



**ENVIRONMENTAL STATEMENT**  
**VOLUME 1**  
**CHAPTER 16 - SUMMARY OF RESIDUAL**  
**EFFECTS**



## 16 SUMMARY OF RESIDUAL EFFECTS

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### 16.1 INTRODUCTION

- 16.1.1. The likely significant residual environmental effects of the Proposed Development have been described in the preceding technical chapters, on the assumption that the mitigation measures those chapters propose will have been implemented. The effects relate to the construction and operational phases and are outlined in **Table 16-1** and **Chapters 5 – 13**.

**Table 16-1 – Summary of Residual Effects**

CHAPTER	STAGE OF DEVELOPMENT	DESCRIPTION OF RESIDUAL EFFECT	RESIDUAL EFFECTS				
			MAJOR / MODERATE / MINOR / NEGLIGIBLE	BENEFICIAL / ADVERSE	PERMANENT / TEMPORARY	DIRECT / INDIRECT	SHORT / MEDIUM / LONG TERM
<b>5. Socio-Economics</b>	Operation	Operational employment (direct, indirect and induced)	Minor	Beneficial	P	D	LT
		Geographical distribution of employment opportunities	Negligible	N/A	N/A	N/A	N/A
		Visitor expenditure	Negligible	N/A	N/A	N/A	N/A
		Contribution to leisure provision	Moderate	Beneficial	P	D	LT
		Employee training and college partnerships	Moderate	Beneficial	P	D	LT
<b>6. Transport and Access</b>	Construction	Severance	Negligible	N/A	N/A	N/A	N/A
		Delay	Negligible	N/A	N/A	N/A	N/A

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			MAJOR / MODERATE / MINOR / NEGLIGIBLE	BENEFICIAL / ADVERSE	PERMANENT / TEMPORARY	DIRECT / INDIRECT	SHORT / MEDIUM / LONG TERM		
		Amenity	Negligible	N/A	N/A	N/A	N/A		
		Fear, intimidation, accidents and safety	Negligible	N/A	N/A	N/A	N/A		
	Operation	Severance	Negligible	N/A	N/A	N/A	N/A		
		Delay	Negligible	N/A	N/A	N/A	N/A		
		Amenity	Negligible	N/A	N/A	N/A	N/A		
		Fear, intimidation, accidents and safety	Negligible	N/A	N/A	N/A	N/A		
		7. Air Quality	Construction	Dust soiling from construction activities (including earthworks, construction works and track out)	Negligible	N/A	N/A	N/A	N/A
		Construction traffic		Negligible	N/A	N/A	N/A	N/A	

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			MAJOR / MODERATE / MINOR / NEGLIGIBLE	BENEFICIAL / ADVERSE	PERMANENT / TEMPORARY	DIRECT / INDIRECT	SHORT / MEDIUM / LONG TERM
	Operation	Road traffic emissions	Negligible	N/A	N/A	N/A	N/A
<b>8. Noise and Vibration</b>	Construction	Construction noise	Minor	Adverse	T	D	ST to MT
		Construction vibration	Minor	Adverse	T	D	ST
		Construction traffic noise	Negligible	N/A	N/A	N/A	N/A
	Operation	Road traffic	Minor	Beneficial	P	ID	LT
		Fixed plant	Negligible	N/A	N/A	N/A	N/A
		Site activity	Negligible	N/A	N/A	N/A	N/A

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9. Biodiversity <sup>1</sup>	Construction	Effects on off-site habitat of ecological importance	Site scale	Adverse	T	I	ST
		Effects on on-site habitat of ecological importance	Site scale	Adverse	T	D and I	ST
		Bats	Site scale	Adverse	T	D and I	ST
		Badger	Site scale	Adverse	T	D and I	ST
		Other mammals	Site scale	Adverse	T	D and I	ST
		Birds	Site scale	Adverse	T	D and I	ST

<sup>1</sup> The terminology for defining the scale of effects for Biodiversity is based on the topic specific criteria set out in **Chapter 9: Biodiversity**.

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			MAJOR / MODERATE / MINOR / NEGLIGIBLE	BENEFICIAL / ADVERSE	PERMANENT / TEMPORARY	DIRECT / INDIRECT	SHORT / MEDIUM / LONG TERM
		Reptiles	Site scale	Adverse	T	D and I	ST
		Amphibians	Site scale	Adverse	T	D and I	ST
		Invertebrates	Site scale	Adverse	T	I	ST
	Operation	Effects on off-site habitat of ecological importance	Negligible	N/A	N/A	N/A	N/A
		Effects on on-site habitat of ecological importance	Site scale	Beneficial	P	D	MT to LT
		Bats	Negligible	N/A	N/A	N/A	N/A
		Badger	Negligible	N/A	N/A	N/A	N/A
		Other mammals	Negligible	N/A	N/A	N/A	N/A



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			MAJOR / MODERATE / MINOR / NEGLIGIBLE	BENEFICIAL / ADVERSE	PERMANENT / TEMPORARY	DIRECT / INDIRECT	SHORT / MEDIUM / LONG TERM
		Birds	Negligible	N/A	N/A	N/A	N/A
		Reptiles	Negligible	N/A	N/A	N/A	N/A
		Amphibians	Negligible	N/A	N/A	N/A	N/A
		Invertebrates	Site scale	Beneficial	P	D and I	LT
<b>10. Archaeology and Cultural Heritage</b>	Construction	Potential buried archaeological remains	Significance unknown; further evaluation by trial trenching to be undertaken during the determination to further inform this potential effect.	Adverse	P	D	LT
	Operation	Setting of designated heritage assets	No effect to minor	Adverse	P	I	LT

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			MAJOR / MODERATE / MINOR / NEGLIGIBLE	BENEFICIAL / ADVERSE	PERMANENT / TEMPORARY	DIRECT / INDIRECT	SHORT / MEDIUM / LONG TERM
11. Ground Conditions	Construction	Potential effects on human health from exposure to contamination and/or ground gas associated with historical and current land use	Negligible	N/A	N/A	N/A	N/A
		Potential for increased mobilisation of chemical contaminants into surface water and / or groundwater	Negligible	N/A	N/A	N/A	N/A
	Operation	Potential effects on human health from exposure to contamination and/or ground gas/vapours associated with historical and current land use	Negligible	N/A	N/A	N/A	N/A
		Potential for increased mobilisation of chemical contaminants	Negligible	N/A	N/A	N/A	N/A

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			MAJOR / MODERATE / MINOR / NEGLIGIBLE	BENEFICIAL / ADVERSE	PERMANENT / TEMPORARY	DIRECT / INDIRECT	SHORT / MEDIUM / LONG TERM
		into surface water and / or groundwater					
		Potential impact to buildings from ground gas	Negligible	N/A	N/A	N/A	N/A
		Potential degradation/permeation of water supply pipes from contaminants	Negligible	N/A	N/A	N/A	N/A
<b>12. Water Resources, Flood Risk and Drainage</b>	Construction	Impact on Fluvial and Pluvial Flood Risk on Construction Workers	Negligible	N/A	N/A	N/A	N/A
		Impact on Fluvial and Pluvial Flood Risk on the Public and Local Users	Negligible	N/A	N/A	N/A	N/A
		Effects on the Existing Surface Water Drainage Ditch Network and Outfall – Water Quality	Negligible	N/A	N/A	N/A	N/A

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			MAJOR / MODERATE / MINOR / NEGLIGIBLE	BENEFICIAL / ADVERSE	PERMANENT / TEMPORARY	DIRECT / INDIRECT	SHORT / MEDIUM / LONG TERM
		Changes to groundwater levels during construction	Negligible	N/A	N/A	N/A	N/A
		Contamination of groundwater	Negligible	N/A	N/A	N/A	N/A
	Operation	Impact on fluvial and pluvial flood risk on the public and local users	Negligible	N/A	N/A	N/A	N/A
		Effects on the existing surface water drainage ditch network and outfall – water quantity and rate	Negligible	N/A	N/A	N/A	N/A
		Effects on the existing surface water drainage ditch network and outfall – water quality	Minor	Adverse	T	D	ST
		Changes to groundwater levels	Negligible	N/A	N/A	N/A	N/A
		Contamination of groundwater	Negligible	N/A	N/A	N/A	N/A

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			MAJOR / MODERATE / MINOR / NEGLIGIBLE	BENEFICIAL / ADVERSE	PERMANENT / TEMPORARY	DIRECT / INDIRECT	SHORT / MEDIUM / LONG TERM
		Effects on the local foul sewerage network	Negligible	N/A	N/A	N/A	N/A
		Effects on the local water authority mains cold water infrastructure network	Negligible	N/A	N/A	N/A	N/A
<b>13. Landscape and Visual Assessment</b>	Construction	Change to landscape character: Site level	Moderate	Adverse	T	D	ST
		Change to landscape character: Local	Minor	Adverse	T	D	ST
		Change to visual amenity: Viewpoint 18: Adjacent residents, Viewpoint 3: PRoW 161/6/10, visitors to hotel and spa	Moderate - major	Adverse	T	D	ST
		Change to visual amenity: Viewpoint 4	Minor - moderate	Adverse	T	D	ST
		Change to visual amenity: Viewpoints 1a,	Minor	Adverse	T	D	ST

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			MAJOR / MODERATE / MINOR / NEGLIGIBLE	BENEFICIAL / ADVERSE	PERMANENT / TEMPORARY	DIRECT / INDIRECT	SHORT / MEDIUM / LONG TERM
		1b, 2, 14a, 14b & A to E					
		Change to visual amenity: Viewpoints 5, 6, 15 & 16	Negligible	N/A	N/A	N/A	N/A
		Change to visual amenity: Viewpoints 7, 8, 9, 10, 11, 12, 13 & 17	Neutral	N/A	N/A	N/A	N/A
	Operation (Year 0)	Change to landscape character: Site level	Minor	Adverse	T	D	ST
		Change to landscape character: Local	Negligible	N/A	N/A	N/A	N/A
		Change to visual amenity: Viewpoint 18: Adjacent Residents, Viewpoint 3: PRoW 161/6/10, visitors to hotel and spa	Moderate	Adverse	T	D	ST
		Change to visual amenity: Viewpoint 4	Minor - moderate	Adverse	T	D	ST

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			MAJOR / MODERATE / MINOR / NEGLIGIBLE	BENEFICIAL / ADVERSE	PERMANENT / TEMPORARY	DIRECT / INDIRECT	SHORT / MEDIUM / LONG TERM
		Change to visual amenity: Viewpoints 1a, 1b, 2, A to E	Minor	Adverse	T	D	ST
		Change to visual amenity: Viewpoints 6, 14a, 14b, 16,	Negligible	N/A	N/A	N/A	N/A
		Change to visual amenity: Viewpoints 5, 7, 8, 9, 10, 11, 12, 13, 15, 17	Neutral	N/A	N/A	N/A	N/A
	Operation (Year 15)	Change to landscape character: Site level	Minor	Beneficial	P	D	LT
		Change to landscape character: Local	Negligible - neutral	N/A	N/A	N/A	N/A
		Change to visual amenity: Viewpoint 18: Adjacent Residents	Minor - moderate	Adverse	P	D	LT
		Change to visual amenity: Viewpoint 3: PRow 161/6/10,	Minor	Adverse	P	D	LT

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			MAJOR / MODERATE / MINOR / NEGLIGIBLE	BENEFICIAL / ADVERSE	PERMANENT / TEMPORARY	DIRECT / INDIRECT	SHORT / MEDIUM / LONG TERM
		visitors to hotel and spa and Viewpoint 4					
		Change to visual amenity: Viewpoints 1b, A & B	Negligible - minor	Adverse	P	D	LT
		Change to visual amenity: 1a, 14a, 14b, C to E, 2 & 16	Negligible	N/A	N/A	N/A	N/A
		Change to visual amenity: Viewpoints 5, 6, 7, 8, 9, 10, 11, 12, 13, 15 & 17	Neutral	N/A	N/A	N/A	N/A

**Key to table:**

P / T = Permanent or Temporary, D / I = Direct or Indirect, ST / MT / LT = Short Term, Medium Term or Long Term, N/A = Not Applicable.