

Attachment I.4 Assessment of Impacts on Groundwater.

Existing Conditions

Geotechnical site investigations undertaken at the Business Park indicate that the overburden ranges in thickness from less than 1.3 m to 8.45 m thick. At the proposed development site, the thickness is thin in the north-western portion of the site and thickens to the east and south.

Information from the GSI suggests a similar range in overburden thickness locally in the surrounding area. The overburden comprises sandy gravelly boulder clays.

The bedrock locally comprises calcareous, shale, limestone, conglomerate of the Tober Coleen Formation. Based on data obtained from the GSI the bedrock aquifer is a locally important (Lm) aquifer that is productive in local zones. Groundwater yields in the formation range from 5.45 - 9 cubic meters per hour (m³/hr) based on reported yields from wells in the formation.

The aquifer is part of the Dublin Area Groundwater Body (IE_EA_G_005). The condition of a groundwater Water Body is defined by its chemical and quantitative status, whichever is worse, and groundwater quality is ranked in one of two status classes: Good or Poor. The Dublin Area Water Body is categorised as being of 'Good' status, but is 'At Risk' of achieving its objective of protecting the existing status. At the time the application was prepared there was no available information on groundwater quality beneath the site.

Assessment of Impacts

The proposed development does not involve the provision of any additional hard surfaces that would reduce groundwater recharge within the site boundaries and will not result in any new emission to groundwater. The rainwater harvesting reduces the demand on the groundwater. Therefore there will be no impact on either the quantitative or qualitative status of the bedrock aquifer.