Appendix 8.6 - Climate Change Resilience Assessment

Table 1: Assessment of Resilience of the Proposed Development to Climate Change

Variable		Projected Change	Receptor	Effect	Consequence	Likelihood	Significance
Precipitation	Extreme rainfall events	Increase in magnitude and frequency of extreme rainfall events	Substructure and Infrastructure / Building Structures	Soil saturation and water damage	Minor adverse	Low	Not significant
				Erosion, silting and sedimentation	Negligible	Low	Not significant
				Softening of subsurface materials below the structures	Moderate adverse	Low	Not significant
				Damage due to increased runoff	Minor adverse	Low	Not significant
			Ancillary Equipment	Blockage of drains and associated assets	Minor adverse	Low	Not significant
				Water accumulation	Minor adverse	Low	Not significant
			Operators, Occupiers	Movement of debris causing slip, trip and fall hazards	Minor adverse	Low	Not significant
				Reduced opportunities for maintenance	Minor adverse	Low	Not significant
			Landscaping / Habitats	Changes in growing season and more vigorous growth during wet periods	Negligible	Medium	Not significant

Variable		Projected Change	Receptor	Effect	Consequence	Likelihood	Significance
	Drought	Increased risk of drought	Substructure and Infrastructure / Building Structures	Enhanced reactions when cement stabilising and drying of concrete during construction	Negligible	Medium	Not significant
				Drying out of construction materials and cracking	Minor adverse	Medium	Not significant
				Increased dust and windborne materials affecting Site construction, operation and maintenance, including silting and sedimentation	Minor adverse	Low	Not significant
				Increased rate of deterioration of materials during operation, potentially leading to need for early replacement	Minor adverse	Low	Not significant
				Subsidence	Moderate adverse	Low	Not significant
				Failure of earthworks due to desiccation	Moderate adverse	Low	Not significant
				Shrinking and cracking of soils	Moderate adverse	Low	Not significant
			Operators, Occupiers; and	Increased dust and windborne materials	Minor adverse	Low	Not significant

Variable		Projected Change	Receptor	Effect	Consequence	Likelihood	Significance
			Landscaping / Habitats	Drying out and loss of vegetation	Negligible	Medium	Not significant
Temperature	Extreme temperature events	Increase in magnitude of extreme temperature	Substructure and Infrastructure / Building Structures	Cracking and expansion particularly impacting structures / Thermal expansion and movement of joints and paved surfaces	Moderate adverse	Low	Not significant
				Increased risk of erosion	Minor adverse	Medium	Not significant
			Ancillary Equipment	Overheating of equipment, (e.g. electronic signage)	Minor adverse	Low	Not significant
				Reduced opportunities for maintenance	Minor adverse	Medium	Not significant
			Operators, Occupiers	Difficult working conditions	Minor adverse	Medium	Not significant
				Increased fire risk	Moderate adverse	Very low	Not significant
				Failure of temperature controls	Minor adverse	Low	Not significant
				Greater demand for cooling	Negligible	Medium	Not significant
	Change in seasonal	Warmer Winters	Roads / Footpaths	Fewer freeze-thaw events causing potholes	Minor beneficial	Medium	Not significant

Variable		Projected Change	Receptor	Effect	Consequence	Likelihood	Significance
	average temperature		Landscaping / Habitats	Changes in growing season and more vigorous growth during autumn and winter	Negligible	Medium	Not significant
			Operators, Occupiers	Less disruption from fewer ice and snow events	Minor beneficial	Medium	Not significant
	Changes in solar radiation	Increase in solar radiation	Substructure and Infrastructure / Building Structures	UV degradation of materials	Minor adverse	Low	Not significant
			Landscaping / Habitats	Changes in growing season and more vigorous growth	Negligible	Medium	Not significant
			Ancillary Equipment	Increased warming of exposed surfaces)	Negligible	Medium	Not significant
				UV degradation of exposed equipment e.g. cabling	Minor adverse	Low	Not significant
				Increase in energy generation from solar PVs	Minor beneficial	Medium	Not significant
Soils	Soil moisture and runoff	Decrease in soil moisture in summer	Substructure and Infrastructure / Building Structures	Shrinking and cracking of soils leading to subsidence	Minor adverse	Very low	Not significant
			Landscaping / Habitats	Shrinking and cracking of soils leading to loss of vegetation	Negligible	Medium	Not significant

Variable		Projected Change	Receptor	Effect	Consequence	Likelihood	Significance
			Ancillary Equipment	Shrinking and cracking of soils leading to subsidence	Minor adverse	Low	Not significant
		Increase in soil moisture in winter	Substructure and Infrastructure / Building Structures	Soil softening and erosion leading to collapse and settlement of structures	Moderate Adverse	Low	Not significant
				Soil saturation	Minor adverse	Low	Not significant
				Flooding and damage due to increased run-off	Moderate Adverse	Very low	Not significant
				Greater mobilisation of pollutants in the soil/ground	Minor adverse	Low	Not significant
			Ancillary Equipment	Blockage of drains	Minor adverse	Low	Not significant
				Water accumulation in low spots and/or on impermeable surfaces	Minor adverse	Medium	Not significant
			Operators, Occupiers	Increased maintenance costs	Minor adverse	Low	Not significant
	Soil stability	Decrease in soil stability	Substructure and Infrastructure / Building Structures	Subsidence impacting structures	Minor adverse	Low	Not significant
				Failure of earthworks due to desiccation	Moderate Adverse	Low	Not significant

Variable		Projected Change	Receptor	Effect	Consequence	Likelihood	Significance
			Landscaping / Habitats	Loss of soil leading to loss of vegetation	Negligible	Medium	Not significant
			Operators, Occupiers	Increased maintenance costs	Minor adverse	Low	Not significant