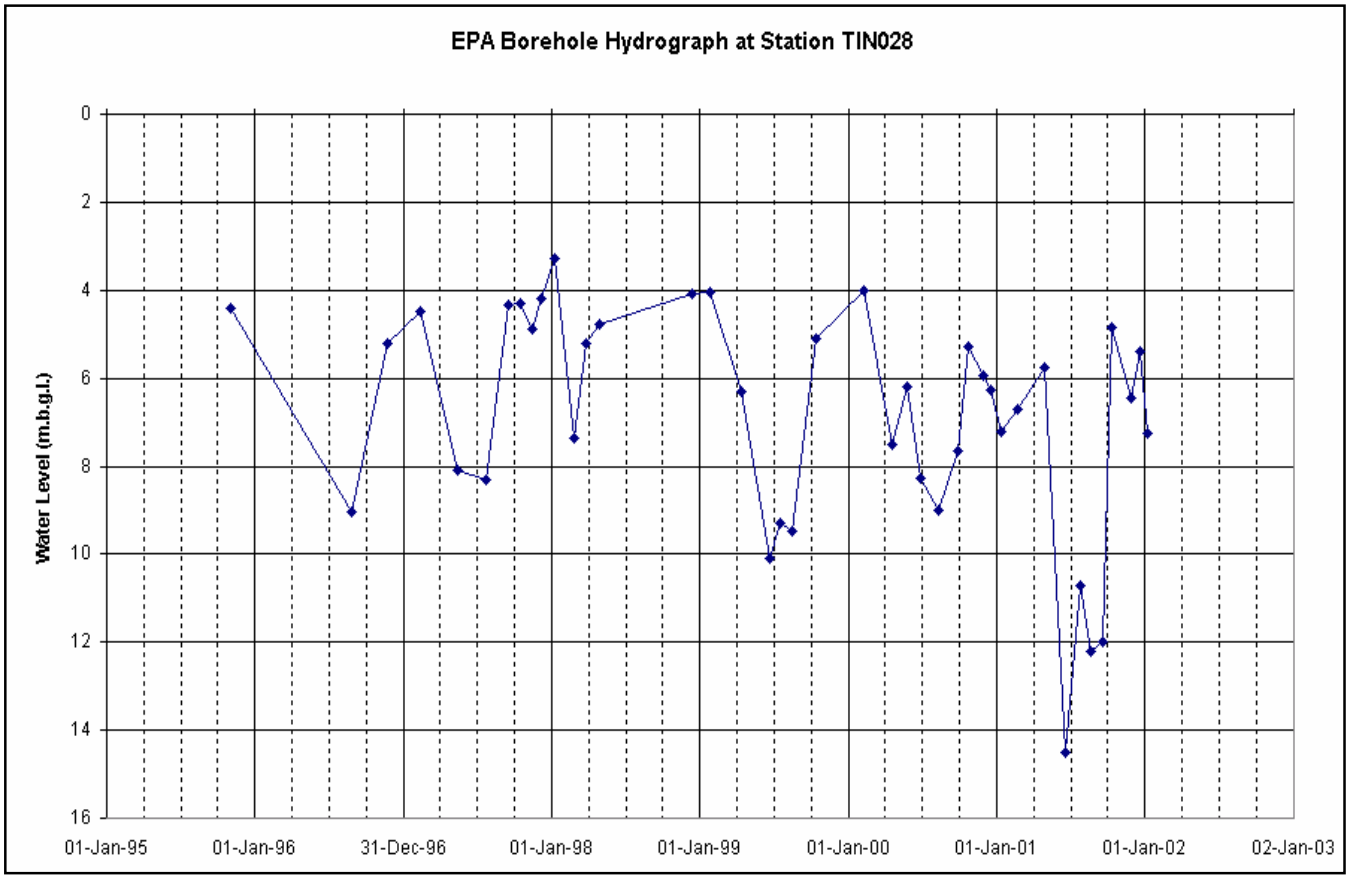
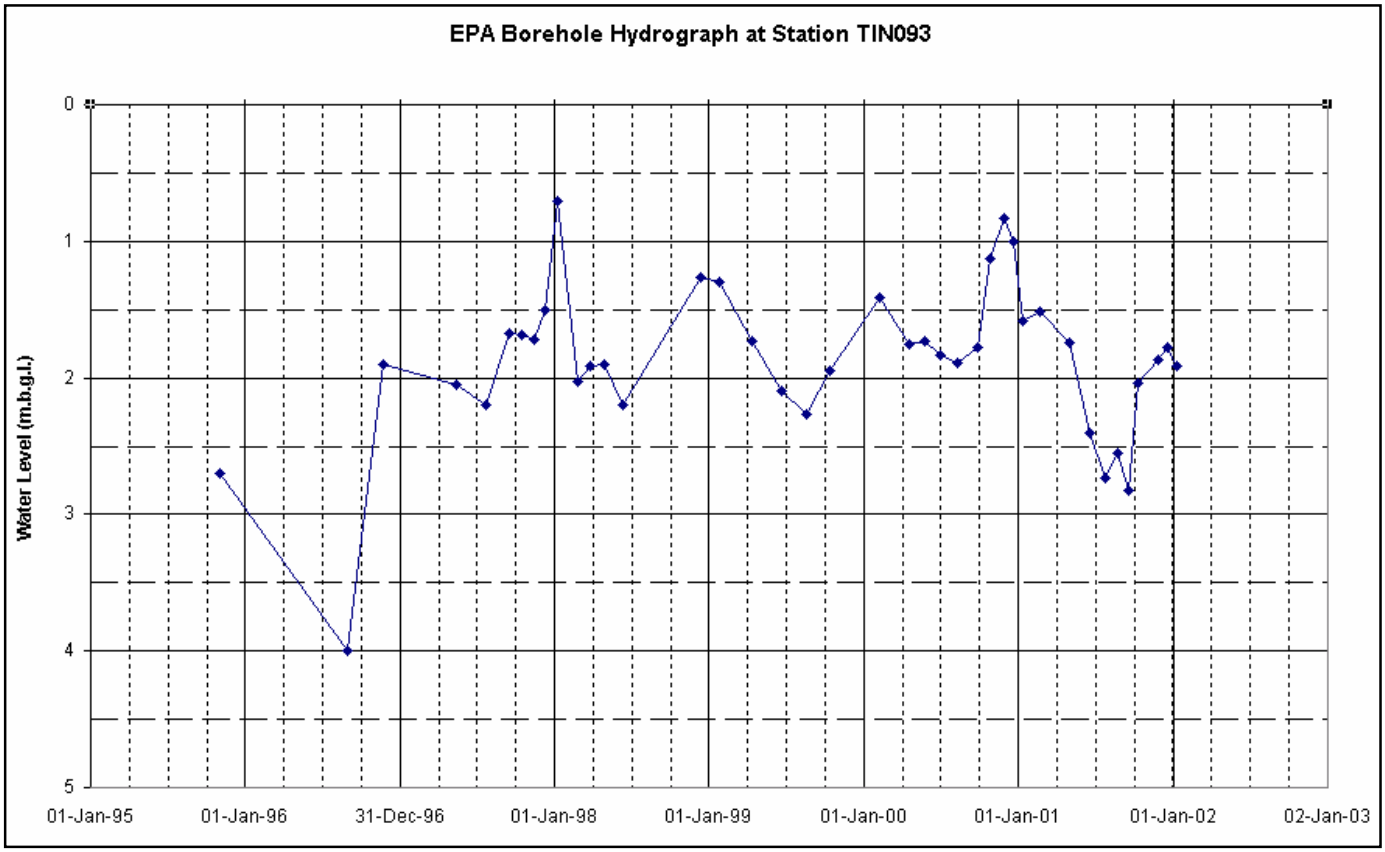
Templemore A GWB: Summary of Initial Characterisation.

Hydrometric Area Local Authority	Associated surface water bodies	Associated terrestrial ecosystems	Area (km^2)
16 – Suir N. Tipperary Co Co S. Tipperary Co Co Laois Co Co	Suir, Erkina, Rossestown, Drish, Fishmoyne, Borrisoleigh Stream, Farneybridge, Clodiagh, Owenbeg, Clover, Black, Multeen, Aughnaglanny, Arglo, Fidaghta, Aherlow, Ara, Outeragh Stream	Bansha Wood, Annacarthy Wetlands, Inchinsquillib and Dowlings Woods, Aughaglanny Valley, Cabragh Wetlands, Templemore Wood.	302

Topography		The groundwater body extends from north of Templemore south towards Annacarthy in Co. Tipperary. The GWB contains the Silvermine Mts, which lie within the SE RBD. At the very north there is Kilduff Mountain, Devilsbit Mountain, Knockanora and Knocknascreggan. Elevations reach up to 450mOD at Hollyford. The land elevation drops off to the east of these mountains towards the Suir valley. Drainage is to the east towards the Suir Valley.
Geology and Aquifers	Aquifer type(s)	**Ll:** Locally important aquifer which is moderately productive only in local zones **Pl:** Poor aquifer which is generally unproductive except for local zones
	Main aquifer lithologies	Devonian Old Red Sandstones Silurian Metasediments and Volcanics Dinantian (early) Sst, Shales and Lst
	Key structures.	There is a major NNW-SSE trending fault complex in this area. The site lies on the south-eastern side of a SW-NE syncline which runs between Two-Mile-Borris and Thurles
	Key properties	
	Thickness	The groundwater body is permeable to some depth due to the presence of faulting and local zones of more permeable rock.
Overlying Strata	Lithologies	*[Information will be added at a later date]*
	Thickness	Subsoil thickness is mostly more than 3m.
	% area aquifer near surface	15%
	Vulnerability	Vulnerability is mostly Extreme with some areas of High
Recharge	Main recharge mechanisms	Diffuse recharge to this groundwater body occurs, mostly where subsoil is thinnest or most permeable. The proportion of available recharge that enters the groundwater body varies depending on the subsoil thickness and permeability. The steep slopes in this area will reduce the actual recharge by causing more interflow and overland flow
	Est. recharge rates	*[Information will be added at a later date]*
Discharge	Springs and large known abstractions (m^3/d)	Ironmills (1363), Hollyford WS (Spring - 50), Coolderry WS (15), Uppercurch WS (11), Drombane WS, Borrisoleigh Co-oop Cream (40),
	Main discharge mechanisms	Discharge from this aquifer will be to the overlying rivers and streams as baseflow and also towards the adjacent limestone groundwater body.
	Hydrochemical Signature	There is limited hydrochemical data for this GWB. Electrical Conductivity values range from 273 to 683 uS/cm with most values tending to be around 300uS/cm. Values for hardness are variable but generally the water appears to be slightly hard to hard.
Groundwater Flow Paths		The majority of groundwater flow in this aquifer is considered to take place in the upper weathered zone (3m), below this the amount of groundwater flow decreases gradually with depths and large flows are not expected below 10m except in isolated open fractures.
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	The groundwater body extends from north of Templemore south towards Annacarthy in Co. Tipperary. The GWB contains the Silvermine Mts, which lie within the SE RBD. Recharge to this GWB occurs by diffuse recharge and runoff will be lowest where subsoils are thinner and/or more permeable. Groundwater flow is considered to take place in the upper weathered zone of the aquifer and the direction of the groundwater flow will be strongly dependent on the slope. Discharge from the groundwater body will be to the overlying rivers and streams and also to the adjacent GWB.	

Attachments	Fig. 1 EPA Borehole Hydrograph at Station TIN028 Fig. 2 EPA Borehole Hydrograph at Station TIN093 Fig. 3 Durov Plot of EPA chemistry Data in Templemore GWB
Instrumentation	Stream gauge: 16103, 16037, 16039, 16051, 16036, 16057, 16101, 16052, 16035, 16001,16058, 16059, 16003, *16002*, 16028, 16024, 16005, 16053, 16118, 16117, *16008*, *16007, 16017*, *16033*, 16029, 16110 Borehole Hydrograph: Borrisoleigh (TIN093), Coolderry GWS (TIN028) EPA Representative Monitoring boreholes: Drombane WS (TIN082), Hollyford WS (spring TIS016), Ironmills (TIS017)
Information Sources	Hunter Williams, N., Motherway, K. and Wright, G. (2002) *North County Tipperary Groundwater Protection Scheme*. Main Report. Draft report to North Tipperary County Council. Geological Survey of Ireland 56pp.
Disclaimer	Note that all calculation and interpretations presented in this report represent estimations based on the information sources described above and established hydrogeological formulae





Formation Name	Code	Description	Rock Unit Group	Aquifer Category
Cadamstown Formation	CW	Pale & red sandstone, grit & claystone	Devonian Old Red Sandstones	Ll
Cappagh White Sandstone Formation	CA	Red & white sandstone, conglomerate	Devonian Old Red Sandstones	Ll
Devilsbit Formation	DV	Polymict conglomerate & sandstone	Devonian Old Red Sandstones	Ll
Hollyford Formation	HF	Greywacke, siltstone & grit	Silurian Metasediments and Volcanics	Pl
Lower Limestone Shale	LLS	Sandstone, mudstone & thin limestone	Dinantian (early) Sst, Shales and Lst	Pl