

Water Framework Directive Groundwater Monitoring Programme

Site Information

An Baile Mor 012D



An Baile Mor comprises 3 adjacent springs, known collectively as Mannings Springs. The total abstraction rate is approximately 600m³/d.



Kerry

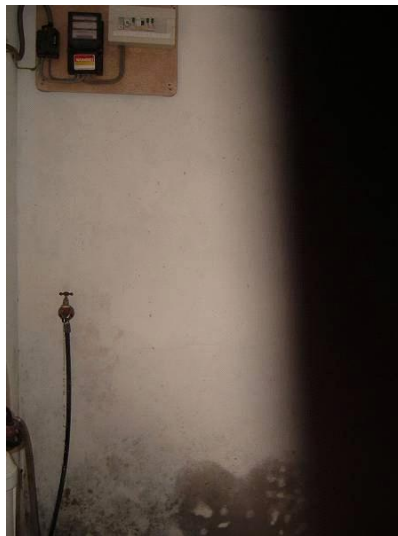
August 2011

SITE INFORMATION					
Site Name:	An Baile Mor 012D		County:	Kerry	
RBD:	SERBD		EU Reporting Code:	---	
Easting:	44910		GWB Name:	Brandon Head	
Northing:	104164		GWB Code:	IE_SH_G_044	
Site Use:	Drinking Water (PWS)		Drinking Water Code:	1300PUB1032	
Hydrometric Area:	22		Water Level Monitoring Network:	Level	Flow
Townland:	GLIN NORTH			N	N
Ownership:	Kerry Co Co				
Water Quality Monitoring Network:	Surveillance		Operational (Point)		Operational (Diffuse)
	N		N		N
Site Comments:	Open hilly land, blanket peat.				
SITE DIRECTIONS					
Location and Access Information:	Entering Dingle from N86 take right at roundabout along 'The Mall', take left at end onto 'Main St'. Keep on 'Main St' onto 'Goat St' and then onto 'Ashmount Tce' / 'Upper Main St'. Take right up 'Cairn Ard', which is located just at the end of the 50kph Zone and signed for Horse Trekking; follow this road for 650m, taking first right. Follow this road, and keep right to the end. It is a dead end. Need to walk from here to see springs, illustrated in photograph 1. Fenced compound around each individual spring and the sand filter reservoir.				
Additional Comments:	Grid reference provided is for the 'Top Spring'. Two other springs are at 44921 104118 and 44920 104086. Collection chamber for three springs is at grid reference 44892 104099				
WELL INFORMATION					
Monitoring Point Type:	Spring	Abstraction Rate (m³/d):	600	Ground Elevation (m OD):	180
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:	An Baile Mor	Number of Abstraction Points in the Scheme:	3	Source Report Available	N
Source Report Info:	---				
Scheme Summary:	3 adjacent springs provide all the water to the Ballymore supply. It supplies approximately 900 people. The springs are conveyed to a collection chamber which then flows to a reservoir and then a chlorination / pumphouse.				

HYDROGEOLOGY								
GEOLOGY	Soil:	Poorly drained mineral soils with peaty topsoil (AminPDPT)					Subsoil Permeability:	n/a
	Subsoil:	Tills (diamictos) (TDSs)						
	Bedrock:	Devonian Old Red Sandstones						
HYDROGEOLOGY	Aquifer Category:	LI	Vulnerability at Monitoring site:	Extreme		Flow Regime:	Poorly productive	
ZONE OF CONTRIBUTION	Estimated ZOC Size (km ²):	0.17	ZOC Delineated By:	TOBIN (CK)		Recharge Estimate (mm/yr):	1400	
	ZOC Delineation Comments:	An Baile Mór 012D comprises 3 adjacent springs (Mannings Springs) with an abstraction of 600 m ³ /d from an LI aquifer. The total discharge of the spring is unknown. There is an overflow from the 3 springs in wet weather. The ZOC was delineated based abstraction rate, topography and recharge; area delineated is 0.2 km ² with a recharge of 1400 mm/yr (rainfall of 2m and all effective rain discharging at springs). Most of the ZOC is rock close with blanket peat the very top of the catchment. The downgradient distance is 30 m. Further work is need to obtain information on the total discharge and the hydrogeology.						
Groundwater Vulnerability within ZOC (% area):	Extreme (X)	Extreme (E)	High	Moderate	Low	High to Low	Unclassified	
	86.98	13.02	0	0	0	0	0	
HYDROCHEMISTRY								
Hydrochemical Signature:	---		Additional Water Chemistry Information:	Low pH (often less than 6, once greater than 9). Exceedances of total and faecal coliforms reported. Occasionally discoloured. Very few data available from drinking water returns.				
Alkalinity (mg/l HCO ₃):	Average:	Range:						
	---	---						
Hardness (mg/l CaCO ₃):	Average:	Range:						
	---	---						
Conductivity (uS/cm):	Average:	Range:						
	79	67-88						
Monitoring Record Period:	From:	To:						
	---	---						
RISK ASSESSMENT								
Pressure (e.g., Nitrates, Phosphates, Abstractions):	---		Typical Contaminants:	---				
Risk Category:	At risk, low confidence		GWB Status:	Good				
Impact Potential within ZOC (% area):	Extreme:	High:	Moderate:	Low:	Negligible:			
	0.00	0.00	0.00	0.00	100.00			
OTHER INFORMATION								



Pump House



Sampling Point



Site Overview

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).

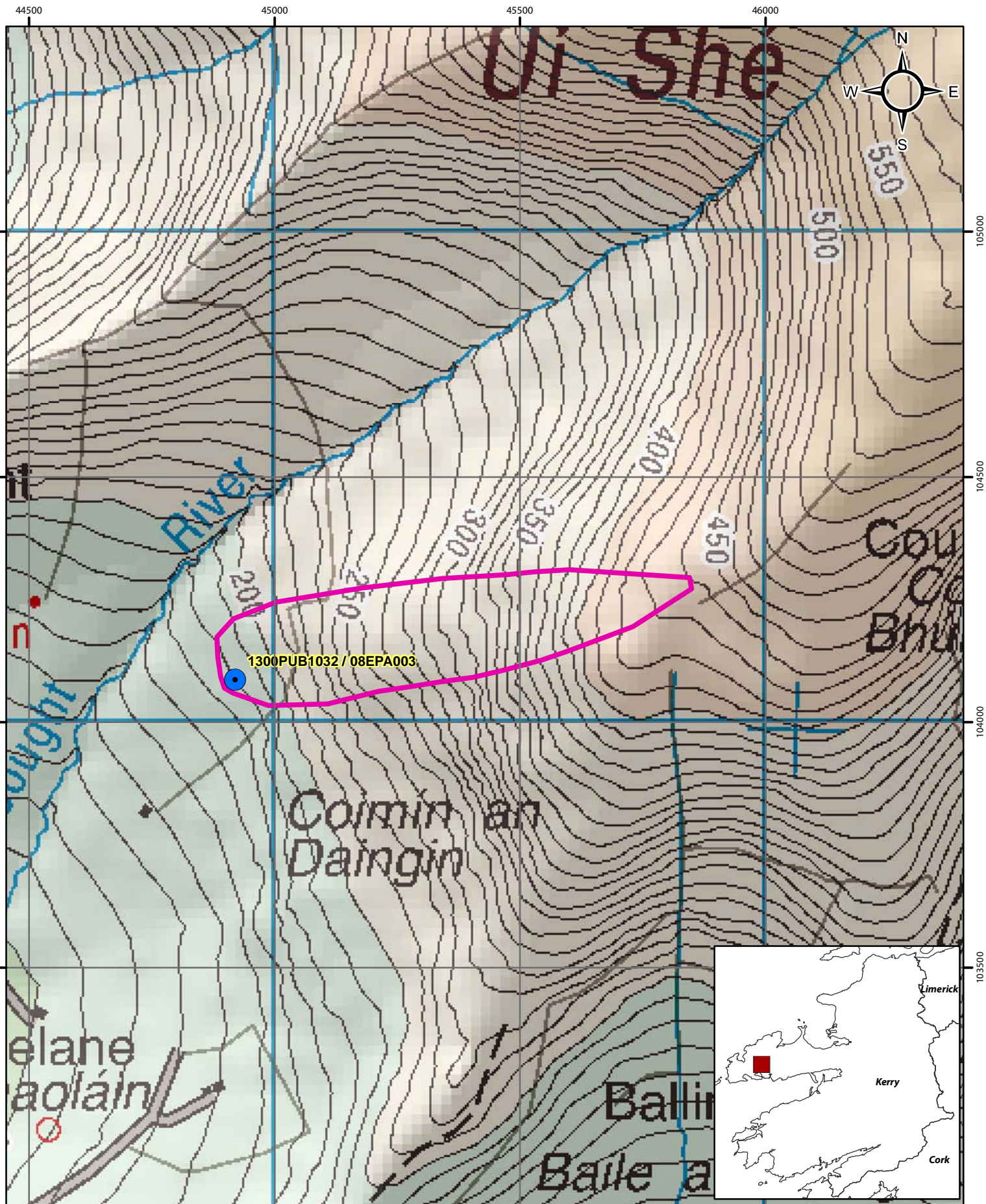
General Downgradient Distances

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
Ll, Pl	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.

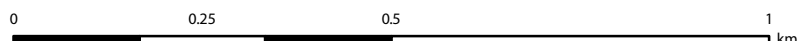
Version 0:	Prepared by		Date:	
Version 1:	Prepared by	TOBIN (CK)	Date:	Feb 2011
Version 2:	Prepared by		Date:	
Version 3:	Prepared by		Date:	
Version 4:	Prepared by		Date:	

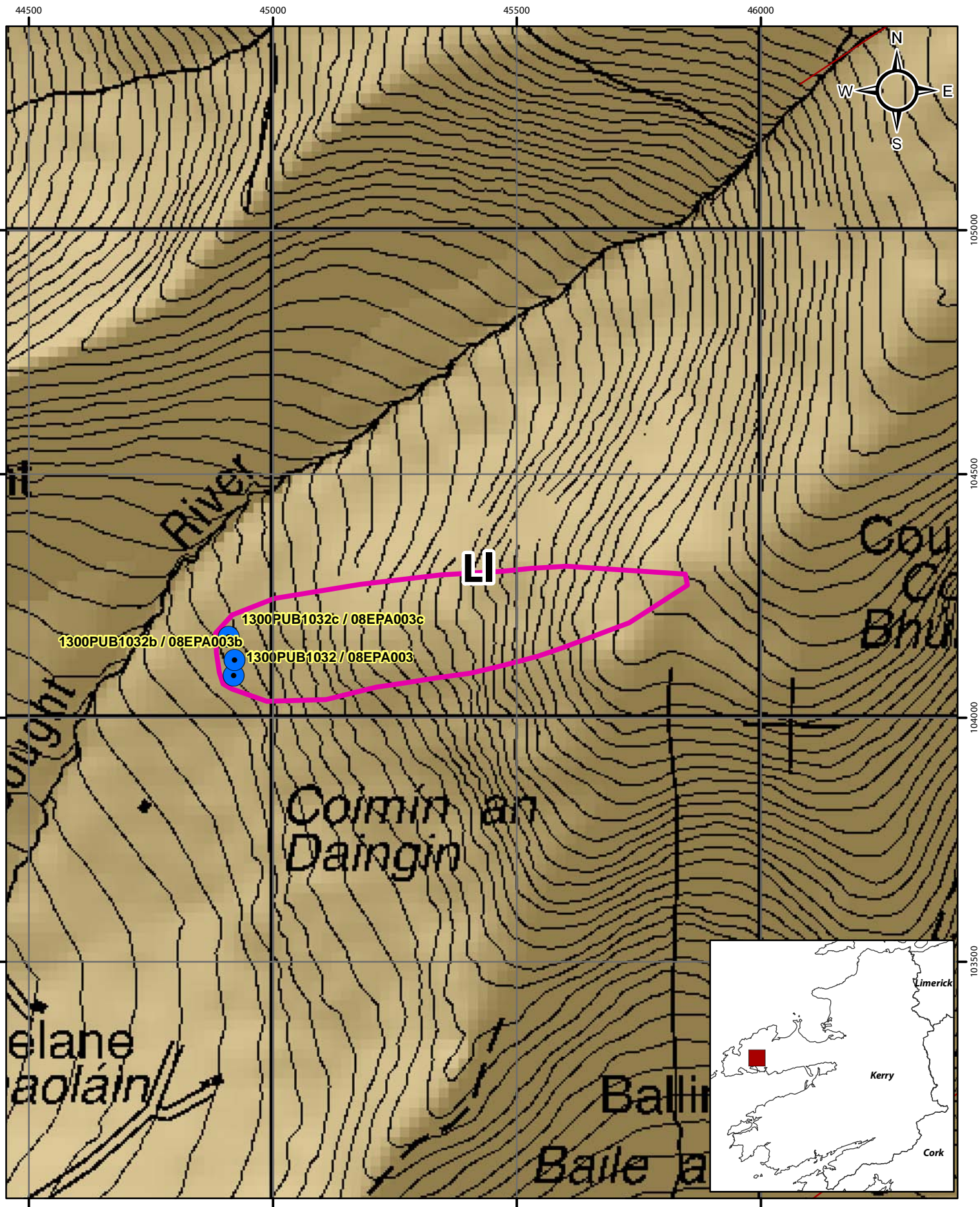


Location Map for An Baile Mor 012D






-  Abstractions
-  River
-  Zone of Contribution

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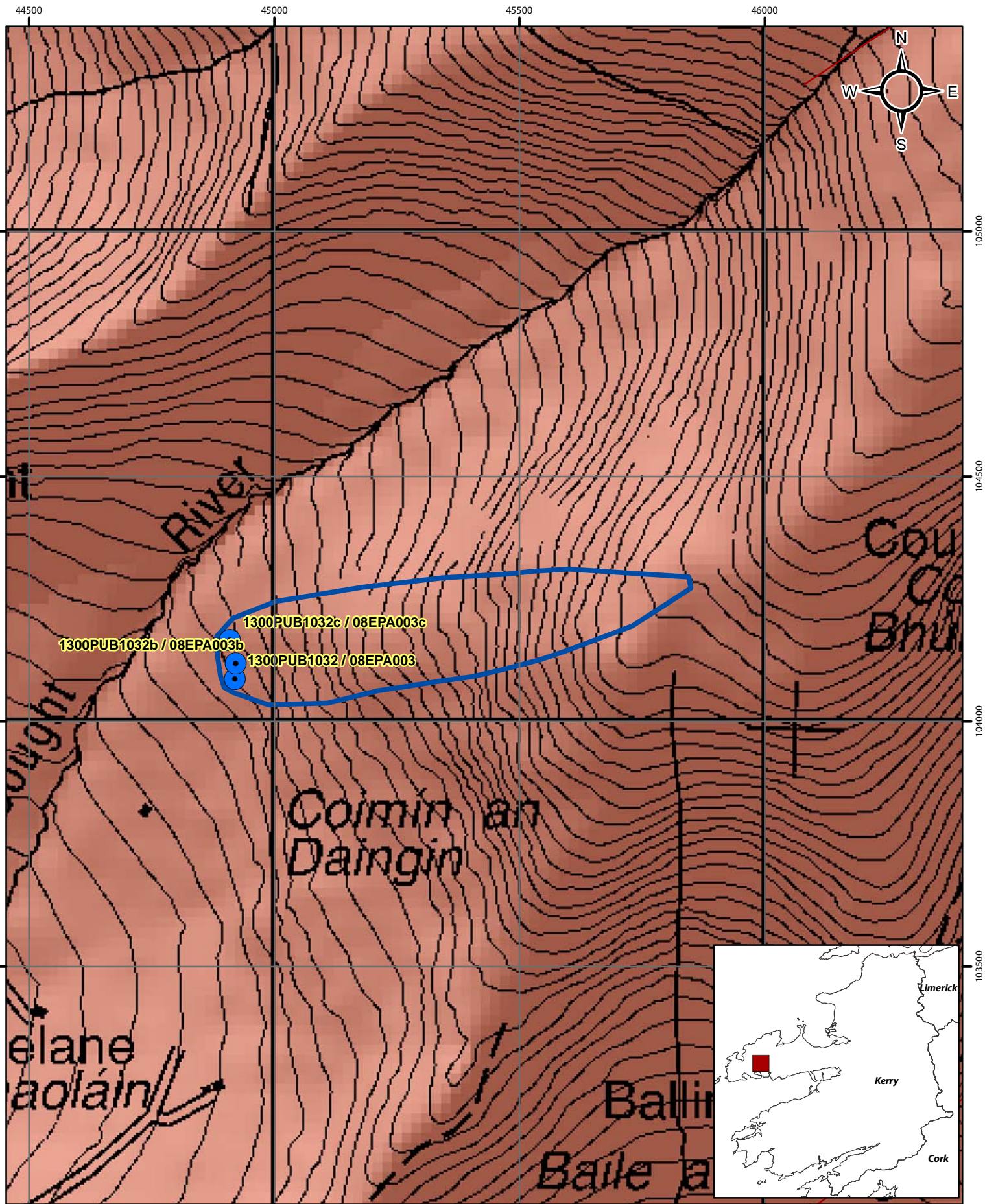


Aquifer Category Map for An Baile Mor 012D






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

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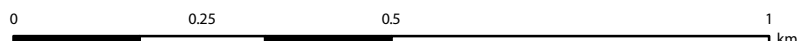
0 0.25 0.5 1 km

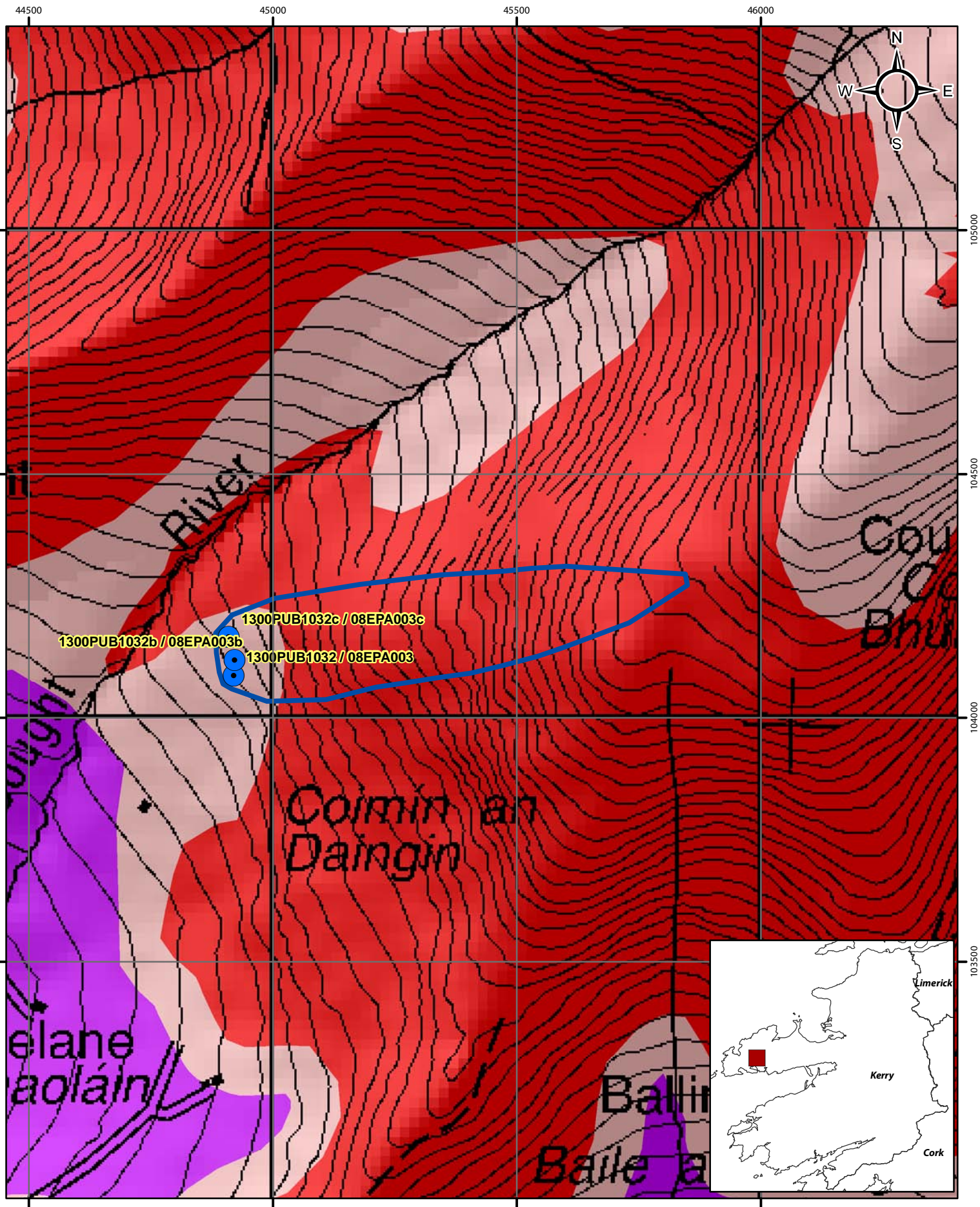


Bedrock Map for An Baile Mor 012D

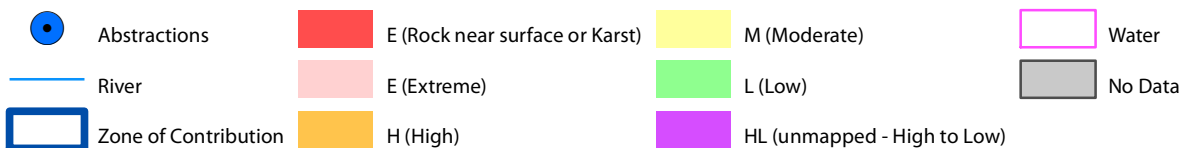
-  Abstractions
-  Fault
-  River
-  Devonian Old Red Sandstones
-  Zone of Contribution

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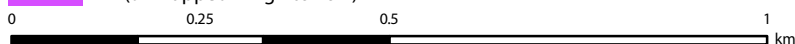


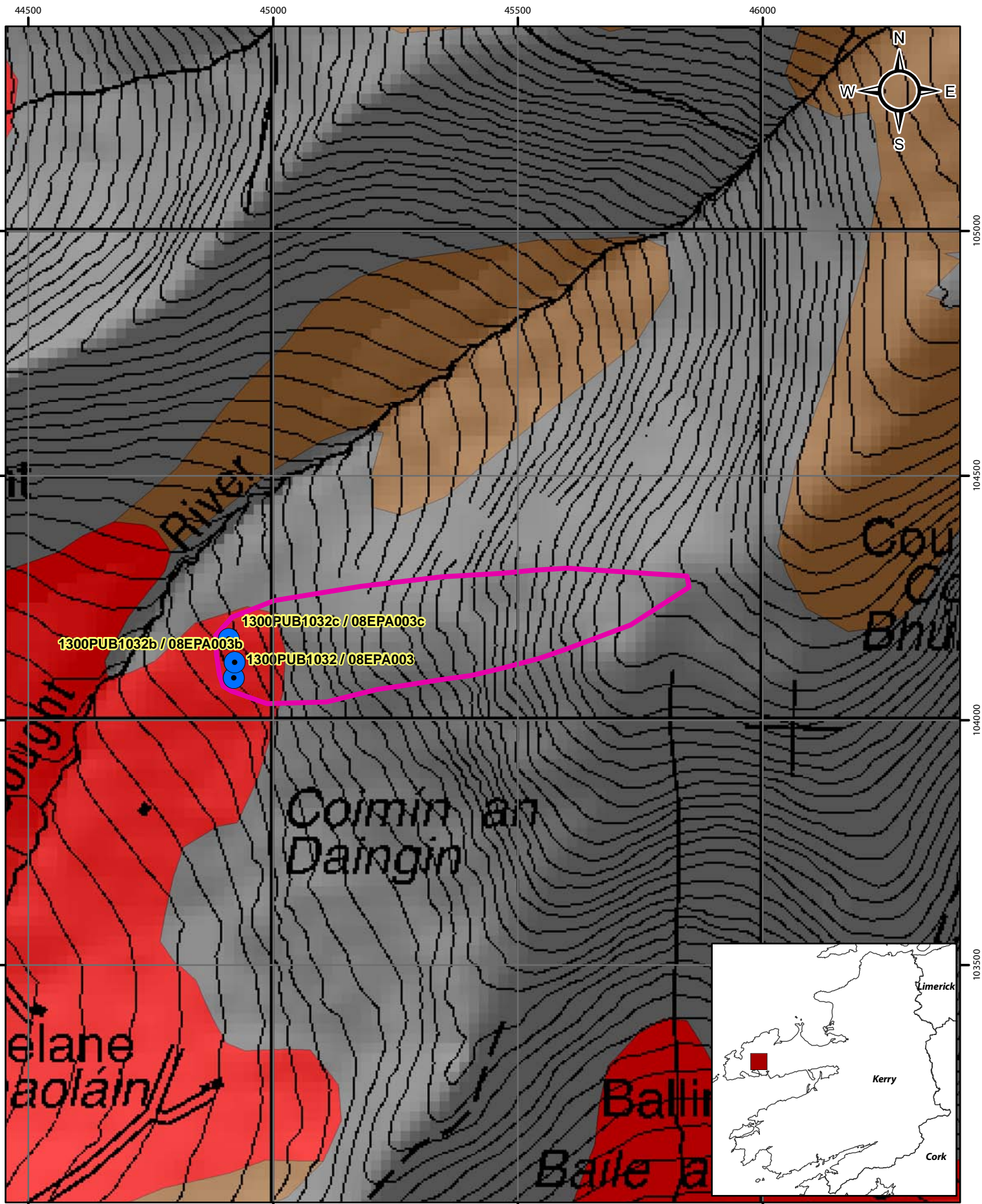


Groundwater Vulnerability Map for An Baile Mor 012D



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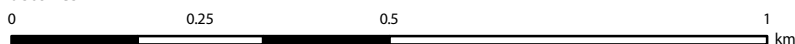


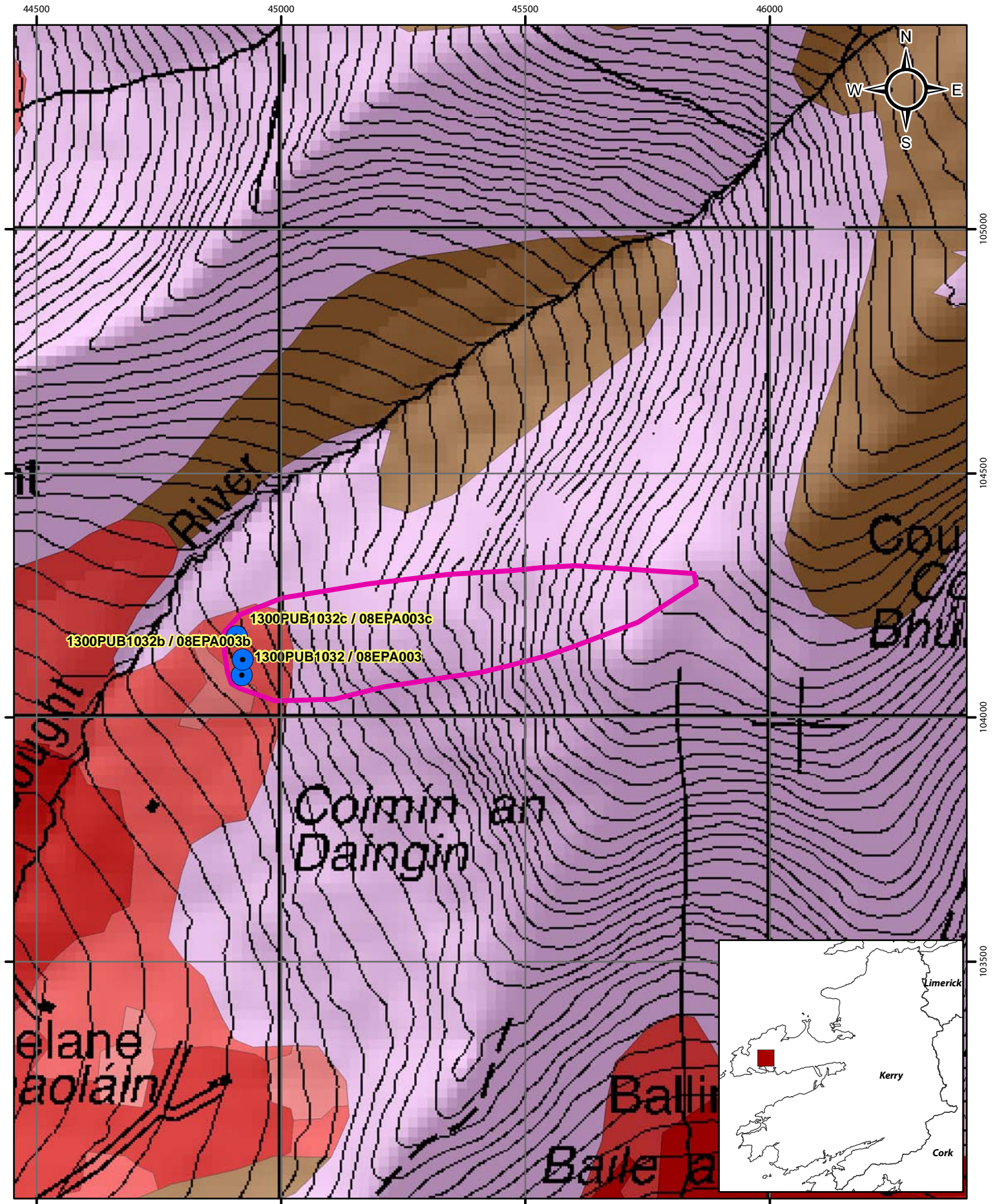


Subsoils Map for An Baile Mor 012D








-  Abstractions
-  River
-  Zone of Contribution
-  Blanket peat
-  Bedrock outcrop or subcrop
-  Till derived from Devonian sandstones

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Soils Map for An Baile Mor 012D

- | | | | | | |
|------------------------------------------------------------------------------------|----------------------|-------------------------------------------------------------------------------------|-----------------------------------|-------------------------------------------------------------------------------------|-----------------------------------|
|  | Abstractions |  | Acid Deep Well Drained Mineral |  | Acid Shallow Well Drained Mineral |
|  | River |  | Acid Deep Poorly Drained Mineral |  | Acid Shallow/Rocky/Peaty Mineral |
|  | Zone of Contribution |  | Acid Poorly Drained Peaty Mineral |  | Blanket Peat |

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