

Table 5.4 Preliminary Risk Assessment

Source	Pathway	Receptor	Severity	Probability	Risk	Justification	
Soil contamination associated with Made Ground, the former use of the site as warehousing and a works and the current use of the site as a car park.	Ingestion and/or Inhalation	Human Health – Current Site Users	Medium	Low	Low to Moderate	The majority of the site is covered by hardstanding; however, the southern section of the site comprises an area of rough ground. Therefore, dermal contact, ingestion and/or inhalation is likely.	
		Human Health – Construction Workers	Minor	Low	Low	The risk rating is based on the use of Personal Protective Equipment (PPE) and appropriate working procedures.	
	Dermal contact, Ingestion and/or Inhalation	Human Health – Future Commercial Users	Medium	Low	Low to Moderate	The proposed development of the site will include predominantly hardstanding, which would limit exposure to any potential soil contamination.	
		Future Landscaping	Minor	Unlikely	Low	The risk rating is based on the assumption that the site will be predominantly covered by hardstanding, with minimal areas of landscaping	
	Leaching	Minor Aquifer (Coal Measures)	Medium	Unlikely	Low	A layer of Glacial Till is indicated to be present above the Coal Measures, which may limit the downward migration of contaminants into the Coal Measures. Significant groundwater migration through the Coal Measures is unlikely to occur as they are classified as a Minor Aquifer. This risk can be refined by intrusive investigation to assess the nature of contamination actually present on site.	
		Controlled Waters – River	Medium	Likely	Moderate	The likelihood is based on the proximity of the site to the River Roch and the likely direction of groundwater flow towards it. Site investigation can be used to refine risk to establish whether groundwater has already been impacted at the site.	
	Lateral and Vertical Migration of groundwater	Controlled Waters – River	Medium	Likely	Moderate	The likelihood is based on the proximity of the site to the River Roch and the likely direction of groundwater flow towards it. Site investigation can be used to refine risk to establish whether groundwater has already been impacted at the site.	
		Roch	Medium	Unlikely	Low	Risk rating based on the provision of suitably resistance new pipe work including channel of clean material laid during redevelopment.	
	Inhalation of vapours	Human Health	Medium	Low	Low to Moderate	Risk may be refined by site investigation and appropriate concrete design.	
		Future Building structures	Mild	Low	Low		
	Groundwater contamination associated with Made Ground, the former use of the site as warehousing and a works and the current use of the site as a car park.	Inhalation of vapours	Human Health	Medium	Low	Low to Moderate	The presence of soil contamination is not known and the risk should be refined by site investigation.
			Controlled Waters – River	Medium	Likely	Moderate	The likelihood is based on the proximity of the site to the River Roch and the likely direction of groundwater flow towards it. Site investigation can be used to refine risk to establish whether groundwater has already been impacted at the site.
Groundwater contamination associated with Made Ground, the former use of the site as warehousing and a works and the current use of the site as a car park.	Inhalation of Gases, Dust and Vapours	Human Health – Current site users, Commercial End users, Development Workers and Commercial End Users	Severe	Low	Moderate	Given the historical development of the site, the potential for the generation of ground gases is low. The risk rating is based on the limited human use and limited exposure times due to the current and proposed commercial use of the site. The risk to Development Workers is based on the use of Personal Protective Equipment (PPE) and appropriate working procedures.	
		Human Health – Current Site Users	Severe	Low	Moderate	The risk rating is based on the age of the properties used on site and the potential for these properties to contain asbestos.	
Asbestos	Inhalation of airborne dust	Human Health – Construction workers	Minor	Unlikely	Low	The risk rating is based on the use of Personal Protective Equipment (PPE) and appropriate working procedures.	
		Human Health – Future Commercial end users	Severe	Unlikely	Low to Moderate	The site will have a Type 2 Asbestos Survey completed before redevelopment. Site investigation can be used to refine risk to establish whether asbestos is present within the soils.	
Soil and groundwater contamination associated with the mills, bus stations, electric house, electrical sub-station and various historical industries within 500m of the site.	Leaching and dermal contact, Inhalation and ingestion	Human Health – Current site user, development workers and Commercial End Users	Medium	Low	Low to Moderate	Historically, a number of mills are located adjacent to the north and south of the site and there is a potential for migration of associated groundwater contamination towards the site.	
		Minor Aquifer (beneath site)	Medium	Unlikely	Low	A layer of Glacial Till is indicated to be present above the Coal Measures, which may limit the downward migration of contaminants into the Coal Measures. Significant groundwater migration through the Coal Measures is unlikely to occur as they are classified as a Minor Aquifer. This risk can be refined by intrusive investigation to assess the nature of contamination actually present on site.	
	Lateral Migration	Vertical and Lateral migration of groundwaters	Medium	Unlikely	Low	It is unclear whether a significant source of ground gas is present which could migrate to the site. Risk rating can be refined by gas monitoring during site investigation.	
		Future built structures	Medium	Low	Low to Moderate		

Off Site