



SCLENTEUCH WIND FARM

FIGURE 9.1

LOCAL HYDROLOGY

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- Site Boundary
- Study Area
- Turbine Location
- Upgraded Site Tracks
- New Site Tracks
- Crane and Compound Hardstanding
- Control Building, Substation Compound and Permanent Hardstanding
- Battery Storage
- Temporary Construction Compound and Battery Storage
- Temporary Enabling Works Compound
- Alternative Temporary Enabling Works Compound
- Borrow Pit Search Area
- Watercrossing Location
- Watercourse (OS OpenMap Local)
- Waterbody (OS OpenMap Local)
- Watercourse and Waterbody (OS OpenMap Local) 50 m Buffer
- Watercourse Catchment Boundary
- Private Water Supply
- Site of Special Scientific Interest (SSSI)

N.B. Entire Area covered by Galloway and Southern Ayrshire Biosphere Reserve.



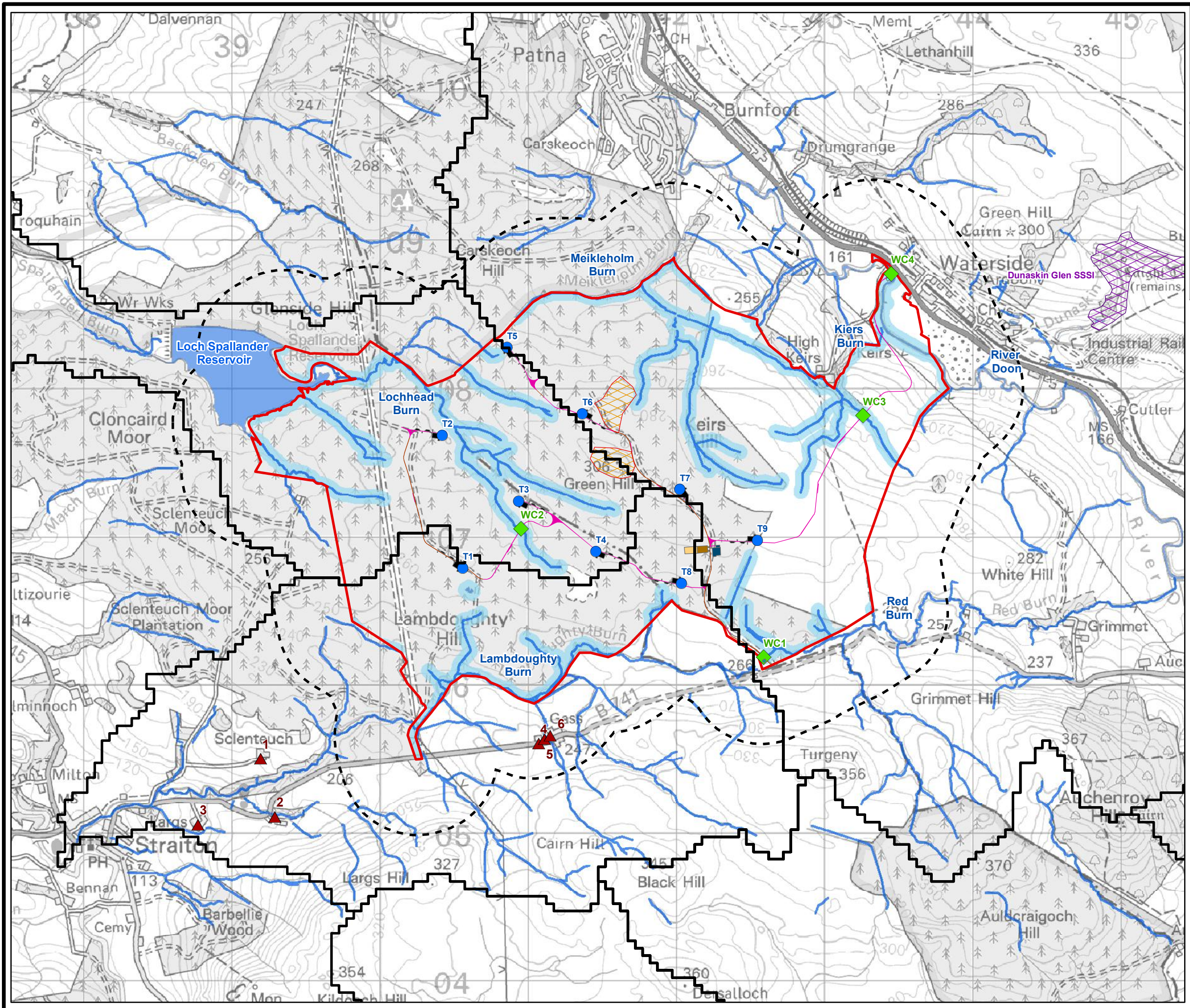
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SCLENTEUCH WIND FARM

FIGURE 9.2

PEATLAND CLASSIFICATION

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- Battery Storage
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- Temporary Enabling Works Compound
- Alternative Temporary Enabling Works Compound
- Borrow Pit Search Area

Peatland Classification

CLASS 1 All vegetation cover is priority peatland habitats. All soils are carbon-rich soils and deep peat

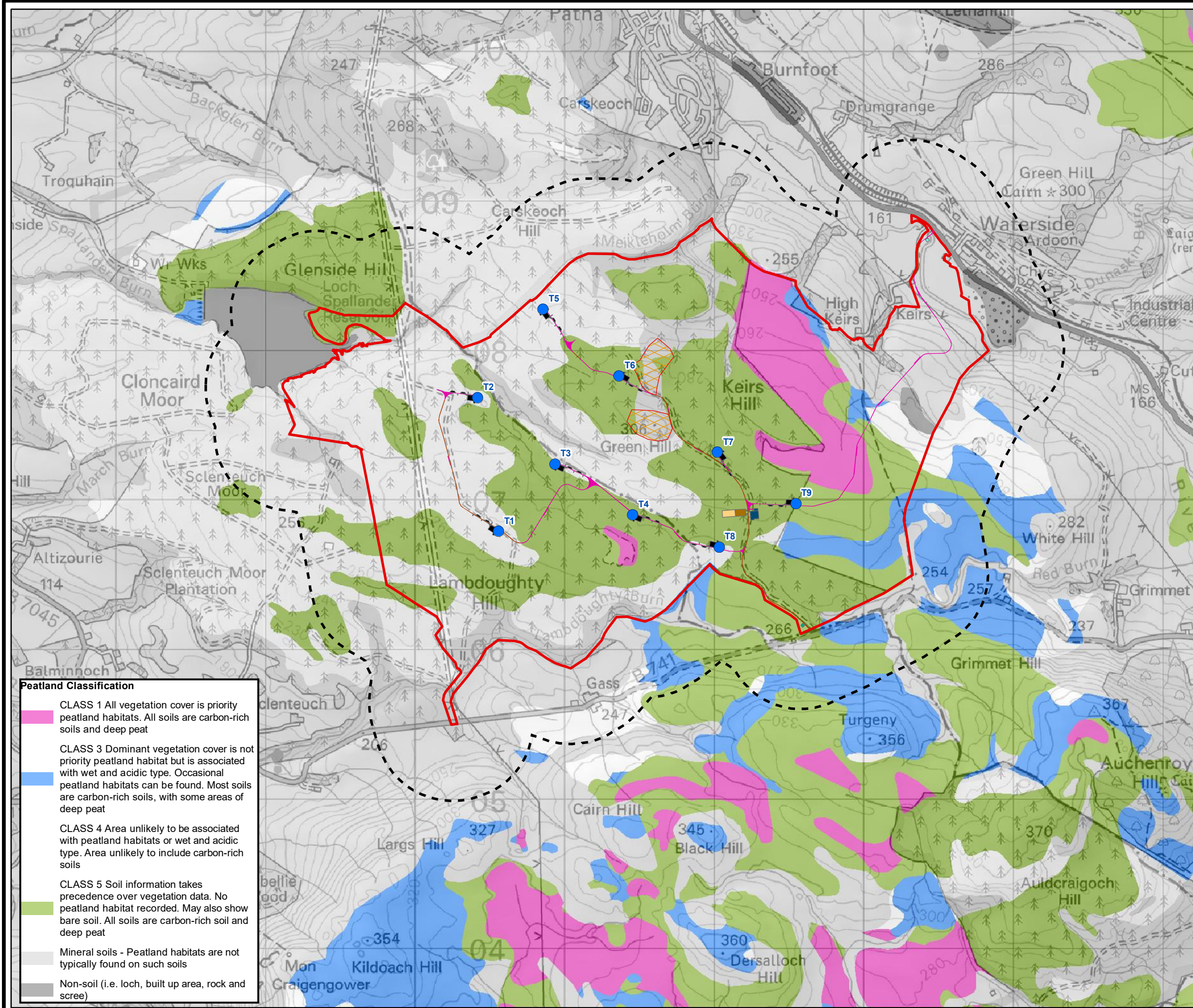
CLASS 3 Dominant vegetation cover is not priority peatland habitat but is associated with wet and acidic type. Occasional peatland habitats can be found. Most soils are carbon-rich soils, with some areas of deep peat

CLASS 4 Area unlikely to be associated with peatland habitats or wet and acidic type. Area unlikely to include carbon-rich soils

CLASS 5 Soil information takes precedence over vegetation data. No peatland habitat recorded. May also show bare soil. All soils are carbon-rich soil and deep peat

Mineral soils - Peatland habitats are not typically found on such soils

Non-soil (i.e. loch, built up area, rock and scree)



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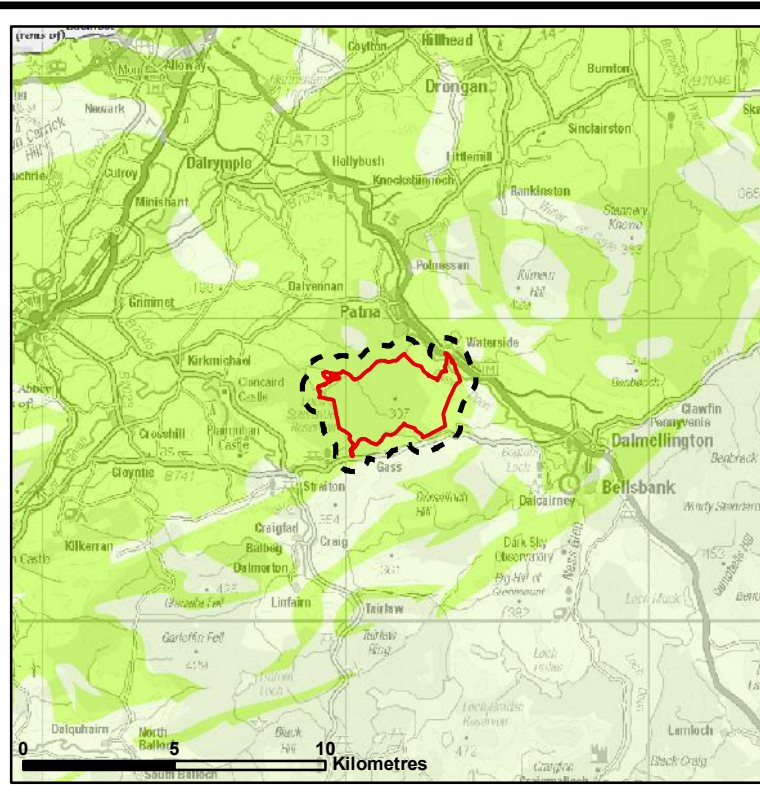
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FIGURE 9.3

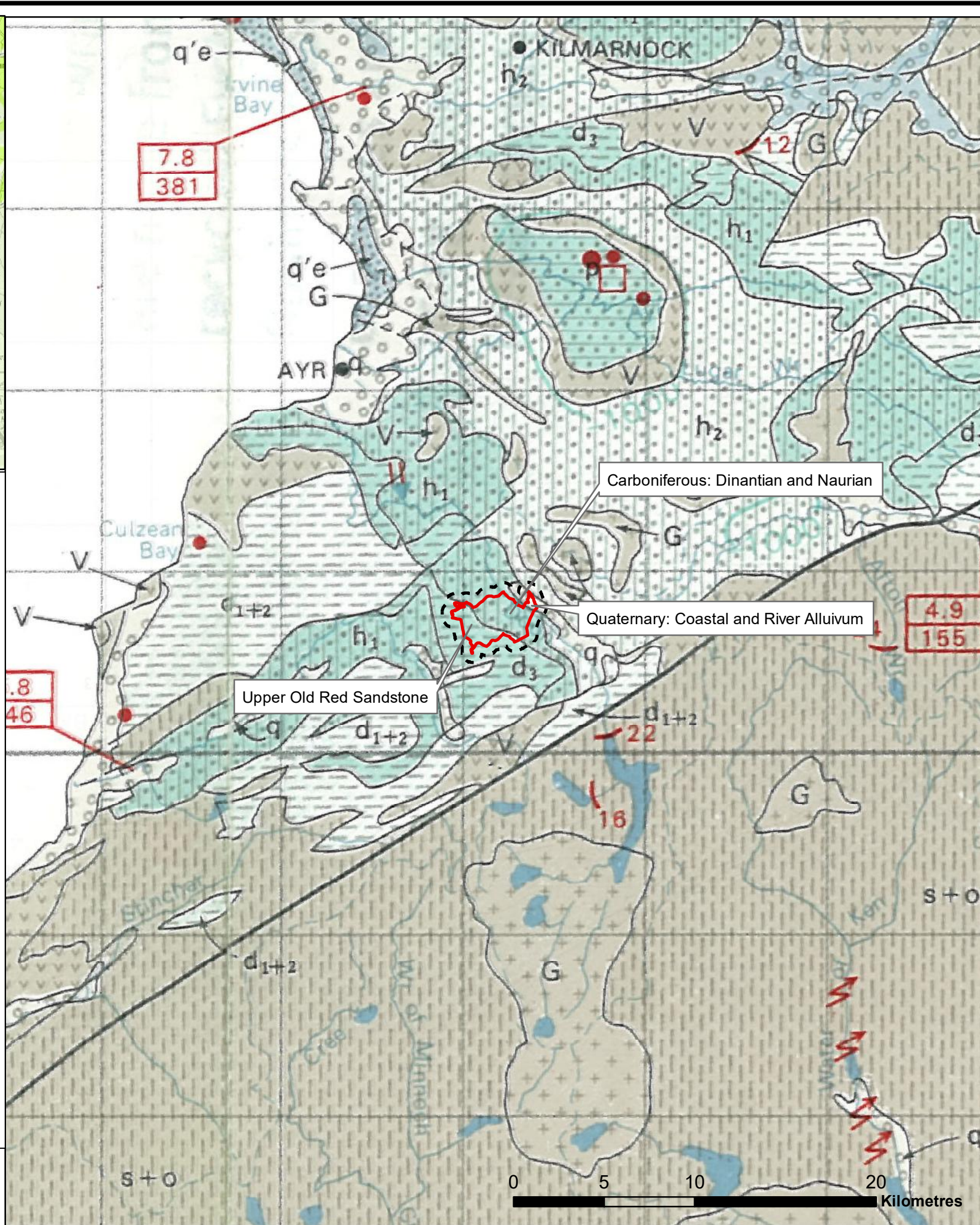
**REGIONAL
HYDROGEOLOGY**

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- Site Boundary
- Study Area
- Map to Left**
Aquifer in which Flow is Virtually All Through Fractures and Other Discontinuities
- 2B, Moderately Productive Aquifer
- 2C, Low Productivity Aquifer



INDEX AND EXPLANATION	
1. Aquifers in which intergranular flow is significant	
a. Highly productive aquifers (not extensive)	Surface water features
p. Permian at Thornhill	Perennial river or stream
d ₃ . Upper Old Red Sandstone in Fifo	Perennial river or stream in which the chloride ion concentration is known to exceed 1000 mg/l under low flow conditions
b. Locally important aquifers	Stream gauging station with mean annual runoff in m ³ /s, over catchment area in km ²
r. Recent: blown sand	Hydrometric area boundary
q. Quaternary sands and gravels	Freshwater loch, reservoir or standing water
p. Permian in North West Gairn	Loch or standing water in which the chloride ion concentration is known to exceed 1000 mg/l
2. Aquifers in which flow is dominantly in fissures and other discontinuities	
a. Highly productive aquifers (not extensive)	Groundwater features
p. Permian	Recognised mineral water spring or borehole with less than 1000 mg/l total dissolved solids.
h ₁ . Carboniferous: Dinantian and Naurian	Sea water spring or well with greater than 1000 mg/l total dissolved solids.
d ₃ . Upper Old Red Sandstone	Areas where the chloride ion concentration exceeds 1000 mg/l above +90 m C.D.
b. Locally important aquifers	Sources of known abstraction (licences are not required):
t. Triassic and Permian	a) 10-19 l/s normal discharge
h ₂ . Carboniferous: Westphalian	b) 20-29 l/s or pumping yield
l. Lower and Middle Old Red Sandstone	c) > 29 l/s
3. Concealed aquifers, aquifers of limited potential, regions without significant groundwater	
a. Concealed aquifers: aquifers with limited or local potential	Artificial works
q. Quaternary: coastal and river alluvium	Impounding reservoir with design yield ≥ 10 Ml/d (figures in Ml/d)
j. Jurassic	Canal
p. Permian at Stranraer	Hydroelectric station
cb. pr. Cambro-Ordovician and Precambrian Limestones	Geological symbols
b. Regions uncertain by impermeable rocks, generally without groundwater except at shallow depths	Geological boundary
s-o. Silurian and Ordovician	Geological boundary beneath cover
p. Precambrian	Fault
e. Extrusive rocks	Contours on the surface of the Old Red Sandstone in m relative to C.D.
i. Intrusive rocks	



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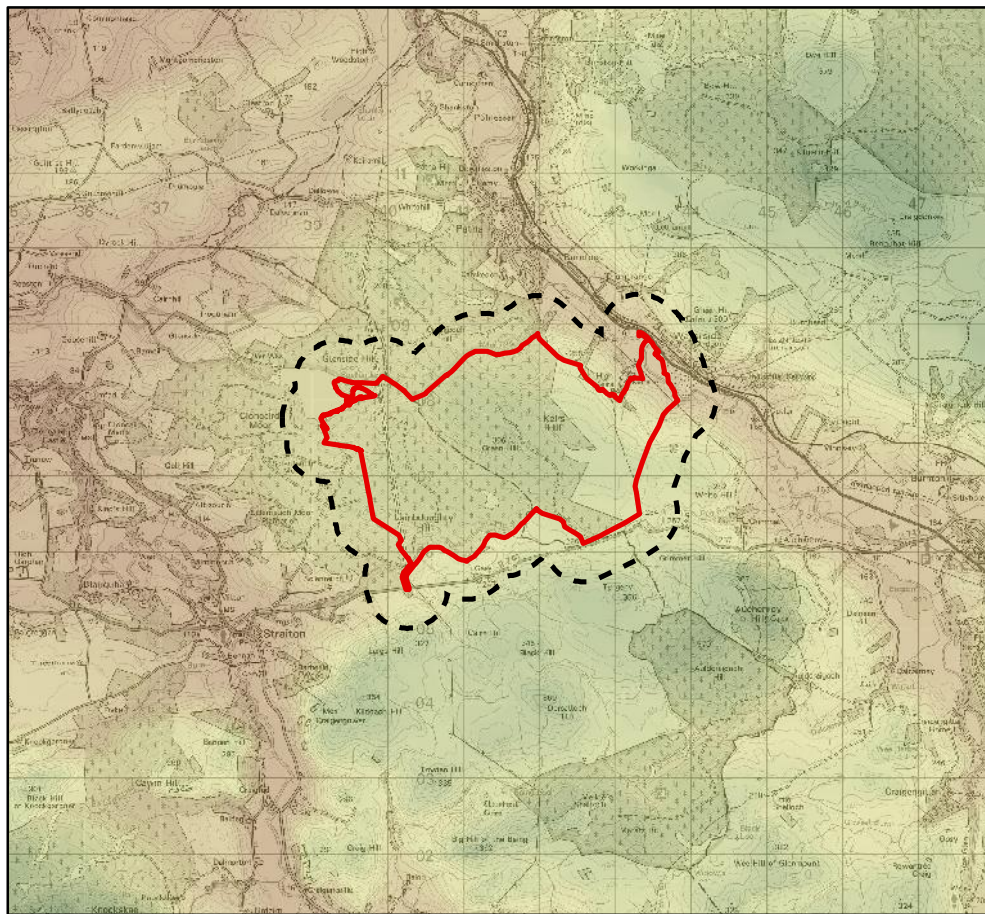
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FIGURE 9.4

**GROUNDWATER
VULNERABILITY**

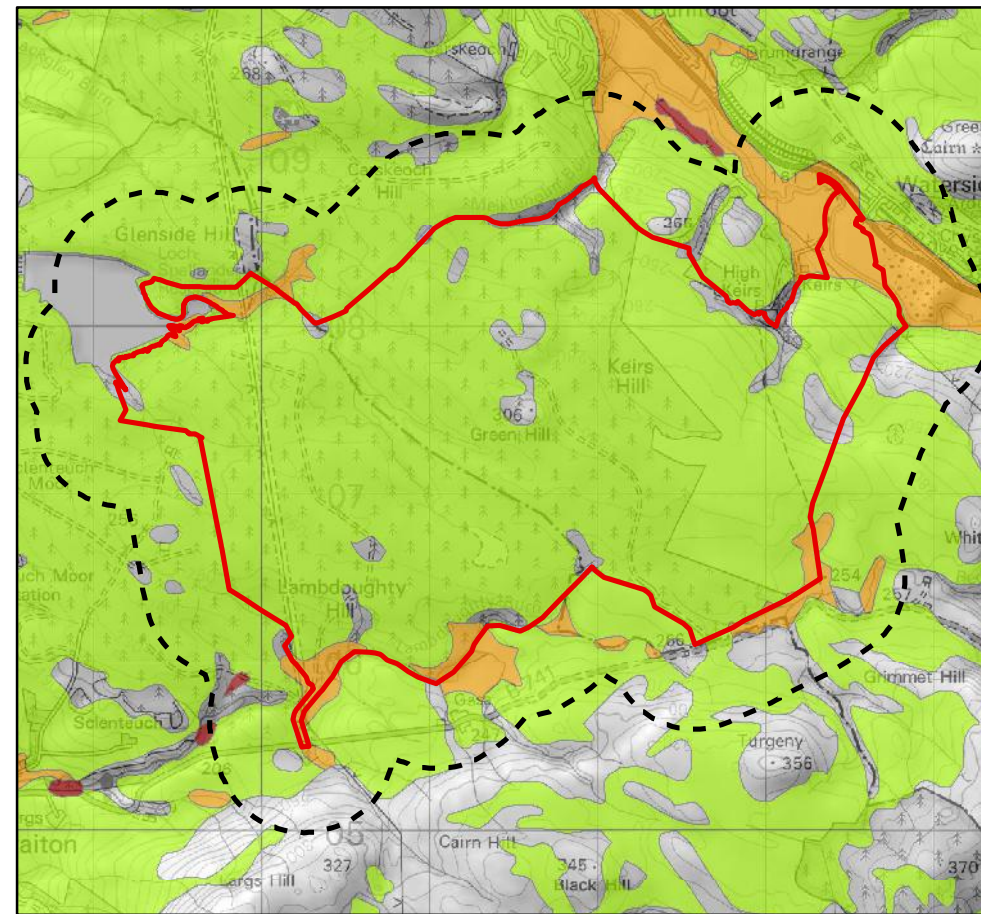
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- Site Boundary
- Study Area
- Superficial Aquifer**
 - Intergranular Flow: High Productivity
 - Intergranular Flow: Moderate to High Productivity
 - Not a significant aquifer
- Bedrock Aquifer**
 - Intergranular & Fracture Flow; Low Productivity
 - Intergranular & Fracture Flow; High Productivity
 - Intergranular & Fracture Flow; Moderate Productivity
 - Fracture Flow; Low Productivity
 - Fracture Flow; Very Low Productivity
- Groundwater Vulnerability in the Upmost Aquifer**
 - 5 (Most Vulnerable) - Vulnerable to most pollutants with rapid impact in many scenarios.
 - 4a - Vulnerable to those pollutants not readily adsorbed or transformed. Less likely to have clay present in superficial deposits (therefore generally higher vulnerability than 4b).
 - 4b - Vulnerable to those pollutants not readily adsorbed or transformed. More likely to have clay present in superficial deposits (therefore generally lower vulnerability than 4a).
 - 3 - Vulnerable to some pollutants; many others significantly attenuated.
 - 2 - Vulnerable to some pollutants, but only when they are continuously discharged/leached.
 - 1 (Least Vulnerable) - Only vulnerable to conservative pollutants in the long term when continuously and widely discharged/leached.



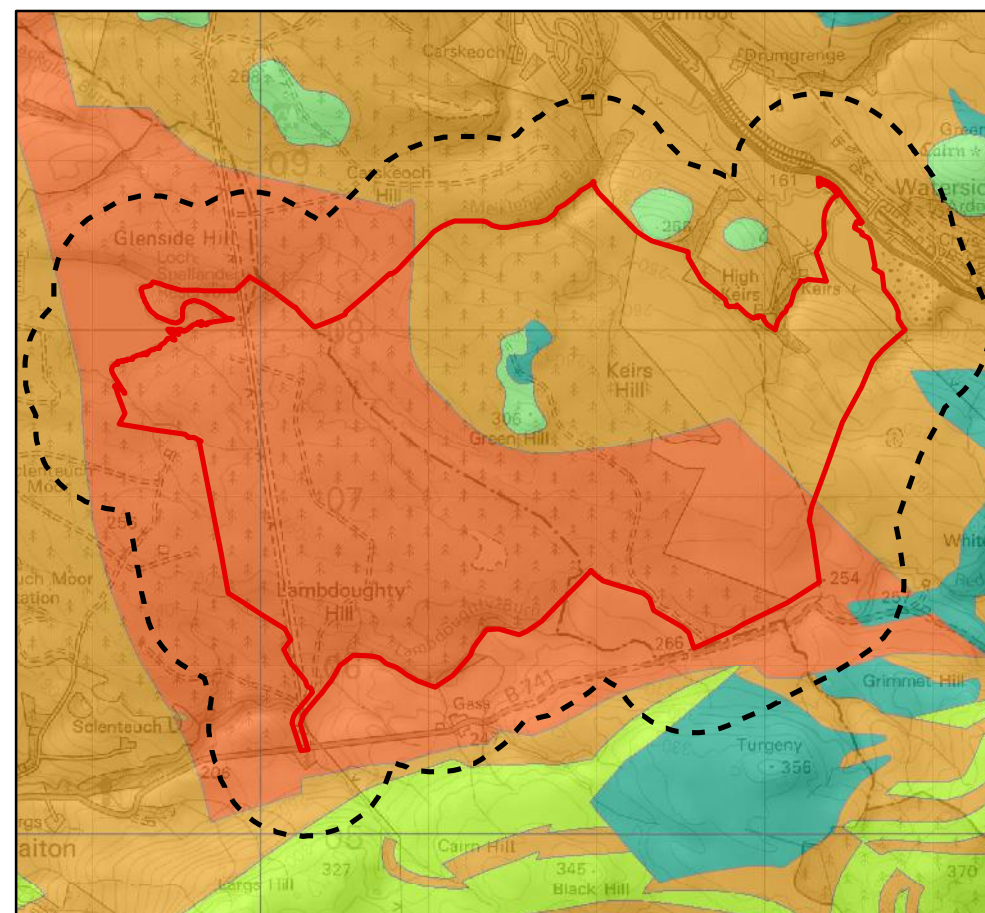
Map Extract

Scale: 1:100,000 @ A3



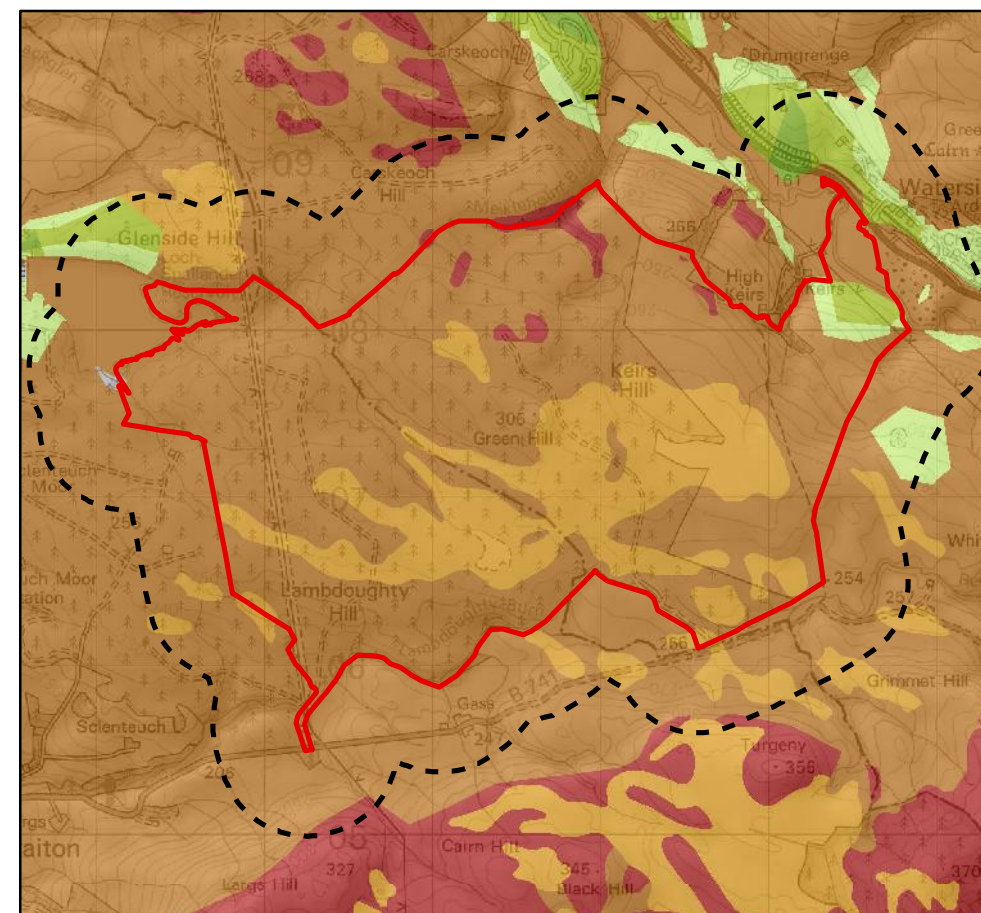
Superficial Aquifers

Scale: 1:45,000 @ A3



Bedrock Aquifers

Scale: 1:45,000 @ A3



Groundwater Vulnerability in the Upmost Aquifer

Scale: 1:45,000 @ A3



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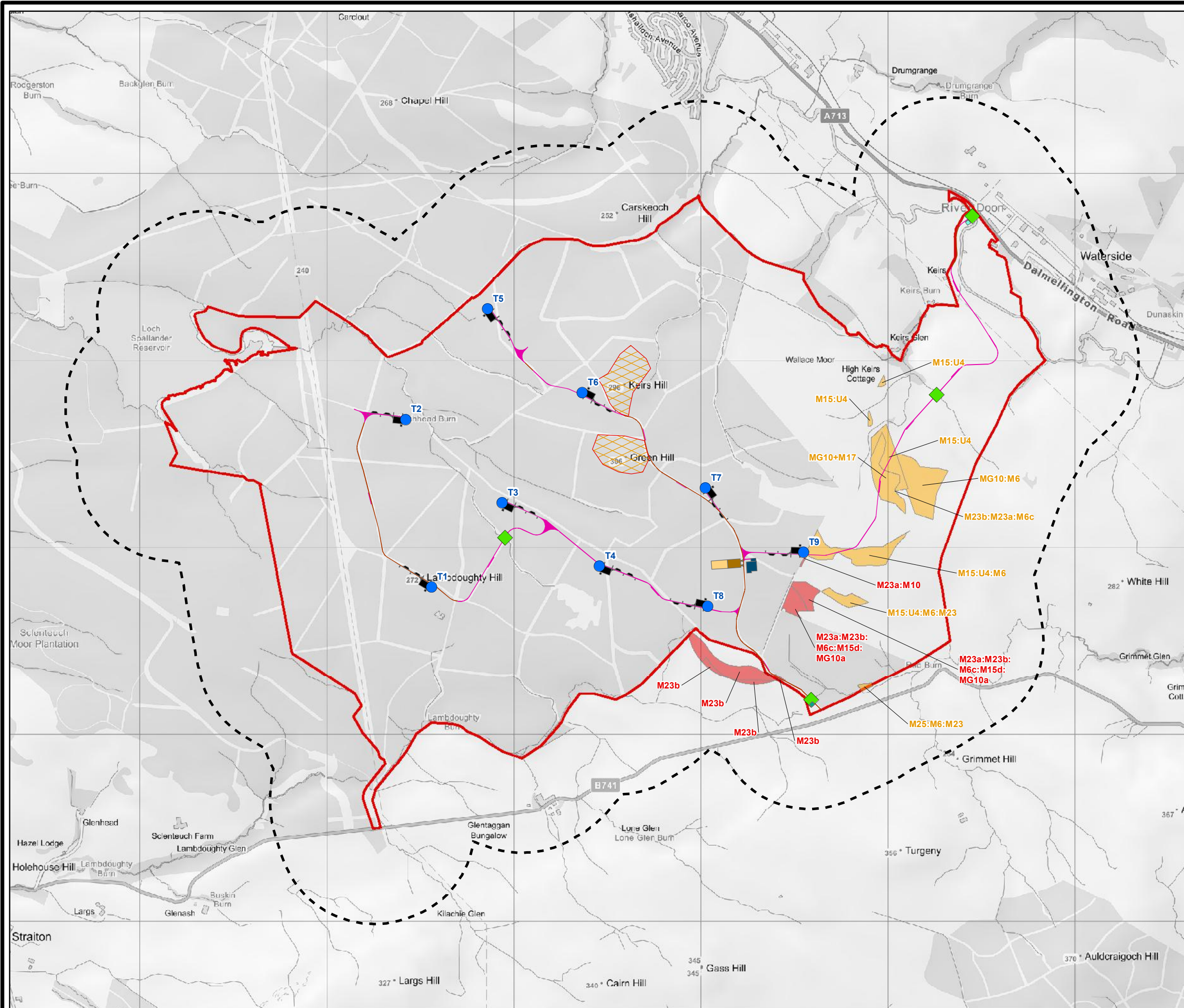


**SCLENTEUCH
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FIGURE 9.5

**POTENTIAL
GWDTE**

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 - Alternative Temporary Enabling Works Compound
 - Borrow Pit Search Area
 - Watercrossing Location
- Groundwater Dependent Terrestrial Ecosystems (GWDTE)**
- High Potential
 - Moderate Potential



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