

2. Definition and Sources

Legend feature	Definition	Source	Extent of mapping
Groundwater Abstraction Well	Location of groundwater abstraction licences, protected groundwater rights, abstractions in determination and Section 32 consents.	1) Groundwater abstraction licences, Environment Agency Thames Region	Zone around route alignment
Id Number	Id number defined by Mott MacDonald	2) Groundwater abstraction licences, Environment Agency Southern Region 3) Abstractions in determination, Thames Water 4) Section 32 Consents, Environment Agency Thames Region 5) Protected Groundwater Rights, personal contact with London Boroughs and District Councils	
Approximate Zone of Saline Influence	Defined as the approximate area in which the groundwater chloride concentration is greater than 100 mg/l and the electrical conductivity greater than 1500S/cm.	Map digitised by Mott MacDonald based on figures in groundwater quality reports. [Water Resources Board, 1972] - [Andrews et al, 1995] and observed data	Extent of 1:25000 sub-section
2003 Chalk Groundwater Levels (m Above Tunnel Datum)	January 2003 groundwater levels in Chalk aquifer (m Above Tunnel Datum) as defined by the Environment Agency	Map digitised by Mott MacDonald based on the Environment Agency's January 2003 Groundwater Levels. [Environment Agency 2003, Rising Groundwater Levels in the Chalk-Basal sand aquifer of the Central London Basin]	Extent of 1:25000 sub-section
50 day Travel Time Zone - Red	Environment Agency Groundwater Source Protection zones (inner and outer).	1) GIS layer with Environment Agency Source Protection Zones, Environment Agency Thames Region.	Zone around route alignment
400 day Travel Time Zone - Green	Time of Travel zones (50 day and 400 day) defined by Mott MacDonald. Note: Time of Travel zones have not been defined for all abstraction wells. For example abstractions from the Lower Greensand and Chalk in areas with a thick layer of London Clay where there would be no penetration through the London Clay.	2) GIS layer with Environment Agency Source Protection Zones, Environment Agency Southern Region. 3) GIS layer with Time of Travel Zones calculated and drawn by Mott MacDonald	
Surface Water Bodies (1)	Rivers, canals and other surface water bodies	Ordnance Survey Vector mapping 1:1250 & 1:2500	1:5000 route windows
Surface Water Bodies (2)	Rivers, canals and major lakes. The layer has been created to extend the water bodies layer produced by Crossrail to cover the 1:25000 route windows.	1) Main rivers GIS layer: Environment Agency, Thames Region. 2) Rivers GIS layer on the Ordnance Survey 1:50000 maps: Environment Agency. 3) Manual addition of water bodies based on the 1:25000 Ordnance Survey raster maps.	Extent of 1:25000 sub-section outside 1:5000 route windows
Environment Agency Flood Zone 3	The map shows the potential extent of a flood for the 1:100 year fluvial event and the 1:200 year tidal event (protected flood plain).	GIS layer, Environment Agency	Extent of 1:25000 sub-section
Surface Water Abstraction License Number	Location of surface water abstraction licences. The licence number is indicated on the map.	1) Surface water abstraction licences, Environment Agency Thames Region 2) Surface water abstraction licences, Environment Agency Southern Region	Within 500 metres of or downstream of route alignment
Surface Water Discharge	Location of surface water discharge consents.	1) Surface water discharge consents, Environment Agency Thames Region 2) Surface water discharge consents, Environment Agency Southern Region	Within 500 metres of the route alignment or 1000 metres distance of station centre