

METROLINK

Integrated Transport. Integrated Life.

A20.3

**Preliminary
Conceptual
Site Model**

Appendix A20.3 - Preliminary Conceptual Site Model (CSM)

Table 20.3.1: Preliminary CSM

Source	Receptor	Pathway	Pollutant Linkage
Construction			
Contaminants within soil and groundwater	Human health (construction workers)	Dermal contact, ingestion and inhalation of impacted soil, dust, fibres (asbestos) and waters	PL1
		Migration of ground gases and vapours to shallow pits or enclosed spaces	PL2
	Human health (adjacent residents / workers, transient foot traffic)	Dermal contact, ingestion and inhalation of windblown soil, dust, fibres (asbestos) during construction	PL3
		Migration of ground gases into homes or workplaces via preferential pathways during construction	PL4
	Groundwater	Leaching and migration of contaminants through natural deposits and made ground	PL5
		Surface water run-off from stockpiled excavated material	PL6
		Leaks and spills from site plant and materials storage	PL7
		Discharge of intercepted contaminated groundwater during passive or active dewatering	PL8
	Surface water, ecological receptors	Migration / mobilisations of contaminated shallow groundwater through drift deposits / made ground	PL9
		Surface water run-off from stockpiled excavated material	PL10
		Leaks and spills from site plant and materials storage	PL11
		Discharge of intercepted contaminated groundwater during passive or active dewatering	PL12
	Property	Direct contact with sub-surface materials including made ground.	PL13
		Migration of ground gases into property through preferential pathways posing a potential explosion risk from ignition of explosive gases	PL14
Operation			
Contaminants within soil and groundwater	Human health (maintenance workers)	Dermal contact, ingestion and inhalation of soil, dust, fibres (asbestos) and waters during routine maintenance	PL13
		Migration of ground gases and vapours to enclosed spaces	PL14
	Human health (end users, adjacent residents, workers)	Dermal contact, ingestion and inhalation of windblown soil, dust, fibres (asbestos) from retained surface soils	PL15
		Migration and accumulation of ground gases into homes or workplaces via preferential pathways created during construction	PL16
	Groundwater	Leaching and migration of contaminants	PL17
		Surface water runoff from placed excavated material	PL18
		Migration of contaminated shallow groundwater through drainage channels and associated granular bedding materials	PL19

Source	Receptor	Pathway	Pollutant Linkage
		Discharge of intercepted contaminated groundwater	PL20
		Leaks / spills from trains and other operational plant	PL21
	Surface water, ecological receptors	Leaching and migration of contaminants	PL22
		Surface water runoff from placed excavated material	PL23
		Migration of contaminated shallow groundwater through drainage channels and associated granular bedding materials	PL24
		Discharge of intercepted contaminated groundwater	PL25
		Leaks / spills from trains and other operational plant	PL26
	Property	Direct contact with sub-surface materials including made ground.	PL27
		Migration of ground gases into property through preferential pathways posing a potential explosion risk from ignition of explosive gases	PL28