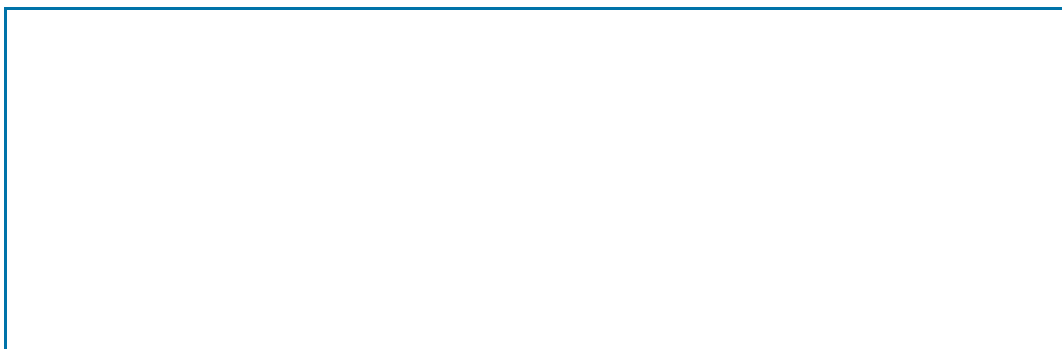

Water Framework Directive
Groundwater Monitoring Programme

Site Information
Borris in Ossary



SITE INFORMATION					
Site Name:	Borris in Ossary		County:	Tipperary North	
RBD:	SERBD		EU Reporting Code:	---	
Easting:	223971		GWB Name:	Derrymore	
Northing:	188018		GWB Code:	IE_SE_G_050	
Site Use:	Drinking Water (PWS)		Drinking Water Code:	1600PUB1007	
Hydrometric Area:	15		Water Level Monitoring Network:	Level	Flow
Townland:	RAHEEN			N	N
Ownership:	Tipperary Co Co				
Water Quality Monitoring Network:	Surveillance		Operational (Point)		Operational (Diffuse)
	N		N		N
Site Comments:	---				

SITE DIRECTIONS					
Location and Access Information:	---				
Additional Comments:	---				

WELL INFORMATION					
Monitoring Point Type:	BH	Abstraction Rate (m³/d):	246	Ground Elevation (m OD):	100
Borehole Log Available:	---	Total Drilled Depth (m bgl):	---	Depth to Bedrock (m bgl):	---
Top of Casing (m agl):	---	Upper Casing Diameter (mm):	---	Lower Casing Diameter (mm):	---
Final Borehole Depth (m):	---	Upper Casing Bottom Depth (m bgl) :	---	Lower Casing Bottom Depth (m bgl):	---
Screen Interval (m bgl):	---	Screen Type (PVC,Steel,other):	---	Screen Slot Size (mm):	---
Grout Type (cement,bentonite):	---	Grouted above (m bgl):	---	Grout Volume Injected (m³):	---
Gravel Pack Interval (m bgl):	---	Gravel Pack Volume (m³):	---	Open Hole Interval (m bgl):	---
Potential Yield (m³/day):	---	Comments on Monitoring Site:	---		
Specific Capacity (m³/d/m):	---				
Static Water Level (m bgl):	---				
Scheme Name:	Borris-In-Ossory	Number of Abstraction Points in the Scheme:	10	Source Report Available	N
Source Report Info:	---				
Scheme Summary:	---				

HYDROGEOLOGY							
GEOLOGY	Soil:	Shallow poorly drained mineral (BminSP)				Subsoil Permeability:	High
	Subsoil:	Glaciofluvial sands and gravels (GLs)					
	Bedrock:	Dinantian Lower Impure Limestones					
HYDROGEOLOGY	Aquifer Category:	LI / Rg	Vulnerability at Monitoring site:	High	Flow Regime:	Poorly productive bedrock /	
ZONE OF CONTRIBUTION	Estimated ZOC Size (km ²):	0.26	ZOC Delineated By:	OCM (DC)	Recharge Estimate (mm/yr):	362	
	ZOC Delineation Comments:	ZOC based on an abstraction rate of 246m ³ /day, water balance and assumed general flow directions. Gravel aquifer overlying Poorly productive aquifer. Unclear if topography is sand an					
Groundwater Vulnerability within ZOC (% area):	Extreme (X)	Extreme (E)	High	Moderate	Low	High to Low	Unclassified
	0	9.19	86.11	4.72	0	0	0
HYDROCHEMISTRY							
Hydrochemical Signature:	Ca-HCO ₃		Additional Water Chemistry Information:	---			
Alkalinity (mg/l HCO ₃):	Average:	Range:		---			
	---	---					
Hardness (mg/l CaCO ₃):	Average:	Range:		---			
	---	---					
Conductivity (uS/cm):	Average:	Range:		---			
	768.5	157.3-875					
Monitoring Record Period:	From:	To:	---				
	2001	2006					
RISK ASSESSMENT							
Pressure (e.g., Nitrates, Phosphates, Abstractions):	---		Typical Contaminants:	---			
Risk Category:	At risk, high confidence		GWB Status:	Good			
Impact Potential within ZOC (% area):	Extreme:	High:	Moderate:	Low:	Negligible:		
	0.00	42.80	5.00	0.00	52.30		
OTHER INFORMATION							



Data Summary Sheet - July 2011

Disclaimer: The data in this document are based on the best available information and understanding at time of writing. Neither the Environmental Protection Agency, nor the individual bodies supplying data for this document and accompanying maps will be responsible for any loss or damage from the use or interpretation of these data.

Rock Unit Geology Map: GSI, 2009

Aquifer Type Map: GSI, 2009

Groundwater Vulnerability Map: GSI, 2009

Soils & Subsoils Type: Teagasc, 2007

Recharge Map: GSI, 2009

Impact Potential Map: EPA, 2009

Risk Assessment Map: EPA WFD Risk Assessment, 2006

Groundwater Body Status: EPA WFD Status Assessment, 2008

Water Quality Data: EPA WFD Monitoring, 2008

Groundwater Threshold Values

Groundwater threshold values for selected parameters:

Nitrate - General Chemical Test/ Drinking Water Test (37.5 mg/l NO₃)

Ammonium - Drinking Water Test (0.175 mg/l N) / Surface Water Test (0.065 mg/l N)

Molybdate Reactive Phosphorus (MRP) - Surface Water Test (0.035 mg/l P)

Chloride -Saline/Intrusive Test (24 mg/l) / Drinking Water Test (175 mg/l Cl)

Electrical Conductivity -Saline/Intrusive Test (800 µS/cm) / Drinking Water Test (1,875 µS/cm)

Further information on groundwater threshold values is contained in the Groundwater Regulations (S.I. No.9 of 2010).

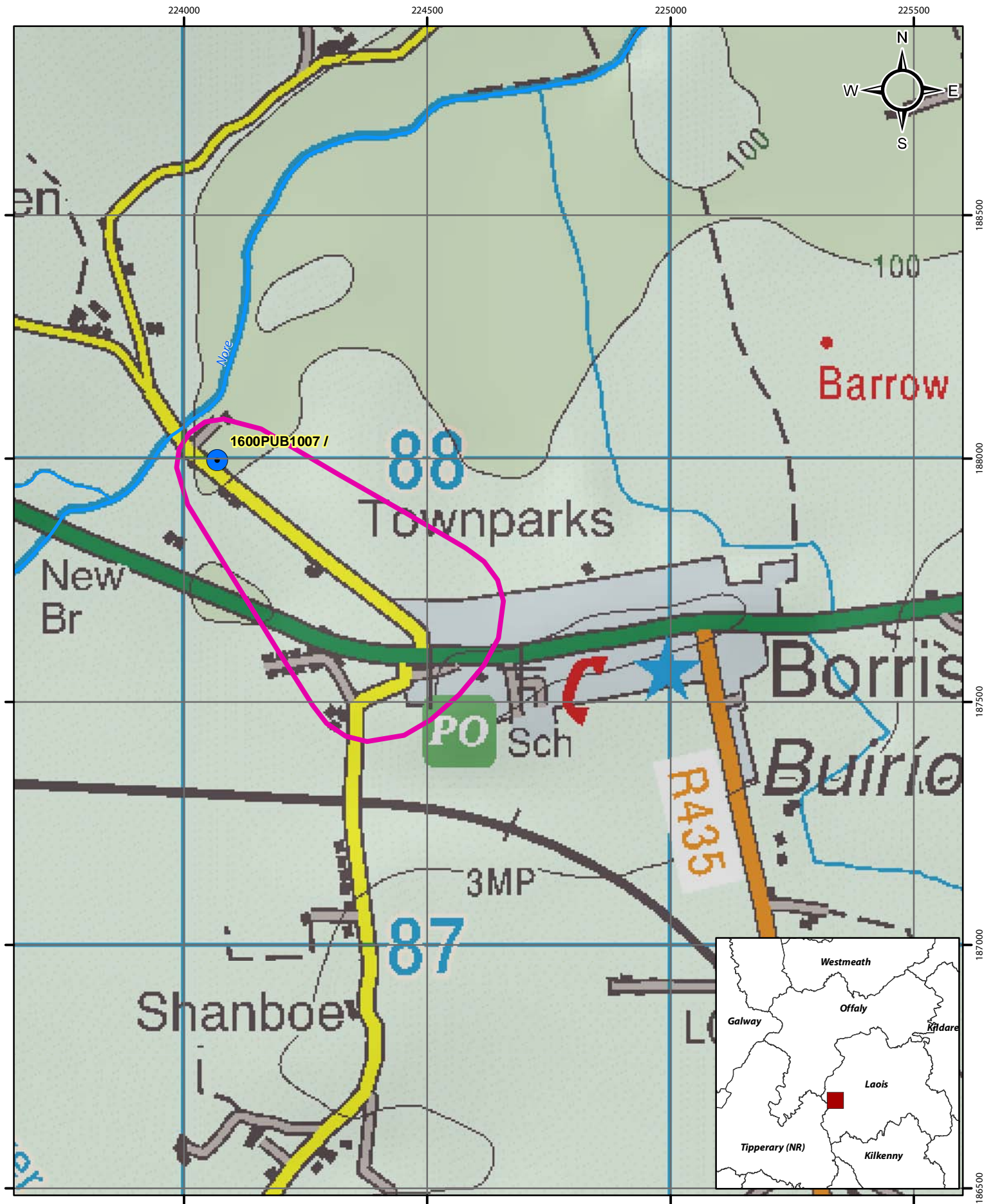
General Downgradient Distances

General Downgradient Distances (XL) applied to boreholes sourced in bedrock aquifers are constrained to estimate approximate limits based on data at the GSI. In some cases they may be higher or lower depending on local conditions.

Rk, Rkd, Lk	225 m
Lm	150 m
LI, PI	60 m

It is assumed that groundwater downgradient of a spring cannot flow back up to the spring, however a precautionary 30m buffer is generally applied which allows for instances where pumping under dry weather periods may induce a drawdown or where the ground may be sloping toward the spring from the downgradient side.

Version 0:	Prepared by		Date:	
Version 1:	Prepared by	OCM (DC)	Date:	Feb 2011
Version 2:	Prepared by		Date:	
Version 3:	Prepared by		Date:	
Version 4:	Prepared by		Date:	

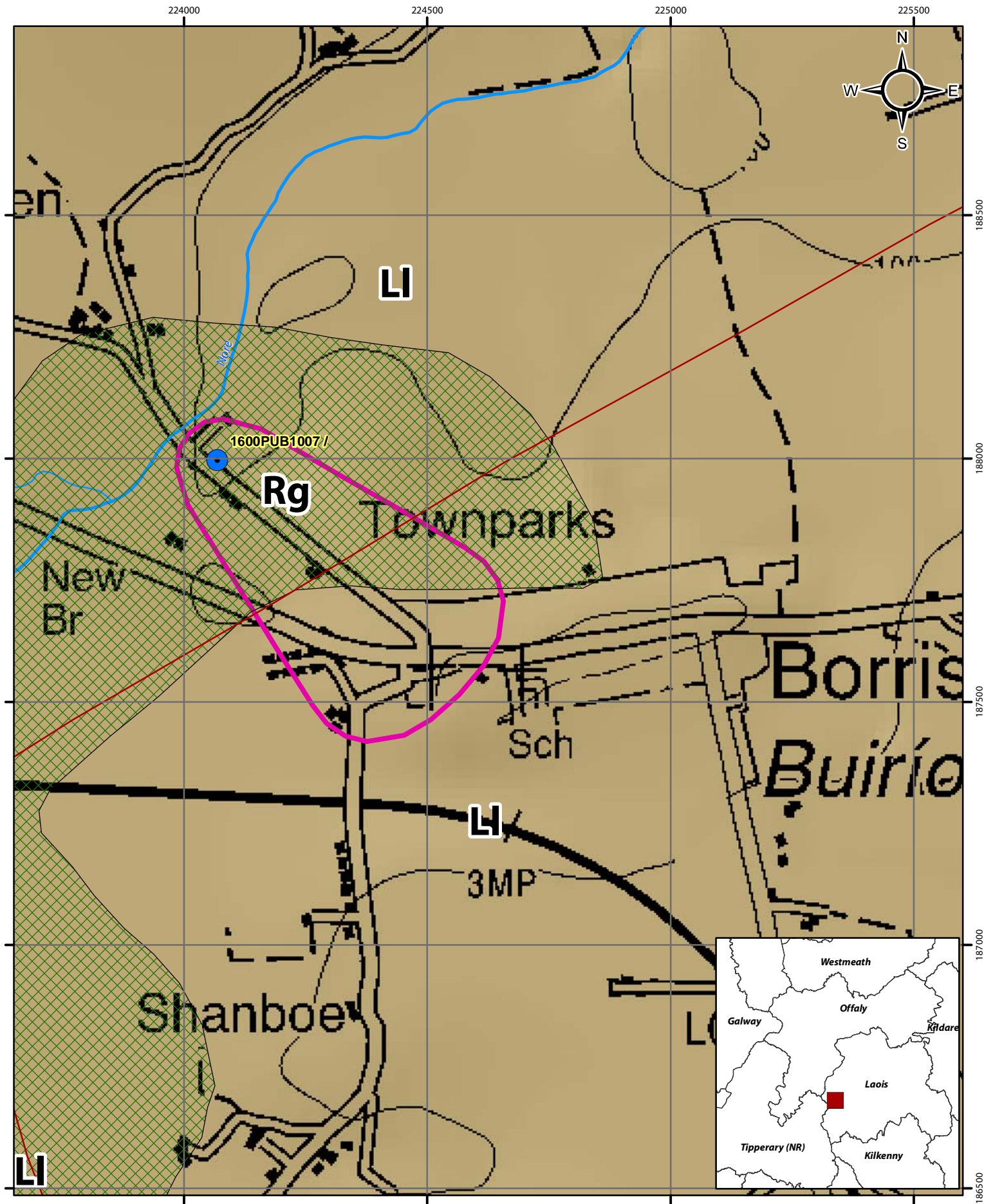


Location Map for Borris in Ossory

- Abstractions
- Zone of Contribution
- River

© Ordnance Survey Ireland. All rights reserved.
Licence number EN0059208

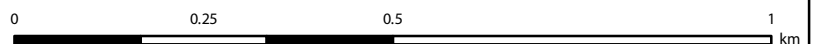
0 0.25 0.5 1 km

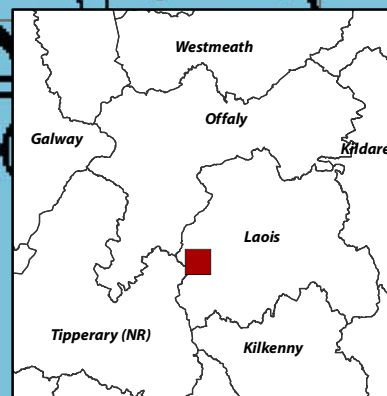
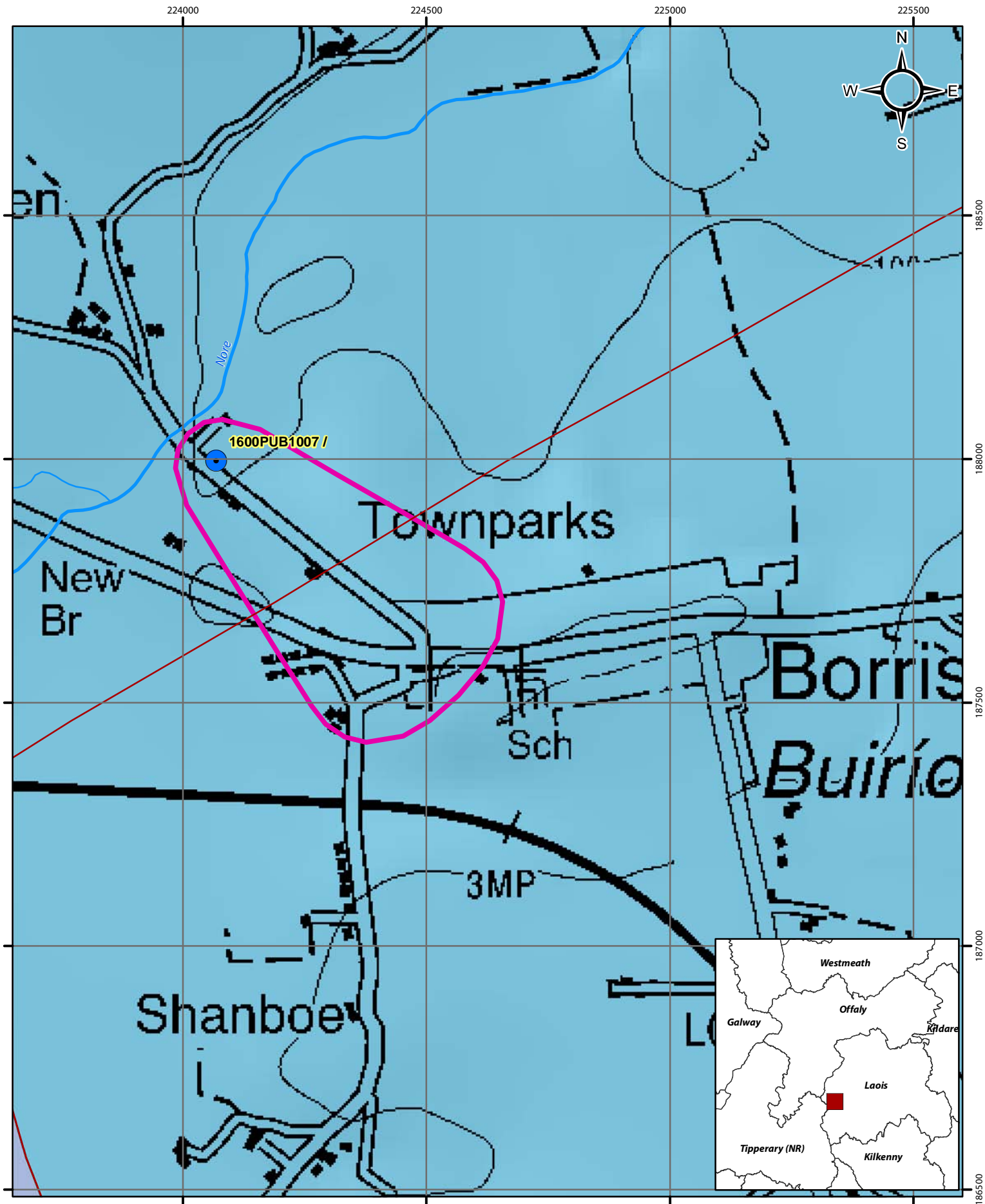


Aquifer Category Map for Borris in Ossory

- | | | | |
|--|----------------------|--|-------|
| | Abstractions | | Fault |
| | Zone of Contribution | | Rg |
| | River | | LI |

© Ordnance Survey Ireland. All rights reserved.
Licence number EN0059208

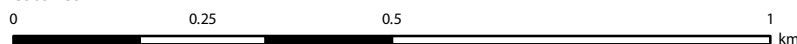


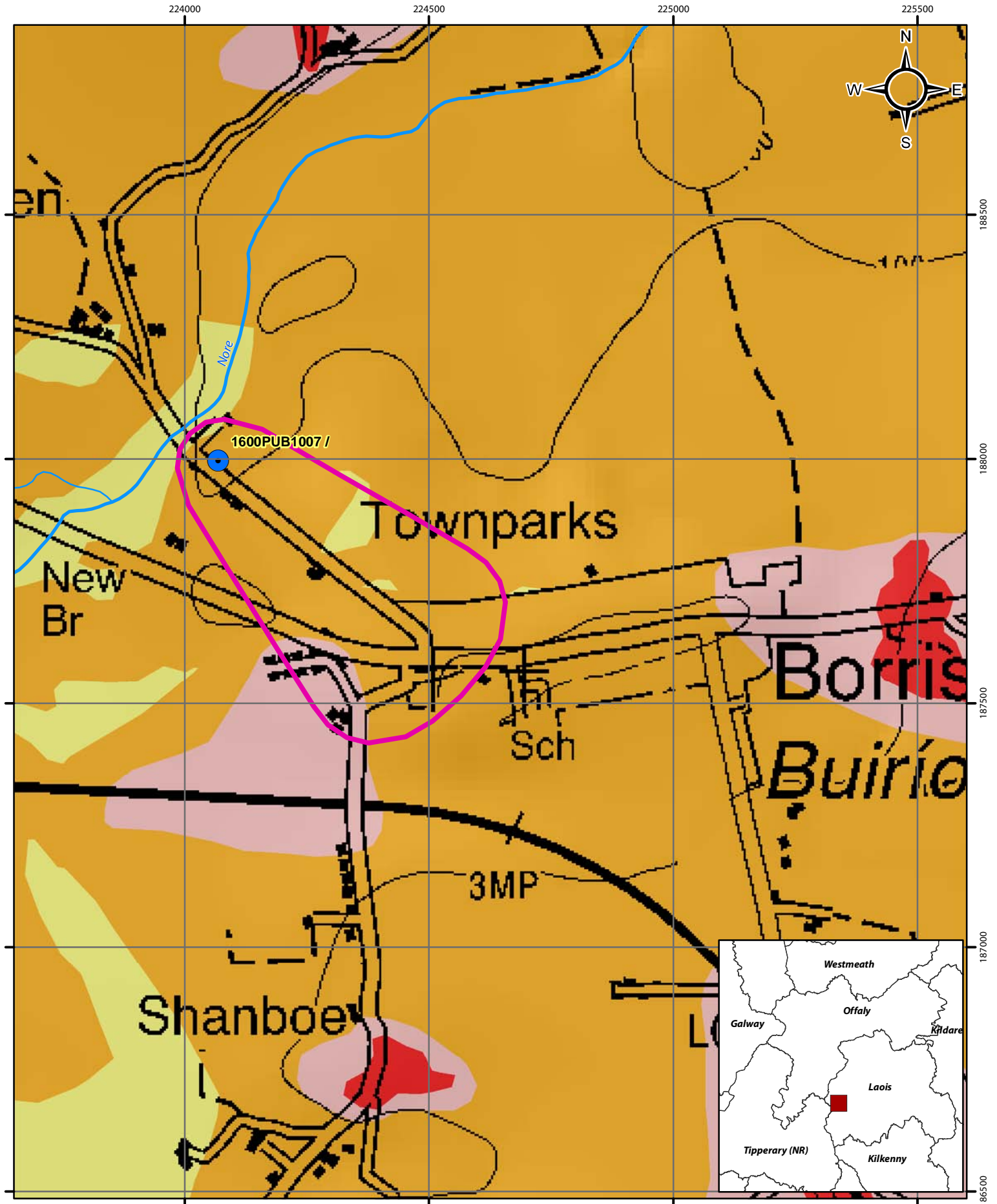


Bedrock Map for Borris in Ossory

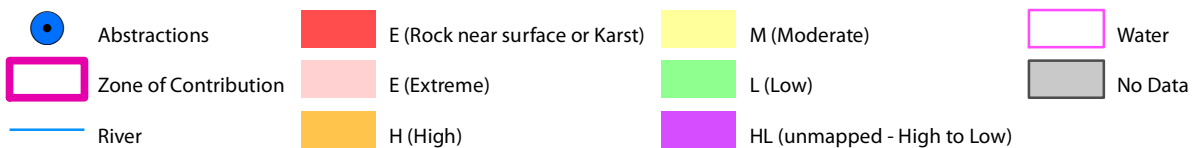
- | | | | |
|--|----------------------|---|------------------------------------|
|  | Abstractions |  | Fault |
|  | Zone of Contribution |  | Dinantian Lower Impure Limestones |
|  | River |  | Dinantian Pure Unbedded Limestones |

© Ordnance Survey Ireland. All rights reserved.
Licence number EN0059208

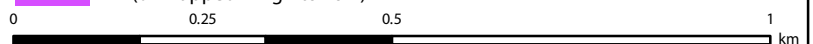


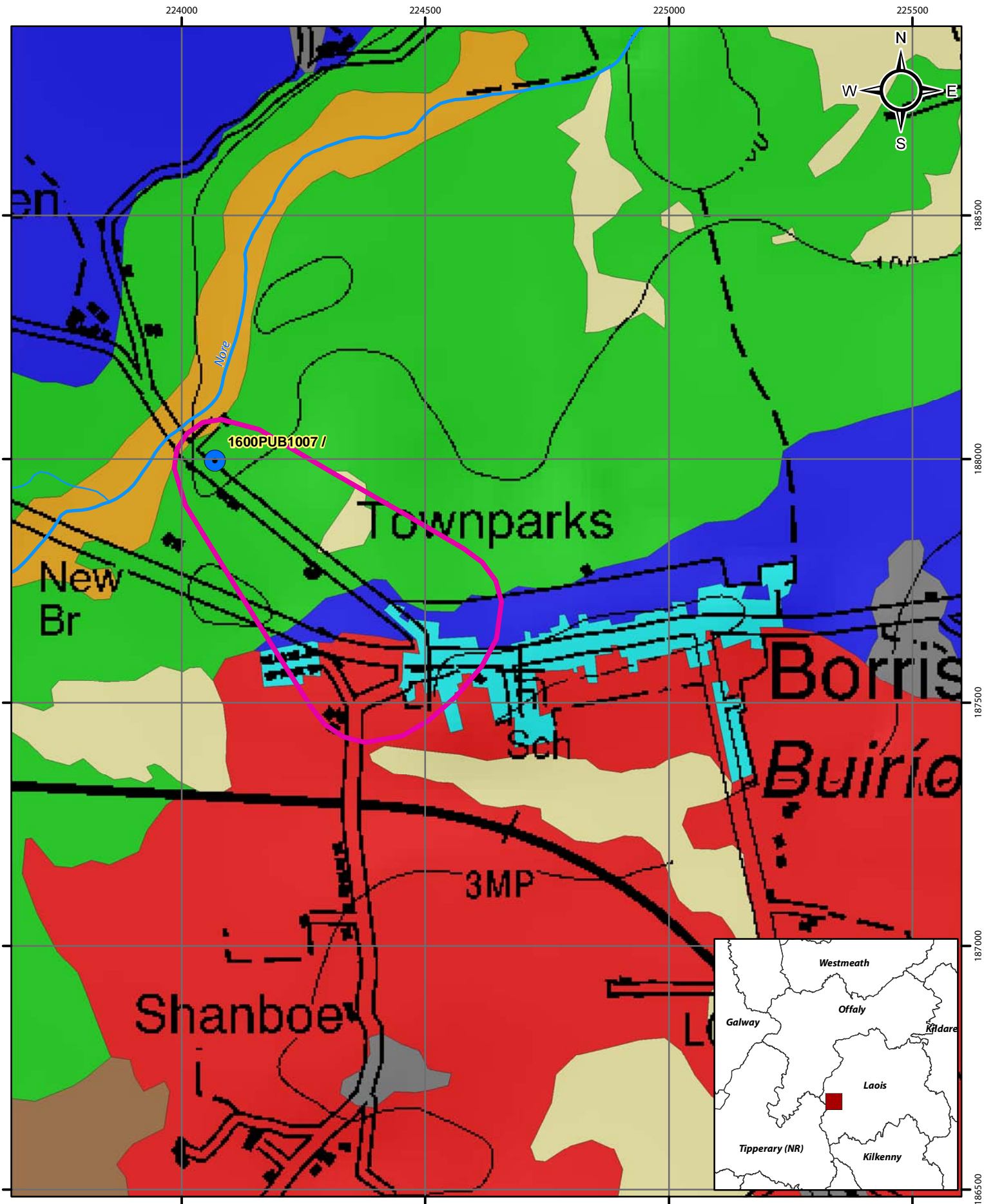


Groundwater Vulnerability Map for Borris in Ossory



© Ordnance Survey Ireland. All rights reserved.
Licence number EN0059208

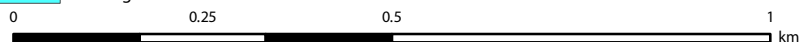


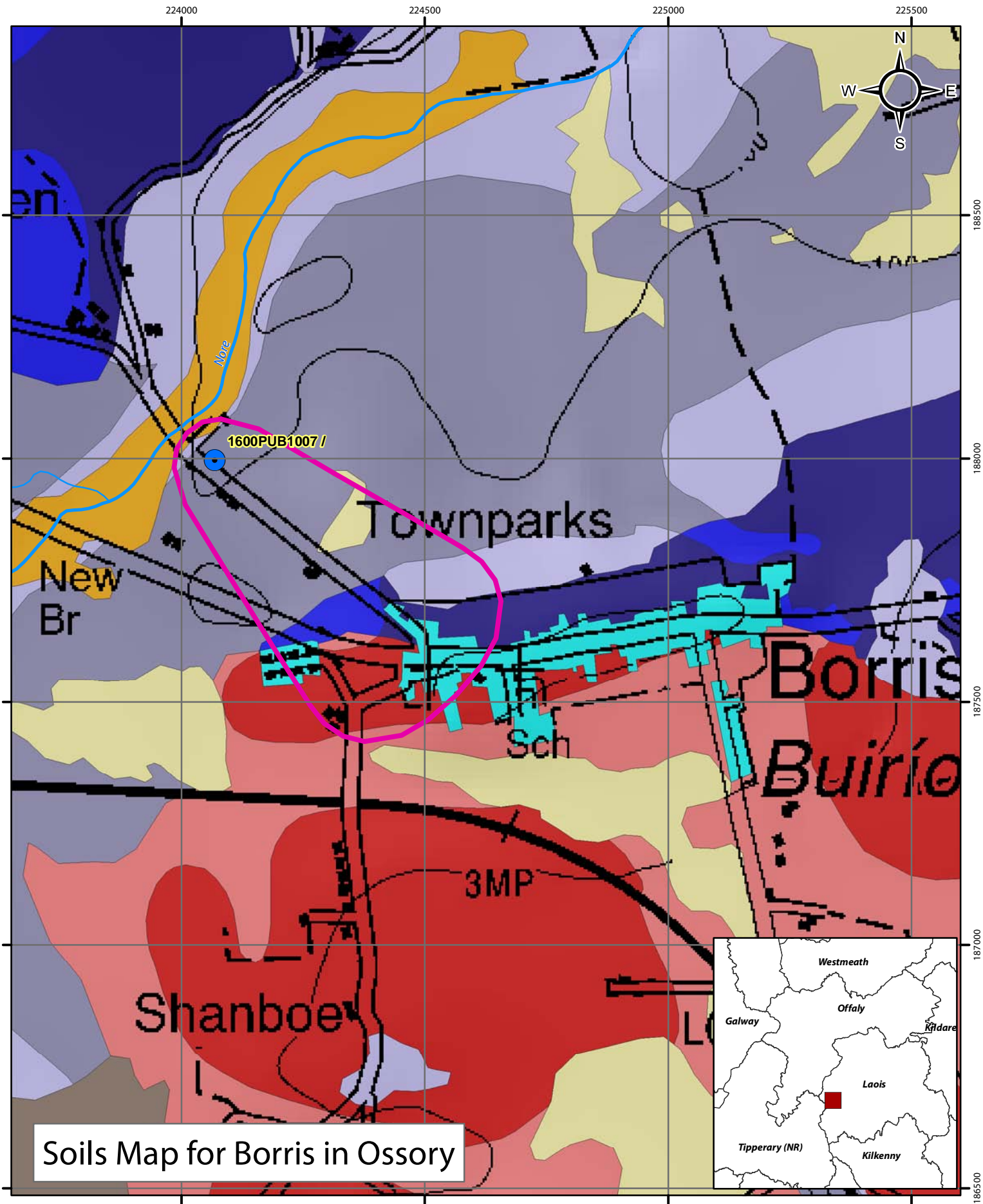


Subsoils Map for Borris in Ossory



© Ordnance Survey Ireland. All rights reserved.
Licence number EN0059208





Soils Map for Borris in Ossory

