# Cainozoic geology and landscape evolution of north-east Scotland - important localities

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Jump to navigation Jump to search

Merritt, J W, Auton, C A, Connell, E R, Hall, A M, and Peacock, J D. 2003. Cainozoic geology and landscape evolution of north-east Scotland. Memoir of the British Geological Survey, sheets 66E, 67, 76E, 77, 86E, 87W, 87E, 95, 96W, 96E and 97 (Scotland). Contributors: J F Aitken, D F Ball, D Gould, J D Hansom, R Holmes, R M W Musson and M A Paul.

Sites of significance

| Site<br>number | Site name                  | Site characteristics and significance  |
|----------------|----------------------------|--|
| 1              | Teindland                  | Long sequence; 4 tills; Ipswichian palaeosol; luminescence dated sand  |
| 2              | Boyne Limestone Quarry     | Mesozoic rafts; glacitectonites; 3 tills one shelly; Whitehills<br>Glacigenic Formation with OIS 2/3 shells  |
| 3              | Castle Hill, Gardenstown   | Mesozoic rafts; glacitectonites; 3 tills one shelly; Whitehills<br>Glacigenic Formation with OIS 2/3 shells; capped by<br>glaciolacustrine Kirkburn Silt Formation                                       |
| 4              | King Edward                | Rafted OIS 3/4 shelly deposits   |
| 5              | Crossbrae Farm, Turriff    | Early Devensian peat bed; gelifluctates  |
| 6              | Howe of Byth Quarry        | Windermere Interstadial peat; OIS 2 till; OIS 3 gravel (luminescence dated)  |
| 7              | Kirkhill and Leys quarries | Longest sequence in region; 2 palaeosols; 5 gelifluctate beds; three 100 ka cycles represented (3 tills)   |
| 8              | Oldmill pit                | Mesozoic rafts; glacitectonites; 2 tills, old gravel   |
| 9              | Philorth valley            | Estuarine deposits and peat; Holocene sea level change   |
| 10             | Ugie valley                | Glacial Lake Ugie and possible mid OIS 2 readvance; tundra polygons  |
| 11             | St Fergus                  | Raised OIS 2 glaciomarine silts and late readvance; tundra polygons  |
| 12             | Sandford Bay               | Logie-Buchan Drift Group deformation tills and clays on 'local' till with sparse Norwegian erratics  |
| 13             | Windy Hills                | Neogene quartzite gravels; tills and gelifluctates; GPR traverse   |
| 14             | Moss of Cruden             | Devonian Smallburn Sandstone Formation outlier Lower<br>Cretaceous Moreseat Sandstone Formation outlier Neogene<br>Buchan Ridge flint/quartzite gravels Camp Fauld; Early<br>Devensian peat bed, 2 tills |
| 15             | Ellon (Bellscamphie)       | 'indigo' shelly till; long sequence with 4 tills   |
| 16             | Kippet Hills (Slains)      | Esker; Logie-Buchan Drift Group; early Pleistocene shells  |
| 17             | Errollston Clay Pit        | Logie-Buchan Drift Group deformation tills and clays   |
| 18             | Mill of Dyce pit           | Deglaciation of lower Don valley; deltaic sequence   |
| 19             | Strabathie, Bridge of Don  | Deltaic sequence formed during parting of ice streams  |
| 20             | Nether Daugh, Kintore      | Meander infill; late Holocene environmental change   |

| 21 | Rothens, Monymusk        | Kettle hole infill; Late-glacial sequence                |
|----|--------------------------|--|
| 22 | Nigg Bay, Aberdeen       | Long sequence including elements of four drift groups    |
| 23 | Loch of Park, Banchory   | Late-glacial to Holocene pollen sequence                 |
| 24 | Balnakettle, Fettercairn | Tectonised sequence; late readvance of East Grampian ice |
| 25 | Knockhill, Glenbervie    | Windermere Interstadial peat bed under landslipped till  |
| 26 | Burn of Benholm          | Red till on Early Devensian peat on shelly diamicton     |

# **Important localities**

- 1 Teindland, near Elgin
- 2 Boyne Limestone Quarry
- 3 Castle Hill, Gardenstown
- 4 King Edward
- 5 Crossbrae Farm, Turriff
- 6 Howe of Byth Quarry
- 7 Kirkhill and Leys quarries
- 8 Oldmill Quarry
- 9 Philorth valley, Fraserburgh
- 10 Ugie valley
- 11 St Fergus (Annachie)
- 12 Sandford Bay
- 13 Windyhills
- 14 Moss of Cruden
- 15 Ellon (Bellscamphie)
- 16 Kippet Hills, Slains
- 17 Errollston Clay Pit, Cruden Bay
- 18 Mill of Dyce
- 19 Strabathie
- 20 Nether Daugh, Kintore
- 21 Rothens, Monymusk
- 22 Nigg Bay, Aberdeen
- 23 Loch of Park
- 24 Balnakettle
- 25 Knockhill Wood, Glenbervie
- 26 Burn of Benholm

# References

#### Full reference list

#### Retrieved from

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# **Navigation menu**

## **Personal tools**

- Not logged in
- <u>Talk</u>
- Contributions
- Log in
- Request account

# **Namespaces**

- Page
- <u>Discussion</u>

#### **Variants**

# **Views**

- Read
- Edit
- <u>View history</u>
- PDF Export

## More

## Search



# Navigation

- Main page
- Recent changes
- Random page
- Help about MediaWiki

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• What links here

- Related changes
- Special pages
- Permanent link
- Page information
- <u>Cite this page</u>
- Browse properties
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- About Earthwise
- <u>Disclaimers</u>



