

Dunmore East GWB: Summary of Initial Characterisation.

Hydrometric Area Local Authority		Associated surface water bodies	Associated terrestrial ecosystems	Area (km ²)
17 – Coastal Area Waterford Co Co		Leperstown Stream.	Belle Lake, Waterford Harbour	75
Topography		The topography in this area is gently undulating hills, most of which are less than 100m high. There appears to be a NNE to SSW direction to the long axis of the hills and this orientation is reflected in the surface drainage.		
Geology and Aquifers	Aquifer type(s)	LI – Locally Important Aquifer, moderately productive only in local zones PI – Poor Aquifer, generally unproductive except for local zones		
	Main aquifer lithologies	TT – Templetown Formation - Red conglomerate with sandstone HL - Harrylock Formation - Red conglomerate, sandstone & siltstone BB - Booley Bay Formation - Dark grey slates with siltstone laminae CA bk – Ballyhack Member - Grey slates with thin siltstones TM - Tramore Shale Formation - Dark grey shales and siltstones		
	Key structures.	This area contains an unconformity between the Devonian conglomerates and sandstones to the southeast and the Ordovician rocks to the north. There is also a number of faults running in a North –South Direction, which appear to be more intense in the Devonian rocks than in the more pliable Ordovician slates.		
	Key properties	No information is available on the hydrogeological properties of this groundwater body. Estimated transmissivities can be considered to range 1 – 10m ² /d.		
	Thickness	Effective thickness is not expected to be large but the bedrock may be permeable to depths of around 25m in some areas.		
Overlying Strata	Lithologies	Volcanic Till		
	Thickness	Mostly 3 – 5m with significant areas where there is rock close to surface or outcrop. The subsoil thickness increases to the south.		
	% area aquifer near surface	~25%		
	Vulnerability	Mostly HIGH with significant areas of EXTREME where there is rock close to surface or outcrop.		
Recharge	Main recharge mechanisms	Most recharge is likely to occur at the top of the hills found in this area where subsoil thickness is probably thinnest.		
	Est. recharge rates	<i>[Information will be added at a later date]</i>		
Discharge	Springs and large known abstractions	None		
	Main discharge mechanisms	Groundwater flow and discharge in this area are considered to reflect the topography. Most discharge will be to the south and west along the coast. There is also likely to be discharge to the local streams in the area.		
	Hydrochemical Signature	The bedrock strata of this groundwater body are siliceous .		
Groundwater Flow Paths		Groundwater flow paths in this body are considered to be short. The area of the groundwater body is small and the bedrock is not a major aquifer. Most groundwater flow circulates in the upper tens of metres, recharging and discharging in local zones. The age of the groundwater is considered to be young.		
Groundwater & surface water interactions		Groundwater will discharge locally to streams and rivers crossing the aquifer and also to small springs and seeps. Owing to the poor productivity of the aquifers in this body it is unlikely that any major groundwater - surface water interactions occur. Baseflow to rivers and streams is likely to be relatively low.		
Conceptual model	This groundwater body consists of the low permeability Ordovician slates in the eastern extremities of Hydrometric area 17. It is bounded to the northwest by the Campile Formation (Ordovician) volcanic aquifer. Most recharge is expected to occur at exposed areas of bedrock and at the peaks of the hills in this area. The groundwater flow is likely to be towards the nearby coast or any local streams in the area.			
Attachments	None			
Instrumentation	Stream gauge: 17061 Borehole Hydrograph: None EPA Representative Monitoring boreholes: None			
Information Sources				
Disclaimer	Note that all calculation and interpretations presented in this report represent estimations based on the information sources described above and established hydrogeological formulae			