecological receptors from dust impacts	Short-term, direct, localised, negative and slight	Short-term, direct, localised, negative and not significant
Operational Phase			

EIAR Chapter	Residual Effect Description	Effect Significance (Pre-Mitigation)	Residual Significance (Post-Mitigation)
	Ballykilleen AGI boilers and backup generator air emissions	Long-term, direct, localised, negative and not significant	Long-term, direct, localised, negative and not significant
Chapter 9 Climate	Construction Phase		
	Greenhouse gas (GHG) emissions from construction activities and embodied carbon in materials	Direct, long-term, negative and slight	Direct, long-term, negative and slight, which is overall not significant
	Vulnerability to climate change hazards	Direct, short-term, negative and imperceptible	Direct, short-term, negative and imperceptible, which is overall not significant
	Operational Phase		
	Greenhouse gas (GHG) emissions during the operational phase	Direct, long-term, negative and slight	Direct, long-term, negative and slight, which is overall not significant
	Vulnerability to climate change hazards	Direct, long-term, negative and imperceptible,	Direct, long-term, negative and imperceptible, which is overall not significant
Chapter 10 Noise and Vibration	Construction Phase		
	The potential for effects from construction noise where works are taking place within 50 m of noise-sensitive locations (NSL)	Negative, significant to very significant and short term.	Negative, slight to moderate and short term
	The potential for effects from construction noise to all other noise-sensitive locations (NSL)	Negative, not significant to moderate and short term.	Negative, slight to moderate and short term
	The potential noise generated from traffic	Neutral, imperceptible and short-term	Negative, slight to moderate and short term
	Potential vibration impacts to residential of other light framed structures	Negative, not significant and short term.	Negative, slight to moderate and short term
	otential vibration impacts to building occupants from vibration	Negative, not significant to slight and short term	Negative, slight to moderate and short term
	Operational Phase		
No operational phase residual effects			
Chapter 11 Landscape and Visual	Construction Phase		
	Heavy vehicle movements and construction machinery; temporary site lighting, storage of construction materials and excavated ground (Landscape)	Slight to slight-imperceptible/imperceptible, negative, and short-term	Slight, negative and short-term

EIAR Chapter	Residual Effect Description	Effect Significance (Pre-Mitigation)	Residual Significance (Post-Mitigation)	
	Topsoil stripping and hedgerow removal, excavation of trenches (Landscape)	Slight to slight-imperceptible/imperceptible, negative, and short-term	Slight, negative and short-term	
	Heavy vehicle movements, construction machinery, and stockpiling (Visual)	Short-term, negative, and moderate-slight and will reduce considerably beyond 500m from the site	Moderate-slight, negative and short-term	
	Operational Phase			
	Maintenance operations (Landscape)	Imperceptible and neutral	Slight-imperceptible, neutral-negative and permanent	
	Pipeline fencing (Visual)	Imperceptible and neutral	Slight-imperceptible, neutral-negative and permanent	
	Kilwarden Offtake and Ballkilleen AGI (Visual)	Slight, negative, and permanent to imperceptible, neutral, and permanent/long term	Slight-imperceptible, neutral and permanent	
Chapter 12 Archaeological and Cultural Heritage	Construction Phase			
	Subsurface archaeological or architectural heritage features.	Negative, moderate and permanent.	Neutral, imperceptible, and short term.	
	Operational Phase			
No operational phase residual effects				
Chapter 13 Traffic and Transportation	Construction Phase			
	Localised traffic delays from traffic management and diversions	Negative, moderate and brief to temporary	Temporary, not significant and negative	
	Operational Phase			
Operational maintenance traffic	Neutral, imperceptible and long term	Neutral, imperceptible and long term		
Chapter 14 Waste Management	Construction Phase			
	Construction-phase waste management	indirect, short-term to long-term, significant and negative	short-term, imperceptible and neutral.	
	Litter pollution	Negative, significant, short-term	Negative, not significant, short-term, unlikely	
	Unlicensed waste collection and/or illegal dumping	Negative, significant, long-term	Negative, significant, short-term, unlikely	
	Insufficient waste facilities	Negative, significant, short-term	Negative, significant, short-term, unlikely	

EIAR Chapter	Residual Effect Description	Effect Significance (Pre-Mitigation)	Residual Significance (Post-Mitigation)
	Lack of waste classification	Negative, significant, long-term	Negative, significant, short-term, unlikely
	Operational-phase waste management	Indirect, short-term to long-term, significant and negative	Long-term, imperceptible and neutral.
	Unlicensed waste collection and/or illegal dumping	Negative, significant, local & regional, long-term	Negative, significant, long-term, unlikely
	Poor waste segregation	Negative, significant, local & regional, long-term	Negative, not significant, long-term, unlikely
	Litter pollution	Negative, significant, local & regional, short-term	Negative, not significant, short-term, unlikely
Chapter 15 Utilities	Construction Phase		
	Potential impacts to to utilities (power and electrical supply, surface water and foul wastewater infrastructure, potable water infrastructure, telecommunications, natural gas)	Neutral, imperceptible, and short-term	Neutral, imperceptible, and temporary
	Operational Phase		
	Potential impacts to utilities (power and electrical supply, surface water and foul wastewater infrastructure, potable water infrastructure, telecommunications, natural gas)	Neutral, imperceptible and long-term	Neutral, imperceptible and long-term