



TORFICHEN WIND FARM  
EIA REPORT

FIG 10.6

REGIONAL  
HYDROGEOLOGY

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INDEX AND EXPLANATION

1. Aquifers in which intergranular flow is significant

- a. Highly productive aquifers (not extensive)
  - p Permian at Thornhill
  - d<sub>1</sub> Upper Old Red Sandstone in Fife
- b. Locally important aquifers
  - q'e Recent: Blown sand
  - q Quaternary sands and gravels
  - p Permian in North West Grampian

- Surface water features**
- Perennial river or stream
  - Perennial river or stream in which the chloride ion concentration is known to exceed 1000 mg/l under low flow conditions
  - Stream gauging station with mean annual runoff in m<sup>3</sup>/s, over catchment area in km<sup>2</sup>
  - Hydrometric area boundary
  - Freshwater loch, reservoir or standing water
  - Loch or standing water in which the chloride ion concentration is known to exceed 1000 mg/l

- Groundwater features**
- Recognised mineral water spring or borehole with less than 1000 mg/l total dissolved solids.
  - Spa water spring or well with greater than 1000 mg/l total dissolved solids
  - Areas where the chloride ion concentration exceeds 1000 mg/l above -80 m O.D.

- Sources of known abstraction (licences are not required):**
- a) 10-19 l/s } normal discharge
  - b) 20-29 l/s } or pumping yield
  - c) > 29 l/s }
  - Springs
  - Springs used for public supply
  - Wells and boreholes
  - Sources of public supply
  - Artesian boreholes
  - Artesian boreholes used for public supply
  - River or loch intake for public supply with ≥ 10 MI/d capacity

2. Aquifers in which flow is dominantly in fissures and other discontinuities

- a. Highly productive aquifers (not extensive)
  - p Permian
  - h<sub>1</sub> Carboniferous: Dinantian and Namurian
  - d<sub>1</sub> Upper Old Red Sandstone
- b. Locally important aquifers
  - p Triassic and Permian
  - h<sub>2</sub> Carboniferous: Westphalian
  - d<sub>1+2</sub> Lower and Middle Old Red Sandstone

3. Concealed aquifers, aquifers of limited potential, regions without significant groundwater

- a. Concealed aquifers; aquifers with limited or local potential
  - q Quaternary: coastal and river alluvium
  - J Jurassic
  - p Permian at Stranraer
  - cb+pr Cambro-Ordovician and Precambrian Limestones
- b. Regions underlain by impermeable rocks, generally without groundwater except at shallow depth
  - s+o Silurian and Ordovician
  - pr Precambrian
  - v Extrusive rocks
  - g Intrusive rocks

- Artificial works**
- 24 Impounding reservoir with design yield ≥ 10 MI/d (figures in MI/d)
  - Canal
  - Hydroelectric station

- Geological symbols**
- Geological boundary
  - Geological boundary beneath cover
  - Fault
  - Contours on the surface of the Old Red Sandstone in m relative to O.D.

KEY

- SITE BOUNDARY
- SITE BOUNDARY 1 KM BUFFER
- AQUIFER IN WHICH FLOW IS VIRTUALLY ALL THROUGH FRACTURES AND OTHER DISCONTINUITIES
  - 1B, MODERATELY PRODUCTIVE AQUIFER
  - 2B, MODERATELY PRODUCTIVE AQUIFER
  - 2C, LOW PRODUCTIVITY AQUIFER



SCALE - 1:300,000 @ A3

ENVIRONMENTAL IMPACT ASSESSMENT  
REPORT 2023

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