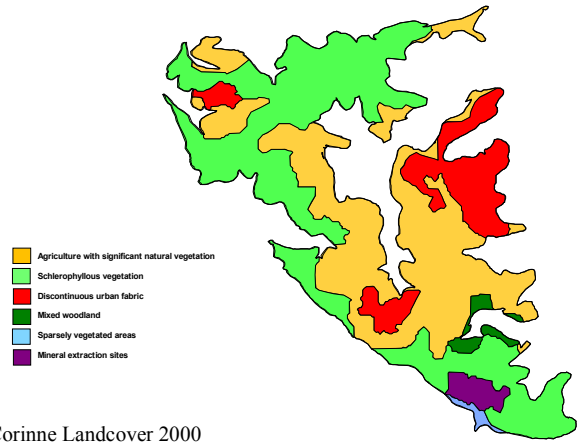
MALTA RESOURCES AUTHORITY

Groundwater Body Code
MT002
Groundwater Body Name
Rabat Dingli Perched Groundwater Body
Reference Year
2004



Corinne Landcover 2000

Hydrogeological Characteristics

Aquifer Description

The **'Upper Coralline Limestone' (UCL)** is a fractured carbonate formation which outcrops over the western and northern zones of the island and forms the highest parts of the topography. Due to its lithographic nature and its sensitivity to weathering this formation hosts a generalized aquifer. The UCL formation varies considerably in thickness due to erosion. The rather small thickness of this formation on the plateaus has made possible the direct exploitation of water resources by shallow wells. The outcrops of the Upper Coralline Limestone acts as a generalized recharge area for the underlying groundwater body.

Mean Aquifer Thickness	18.7m
Soil Type and Indicative Thickness	Carbonate Raw Soils are most common while Terra Soils and Xerorendzinas can be found in minor quantities. Indicative thickness is 20-95cm.
Mean Hydraulic Conductivity	2.93E-6m/s
Mean Annual Groundwater Level Amplitude*	244,710m^3

Pressures—Quantitative Status

Mean Annual Recharge (Natural and Artificial)	4.64hm^3
Mean Annual Groundwater Demand	4.62hm^3
Balance	0.02hm^3
WSC Groundwater Sources	21 Springs and 1 Pumping Station (utilized for the abstraction of 2nd Class water)
Registered Private Groundwater Sources	Exceed 1000

Pressures—Qualitative Status

Principal Diffuse sources of Pollution	Agriculture, Urbanisation related pressures.
Principal Point sources of Pollution	Animal Husbandry Activities, Communal Cesspits
Nitrate Content in Groundwater	High—exceeding 50mg/l
Chloride Content in Groundwater	Low—generally below 250mg/l
Pesticide Content in Groundwater	No pesticides have been encountered in past quality tests at WSC Sources; however the karstic nature of the aquifer makes it highly vulnerable to pesticide pollution.
Other Pollutants	n/a
Direct discharges to Groundwater	No direct discharges have been permitted

Associated Aquatic Ecosystems-site under investigation

Two specific watercourses have preliminarily been identified as being directly dependent on springs flowing from the Rabat-Dingli Groundwater Body. These are the Wied il-Luq watercourse at Buskett and the Wied ir-Rini watercourse at Bahrija. These watercourses sustain distinctive types of flora and fauna, which have a limited distribution since their existence depends on a year round supply of freshwater.

Preliminary Risk Assessment

This Groundwater Body is at risk of failing to achieve the Environmental Objectives of the Regulations both from the point of view of criteria related to the achievement of the objectives related to 'good' quantitative and qualitative status. It should be noted that the groundwater body is also at risk of failing to achieve the objectives set in the Nitrates Regulations.

* reported as variations in groundwater flow from the Fiddien Springs for the period 1982-1992.