

## Map 19: ARDULIE POINT TO BALCONIE POINT

**Hinterland Geology and Coastal Geomorphology:** Old Red Sandstone continues to underlie the drift deposits of mainly marine derived sand and gravel. Raised beach features continue eastwards along this unit of coastline. The narrower coastal plateau gives way to a broader expanse of marine modified landscape. Towards Balconie Point, freshwater alluvium has formed an outwash fan that is incised by river channels. The hinterland is low lying below 10m OD. Intertidal flats become much more extensive towards Alness Bay.

**Erosion class:** From Arduvie Point to Foulis Point conditions at the foreshore appear to be stable. The unit between Foulis Point to the west of Kiltearn Cottage is defended by rock armour and is stable. New gabion baskets have been placed at the cliff near Kiltearn Cottage and lend stability to the soft coastal edge. At NH 6232 6528 extensive rubble armouring has been dumped over derelict wooden sea defences but this material is being eroded by overtopping. Rabbits infest this soft shoreline and are exacerbating the problem. At Balconie Point the sea cliff is eroding and the softer merge deposits at the backshore are eroding due to wave hammer and overtopping on MHWS tides. Offshore conditions are stable with mud accreting on the tidal flats.

**Built Heritage and Archaeology:** The first site recorded on this area of the survey was the Cromarty road bridge. On the north east side of the bridge were two herring boat hulks that had been abandoned in the intertidal zone. Foulis Point was an important 18<sup>th</sup> and 19<sup>th</sup> century landing place and this was confirmed by the hulks on the north east shore of the point and the siting of a grain ginal, which has recently opened as a public heritage centre. The hinterland sites at Kiltearn indicate that the area was an important 18<sup>th</sup> and 19<sup>th</sup> century religious centre. Beneath a modern levee a wooden drainage trough was found associated with a small pond beneath the parish church. The fishing station on Balconie Point was built to represent a chapel.

## Map 19: Hinterland Geology and Coastal Geomorphology

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### 1. ARDULLIE POINT to FOULIS POINT

NH 592630

Mud, sand and shingle

1.9km

Low cliff (10m)

Raised beach deposits

Mud and shingle dominate the foreshore. Raised beach deposits cover the hinterland.

### 2. FOULIS POINT to KILTEARN COTTAGE

NH 605 645

Mud, sand and shingle

2.9km

Low cliff (10m)

*Raised beach deposits*

Irregular coastal edge with a foreshore of mud and shingle. The hinterland consists of raised beach deposits, which support pasture.

### 3. KILTEARN COTTAGE to BALCONIE POINT

NH 619 652

Mud and sand

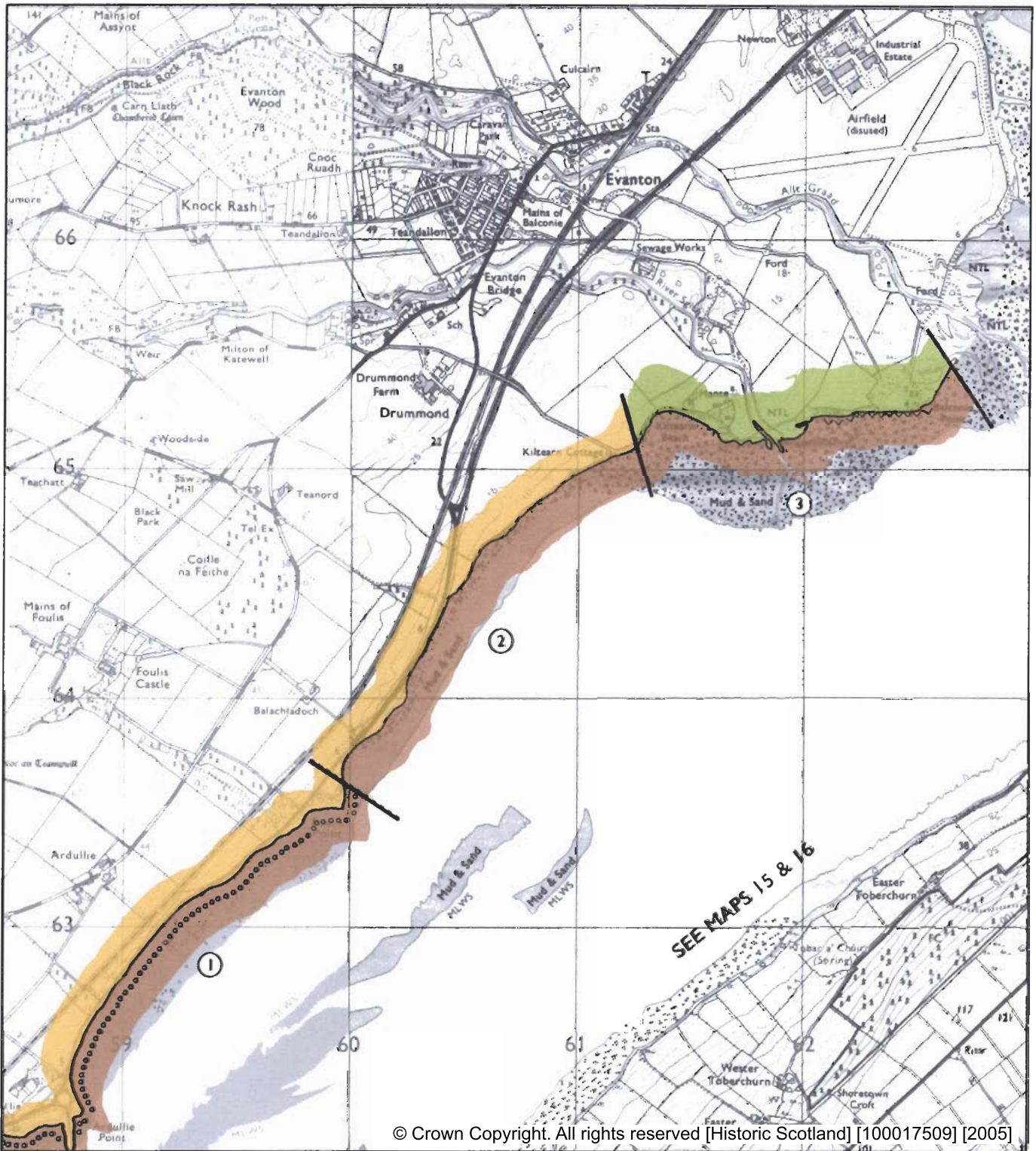
1.5km

Low edge (10m)

*Alluvium*

Promontory at the head of two rivers. The hinterland consists of freshwater alluvium below 10m OD. The foreshore is mud and sand with boulders and shingle. River channels are visible at low water.

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**MAP 19: ARDULIE POINT TO BALCONIE POINT 1:25 000**  
 MORAY FIRTH SURVEY Grid ref: NH 59-63/62-67

Basemap: O.S. Pathfinder Series  
 Sheets 143 & 144  
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**HINTERLAND GEOLOGY  
 AND FORESHORE  
 GEOMORPHOLOGY**

Assessment date: 15 September 1998

**Hinterland:**

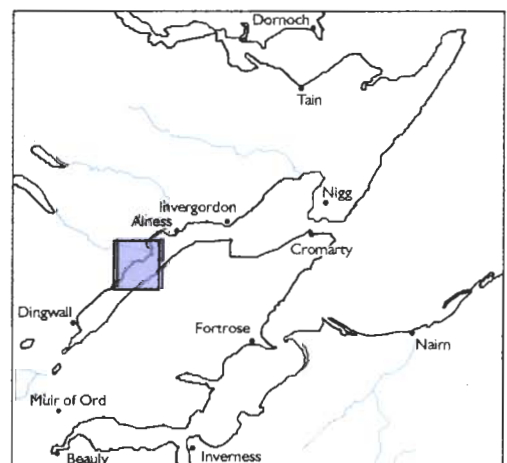
- Drift, boulder clay
- Drift, boulder clay over visible rock
- Raised beach and marine deposits
- Blown sand
- Glacial sand and gravel
- Alluvium

**Coast edge:**

- Low edge (< 5m tall)
- Cliff over 5m tall
- Man made barrier
- Shingle/storm bank
- Human disturbance

**Foreshore:**

- Mainly rock platform
- Mainly sand
- Mainly alluvial/marine mud
- Marsh



## MAP 19: EROSION

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### 1. ARDULIE POINT to FOULIS POINT

NH 592 630

1.6km

Accreting or stable

From Cromarty Bridge to Foulis Point the coastal protection continues as in the previous unit. The foreshore appears to be stable with occasional large boulders, cobbles and mud.

### 2. FOULIS POINT to south of KILTEARN

COTTAGE

NH 655 644

1km

Stable or Eroding

This unit of coastline appears to be fairly stable with very localised patches of erosion on the foreshore where shingle is exposed and prone to displacement. Sea defences is lending stability to the backshore region.

### 3. South of KILTEARN COTTAGE to

BALCARSE POINT

NH 620 650

1.9km

Definitely Accreting

New Gabion baskets have been placed along the shore west of Kiltearn church. Sediment loading is leading to accretion within the region of the river Sgitheach. Rubble dumping is extensive at NH 6232 6528 where the soft marine sand and gravel deposits are eroding by both overtopping and rabbit warrens. On the beach, conditions appear to be stable with mud and shingle accretion.

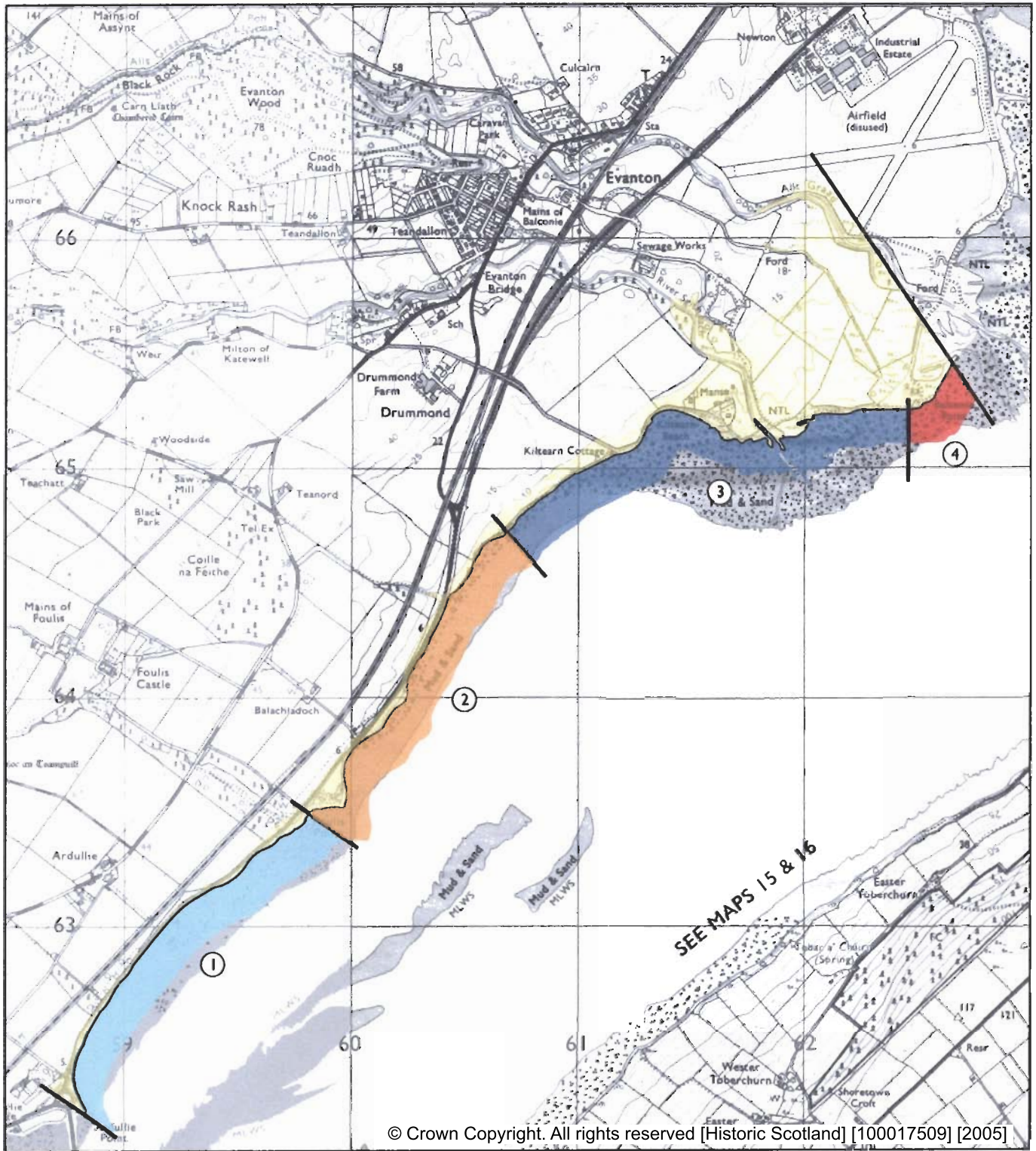
### 4. BALLONIE POINT

NH 626 653

0.2km

Definitely Eroding

The cliff is eroding in places and the softer merge deposits failing as a result of scouring at the low water mark. Rubble sea defence continues through this unit but their effectiveness appears to be poor.



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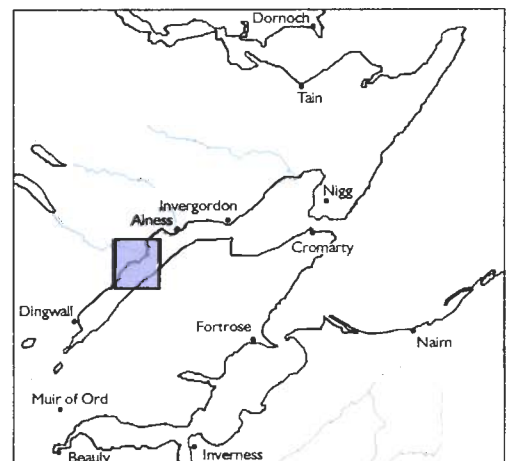
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**EROSION CLASS**

Assessment date: 15 September 1998

**Key:**

- Definitely accreting
- Accreting or stable
- Stable
- Eroding or stable
- Definitely eroding
- Both accreting and eroding
- No access
- Land below 10m



## MAP 19: BUILT HERITAGE AND ARCHAEOLOGY

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### Sites on the Coastal Edge & Foreshore

**NH56SE 8550**  
 NH 5895 6235  
 ARDULLIE POINT  
 Two abandoned herring boats  
 20<sup>th</sup> century AD  
 Poor  
 Survey and monitor

NH 5992 6335  
 FOULIS POINT  
 Fish trap  
 Uncertain  
 Poor  
 Survey

NH 5971 6340  
 FOULIS POINT  
 Stone pier  
 Uncertain  
 Poor  
 Monitor

**NH56SE 25**  
 NH 5998 6359  
 FOULIS POINT  
 Ferry; landing-place  
 18<sup>th</sup>/19<sup>th</sup> century AD  
 Good  
 Nil

NH 5998 6371  
 FOULIS POINT  
 Two hulks  
 Uncertain  
 Poor  
 Survey and monitor

NH 6025 6390  
 DRUMMOND  
 Stone alignments  
 Uncertain  
 Fair  
 Nil

### Sites on the Coastal Edge & Foreshore

**NH 6060 6470**  
 DRUMMOND  
 Stone walling  
 Uncertain  
 Poor  
 Monitor

NH 612 650 - 616 650  
 KILTEARN BEACH  
 Fish trap  
 Uncertain  
 Poor  
 Survey

NH 6167 6518  
 KILTEARN  
 Wooden trough and associated pond  
 Uncertain  
 Poor  
 Survey and Monitor

NH 6232 6527  
 BALCONIE POINT  
 Fishing station (designed to look like a chapel)  
 Uncertain  
 Poor  
 Monitor

NH 6261 6529  
 KILTEARN BEACH  
 Fish trap  
 Uncertain  
 Poor  
 Survey

NH 6250 6552  
 BALCONIE POINT  
 Wall / levee  
 19<sup>th</sup> century AD  
 Fair  
 Nil

### Sites in the Hinterland

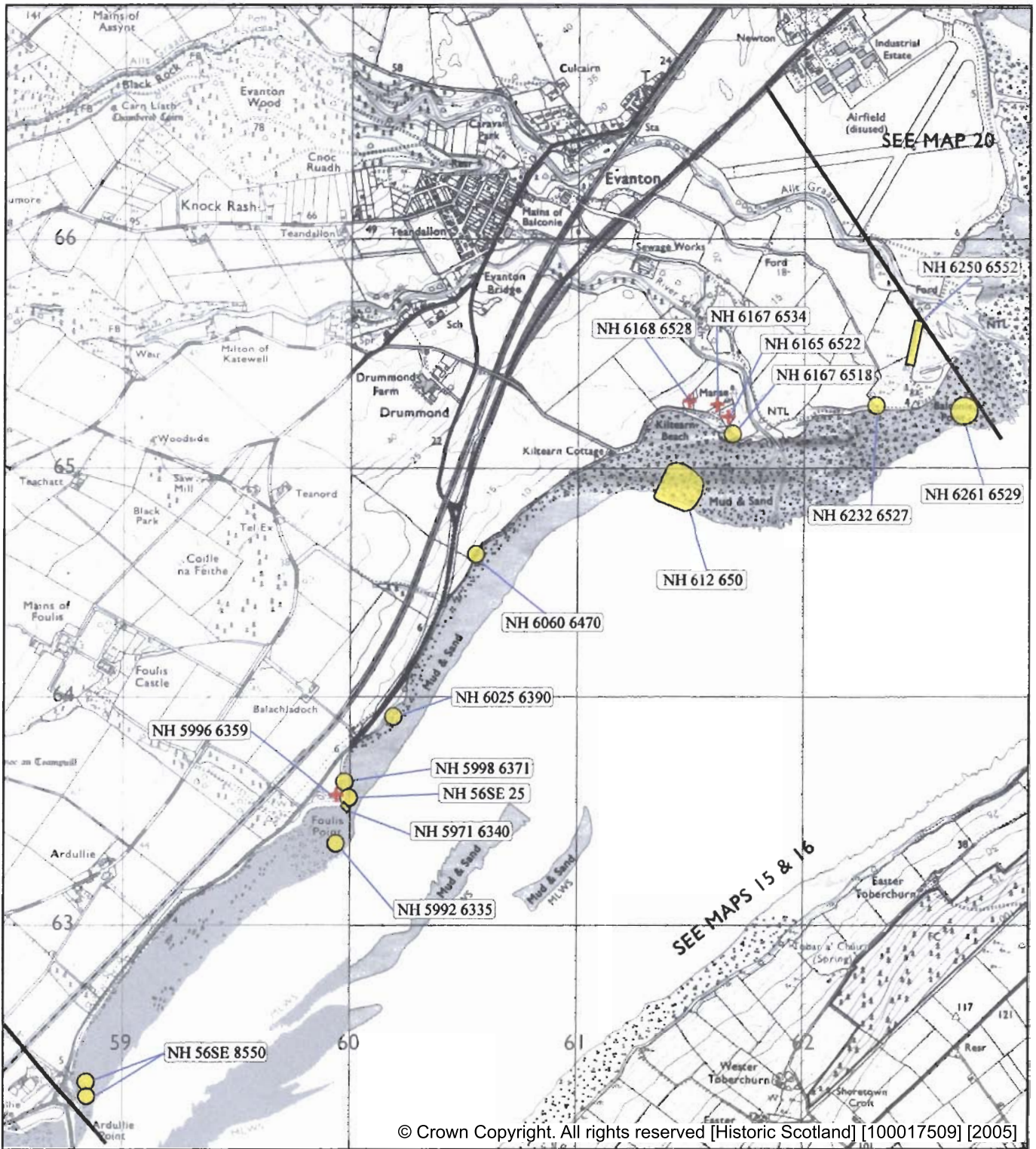
**NH56SE 19 - Listed C**  
 NH 5996 6359  
 FOULIS POINT  
 Giral  
 18<sup>th</sup> century AD  
 Good  
 Nil

**NH66NW 1 - Listed B**  
 NH 6165 6522  
 KILTEARN  
 Parish church  
 Built 1791  
 Poor  
 Monitor

**NH66NW 48 - Listed B**  
 NH 6168 6528  
 KILTEARN, Parish Manse  
 Steading  
 18<sup>th</sup>/19<sup>th</sup> century  
 Good  
 Nil

**NH66NW 25 - Listed C (S)**  
 NH 6167 6534  
 KILTEARN, Parish Manse  
 Barn  
 18<sup>th</sup>/19<sup>th</sup> century  
 Good  
 Nil

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





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**BUILT HERITAGE AND  
 ARCHAEOLOGY**

Assessment period: September 1998

**Key:**

- |   |  |   |   |
|---|--|---|---|
|   | Protected Ancient Monument,  |  | Other known Ancient Monuments,                |
|  | or area of designated wreck  |  | or Undesignated wreck                         |
|   | Listed Historic Building   |  | Designated Landscape                          |
|   | Monument formally proposed by<br>Historic Scotland for scheduling,<br>or wreck for designation |  | Insufficient information;<br>more work needed |
|   |  |  | Probably archaeologically sterile             |

