

# 11 Mitigation Measures, Monitoring and Residual Effects

## 11.1 Introduction

11.1.1 Tables 11.1 and 11.2 provide a summary of the likely significant effects during construction and operational phases respectively as well as associated mitigation and monitoring measures, and residual effects of the Development as detailed in each of the ES technical chapters (7 to 9).

11.1.2 Table 11.3 and 11.4 provide a summary of the likely cumulative significant effects during construction and operational phases, respectively.

11.1.3 For ease of reference, a summary of key mitigation measures, including embedded mitigation within the Parameter Plans and Development Specification, is provided below for both the construction and operational phase of the Development.

### Construction Phase

- Construction Environmental Management Plan (CEMP), to include Dust Management Plan, Site Waste Management Plan (SWMP) and flood emergency and contingency plan;
- Adherence to Arboricultural Impact Assessment recommendations (for those features to be retained);
- Construction Travel Management Plan (CTMP); and,
- Landscape and Habitats Management Plan (LHMP), including a comprehensive ecological monitoring programme.

### Operational Phase

- Travel Plans;
- Creation of circa. 5.4ha of wet grassland/inundation vegetation within the No Build Zone of the Application 1 site;
- Circa. 370m of new hedgerow planting;
- European Protected Species Mitigation Licence (EPSML) acquisition for Building B1 within the Application 2 site. An artificial roost would be provided at a suitable location nearby to the retained vegetation in the southern section of the Application 1 site to ensure that the bat population can access the adjacent commuting and foraging habitat;
- Provision of new artificial roosting features in the form of bat boxes and bat bricks to increase the overall number of potential roost sites across the Development;
- Improvements to the bus, pedestrian and cycle network;
- Sensitive design of lighting scheme;
- New drainage infrastructure and SuDS and their maintenance;
- Flood compensation measures; and,
- LHMP, including a comprehensive ecological monitoring programme.

Table 11.1: Summary of Construction Phase Effects (Scenarios 1 to 4)

Topic	Potential Effect	Receptor (Geographic Scale)	Mitigation Measures and Monitoring	Anticipated Securing Mechanism	Residual Effect
Biodiversity	<b>Designated Sites</b>				
	Indirect effects from pollution, run-off and noise.	Bicester Wetland Reserve LWS/ Graven Hill LWS (County)	CEMP and LHMP	Planning Condition	Negligible
		Proposed Promised Land Farm DWS (District)	CEMP and LHMP	Planning Condition	Negligible
	<b>Habitats</b>				
	Semi-improved Neutral Grassland and Improved Grassland - direct loss of habitat	Semi-improved Neutral Grassland and Improved Grassland (Up to District)	c. 5.4ha of wet grassland/inundation vegetation creation. Retained habitats enhanced through planting and management. CEMP and LHMP.	Planning Condition	Negligible
	Hedgerows - direct loss of habitat, degradation of retained areas.	Hedgerows (Local)	c. 370m of new hedgerow planting. Buffer retained hedgerows, new hedgerow planting, sympathetic management. CEMP and LHMP.	Planning Condition	Negligible
	Ditches – partial and permanent loss of ditches	Ditches (Site)	Creation of swales/new waterbodies. CEMP and LHMP.	Planning Condition	Negligible

Topic	Potential Effect	Receptor (Geographic Scale)	Mitigation Measures and Monitoring	Anticipated Securing Mechanism	Residual Effect
	Trees - impacts from construction activities, partial loss of mature trees	Trees (Local)	New tree planting as part of landscaping proposals. CEMP and LHMP.	Planning Condition	Negligible
	Ponds - direct loss of habitat	Ponds (Site)	Creation of swales/new waterbodies. CEMP and LHMP.	Planning Condition	Negligible
	Watercourses - indirect effects from pollution from siltation, chemical spills or dust deposition.	Watercourses (Local)	CEMP and LHMP	Planning Condition	Negligible
<b>Species</b>					
	Badgers - not confirmed on site but may pass through it.	Badgers (Negligible)	Precautionary measures in CEMP to protect against badgers passing through construction area. CEMP and LHMP.	Planning Condition	Negligible
	Bats - habitat loss and maternity roost	Bats (Local)	Retaining and enhancing boundary features, such as field margins and hedgerows; new habitat creation and new roosting opportunities. An artificial roost to be provided at a suitable location nearby to the	Planning Condition	Negligible

Topic	Potential Effect	Receptor (Geographic Scale)	Mitigation Measures and Monitoring	Anticipated Securing Mechanism	Residual Effect
			retained vegetation in the southern section of the Application 1 site to ensure that the bat population can access the adjacent commuting and foraging habitat. CEMP and LHMP.		
	Birds - habitat loss and disturbance	Birds (Local)	Retained habitats enhanced through planting and management. c. 370m of new hedgerow planting. c. 5.4ha of wet grassland/inundation vegetation creation. New tree planting as part of landscaping proposals. Creation of swales/new waterbodies. CEMP and LHMP.	Planning Condition	Negligible
	Otter - not confirmed on site but may pass be using Langford Brook.	Otter (Up to County)	Precautionary measures in CEMP to protect against otter passing through construction area. CEMP and LHMP.	Planning Condition	Negligible

Topic	Potential Effect	Receptor (Geographic Scale)	Mitigation Measures and Monitoring	Anticipated Securing Mechanism	Residual Effect
Water Resources and Flood Risk	Flood Risk - Construction Workers and Construction Plant	Human (Site)	Flood emergency and contingency plan as part of the CEMP.	Planning Condition	Negligible
	Surface Water Drainage and Water Quality - Increased sediment loads	Waterbodies (Site/Local)	Good site practice in accordance with the CEMP. CEMP to include SWMP.	Planning Condition	Negligible
	Surface Water Drainage and Water Quality - Accidental leaks of and spillage of hazardous materials	Waterbodies (Site/Local)	Good site practice in accordance with the CEMP. CEMP to include SWMP.	Planning Condition	Negligible
	Surface Water Drainage and Water Quality - Infrastructure	Infrastructure (Local)	Good site practice in accordance with the CEMP. CEMP to include SWMP.	Planning Condition	Negligible
Transport and Access	Severance	Road users on Wendlebury Road/ Vendee Drive Link (Local)	CTMP and CEMP	Planning condition	Negligible
	Driver Delay	Vehicle users on Wendlebury Road/ Vendee Drive Link (Local)	CTMP and CEMP	Planning condition	Negligible
	Pedestrian and Cyclist Delay and Amenity	Pedestrians and cyclists on Wendlebury Road/ Vendee Drive Link (Local) (Local)	CTMP and CEMP	Planning condition	Negligible
	Fear and Intimidation	Pedestrians and cyclists on Wendlebury Road/ Vendee Drive Link (Local) (Local)	CTMP and CEMP	Planning condition	Negligible

Topic	Potential Effect	Receptor (Geographic Scale)	Mitigation Measures and Monitoring	Anticipated Securing Mechanism	Residual Effect
	Accidents and Safety	Road users on Wendlebury Road (Local)	CTMP and CEMP	Planning condition	Negligible

Table 11.2: Summary of Completed Development Effects (Scenarios 1 to 4)

Topic	Potential Effect	Receptor (Geographic Scale)	Mitigation Measures and Monitoring	Anticipated Securing Mechanism	Residual Effect
Biodiversity	<b>Designated Sites</b>				
	Indirect effect from disturbance to the wintering bird assemblage.	Bicester Wetland Reserve LWS (County)	None required	None required	Negligible
	<b>Species</b>				
	Bats/Badgers - Lighting disturbance to bat assemblage using retained and newly created habitats for foraging and commuting.	Bats (Local)	Implementation of a sensitive lighting scheme.	Reserved matters application and planning conditions to ensure sensitive lighting design included within the final design.	Negligible
	Bats - Loss of potential maternity roost for common pipistrelle in Building B1.	Bats (Local)	Implementation of EPSML, sensitive timing of works, provision of replacement roost to be provided at a suitable location nearby to the retained vegetation in the southern section of the Application 1 site to	Planning Condition	Negligible

Topic	Potential Effect	Receptor (Geographic Scale)	Mitigation Measures and Monitoring	Anticipated Securing Mechanism	Residual Effect
			ensure that the bat population can access the adjacent commuting and foraging habitat.		
Water Resources and Flood Risk	Water Quality	Waterbodies/ Infrastructure (Site/Local)	New drainage infrastructure to be maintained in line with an approved maintenance strategy, and Class 1 Interceptors to be installed.	Reserved matters application and planning conditions	Negligible
	Surface Water Drainage and Flood Risk	Waterbodies/ Infrastructure/ Human (Site/Local)	All surface water flows restricted to Greenfield Levels using SuDS techniques as agreed. Finished floor levels are proposed to be set at a minimum of the 1 in 100 year + 35% climate change + 300mm = 64.45m AOD. Flood compression schemes to be maintained and managed.	Reserved matters application and planning conditions	Negligible
	Groundwater	Waterbodies (Site/Local)	All surface water flows restricted to Greenfield Levels using SuDS techniques as agreed. New drainage infrastructure to be maintain in line with an approved maintenance	Reserved matters application and planning conditions	Negligible

Topic	Potential Effect	Receptor (Geographic Scale)	Mitigation Measures and Monitoring	Anticipated Securing Mechanism	Residual Effect
			strategy, and Class 1 Interceptors to be installed.		
	Foul Sewer	Infrastructure (Site/Local)	Implementation of suitable foul sewer network on Site, to be agreed with Thames Water Utilities Ltd (TWUL).	Reserved matters application and planning conditions	Negligible
	Water Demand	Infrastructure (Site/Local)	Implementation of suitable water network on Site, to be agreed with TWUL and water saving measures to be installed.	Reserved matters application and planning conditions	Negligible
Transport and Access	Severance	Road users on Wendlebury Road/ Vendee Drive Link (Local)	Crossing Facilities/ Footway and Cycleway	Planning condition	Minor Adverse (not significant) to Negligible
	Driver Delay	Vehicle users on Wendlebury Road/ Vendee Drive Link (Local)	Travel Plan/ Bus Contribution /SEPR Contribution	Planning condition Section 106	Minor Adverse (not significant)
	Pedestrian and Cyclist Delay and Amenity	Pedestrians and cyclists on Wendlebury Road/ Vendee Drive Link (Local) (Local)	Crossing Facilities/ Footway and Cycleway	Planning condition	Minor Adverse (not significant) to Negligible
	Fear and Intimidation	Pedestrians and cyclists on Wendlebury Road/ Vendee Drive Link (Local) (Local)	Crossing Facilities/ Footway and Cycleway	Planning condition	Negligible
	Accidents and Safety	Road users on Wendlebury Road (Local)	Crossing facilities/ Travel Plan/ Bus Contribution/ SEPR Contribution	Planning condition Section 106	Minor Adverse (not significant)



Table 11.3: Summary of Construction Cumulative Effects (Scenarios 1 to 4)

Topic	Potential Effect	Receptor (Geographic Scale)	Mitigation Measures and Monitoring	Anticipated Securing Mechanism	Residual Effect
Biodiversity	<b>Designated Sites</b>				
	None identified				
	<b>Habitats</b>				
	None identified				
	<b>Species</b>				
None identified					
Water Resources and Flood Risk	None identified				
Transport and Access	Severance	Road users on Wendlebury Road/ Vendee Drive Link (Local)	CTMP and CEMP	Planning condition	Negligible
	Driver Delay	Vehicle users on Wendlebury Road/ Vendee Drive Link (Local)	CTMP and CEMP	Planning condition	Negligible
	Pedestrian Delay and Amenity	Pedestrians and cyclists on Wendlebury Road/ Vendee Drive Link (Local) (Local)	CTMP and CEMP	Planning condition	Negligible
	Fear and Intimidation	Pedestrians and cyclists on Wendlebury Road/ Vendee Drive Link (Local) (Local)	CTMP and CEMP	Planning condition	Negligible
	Accidents and Safety	Road users on Wendlebury Road (Local)	CTMP and CEMP	Planning condition	Negligible

Table 11.4: Summary of Completed Development Cumulative Effects (Scenarios 1 to 4)

Topic	Potential Effect	Receptor (Geographic Scale)	Mitigation Measures and Monitoring	Anticipated Securing Mechanism	Residual Effect
Biodiversity	<b>Designated Sites</b>				
	None identified				
	<b>Habitats</b>				
	None identified				
	<b>Species</b>				
None identified					
Water Resources and Flood Risk	None identified				
Transport and Access	Severance	Road users on Wendlebury Road/ Vendee Drive Link (Local)	Crossing Facilities/ Footway and Cycleway	Planning condition	Minor Adverse (not significant) to Negligible
	Driver Delay	Vehicle users on Wendlebury Road/ Vendee Drive Link (Local)	Travel Plan/ Bus Contribution/ SEPR Contribution	Planning condition Section 106	Minor Adverse (not significant)
	Pedestrian Delay and Amenity	Pedestrians and cyclists on Wendlebury Road/ Vendee Drive Link (Local) (Local)	Crossing Facilities/ Footway and Cycleway	Planning condition	Minor Adverse (not significant) to Negligible
	Fear and Intimidation	Pedestrians and cyclists on Wendlebury Road/ Vendee Drive Link (Local) (Local)	Crossing Facilities/ Footway and Cycleway	Planning condition	Negligible
	Accidents and Safety	Road users on Wendlebury Road/ A41 signal junctions/ Vendee Drive Link (Local)	Crossing facilities/ Travel Plan/ Bus Contribution/ SEPR Contribution	Planning condition Section 106	Minor Adverse (not significant)

## 11.2 Monitoring

### Construction Phase

- 11.2.1 Outside standard good practice site monitoring requirements during construction works and an ecological monitoring programme, which will be included within the CEMP, CTMP and LHMP, no further environmental monitoring requirements have been identified.
- 11.2.2 The CEMP and CTMP would be prepared once a Principal Contractor has been appointed and would include monitoring prescriptions during the construction phase for dust, noise and vibration and HGV movements (in respect of timing, routing and wheel washing etc.). Details of monitoring techniques, duration and extent would need to be agreed with CDC once the Principal Contractor has been appointed and the final construction method has been confirmed.
- 11.2.3 The LHMP will be produced as part of subsequent Reserved Matters applications relating to the Outline Component of the Application 1 site and Application 2. It will set out objectives to minimise effects of disturbance once the construction is complete and the Development is occupied. It will also describe measures to maximise the biodiversity potential of retained and newly created habitats through appropriate management, as well as, a programme of monitoring to provide a mechanism to modify the management prescriptions if required.

### Operational Phase

- 11.2.4 Outside of the ongoing maintenance of landscape planting and habitats within the Development, which would be defined within a LHMP, no long-term environmental monitoring requirements have been identified for the operational phase of the Development. Some measures are likely to be in place to monitor the effectiveness of the Travel Plan and sustainable travel initiatives.