

## Map 7: KILMUIR TO AVOCH BAY

**Hinterland Geology and Coastal Geomorphology:** Brecciated conglomerates form the principal basement geology and these outcrop along the foreshore and into the hinterland. North east of Kilmuir, a cusped foreland formed from marine deposits extends out into the Firth. The hinterland rises sharply behind the foreland and is well wooded. Further north, brecciated convex cliffs overlooks the mouth of Munloch Bay. Munloch Bay is a small isolated estuary surrounded by a shingle beach and mudflats. This bay is a key site for studies on Late-glacial and Flandrian relative sea level changes in the Moray Firth. It provides unique morphological evidence for three Late-glacial and five Flandrian beaches and also stratigraphic evidence for the Main Late-glacial shoreline and a possible Flandrian storm (tsunami) surge layer and established radiocarbon dated chronologies for the culmination of the Main Post-glacial transgression. The southern side of the bay has recently been afforested whilst the northern shore contains dense mature forest and fields.

**Erosion class:** Between Kilmuir and Munloch Bay the coastline comprises a mixture of stable shingle beaches until east of Taindore Wood. From here, rock abrasion platforms outcrop. These are considered to be eroding but stable owing to their resilient nature. Towards the base of the cliff, rock falls are vegetated providing reasonable stability. Munloch Bay is extremely sheltered and its entire shoreline is stable. Rabbit erosion was noted in the cliff at NH 6853 5292. Between Wood Hill to Ormond Hill, exposed sandstone rock platforms are eroding at such a slow and immeasurable rate that they are for the present considered to be stable in the short term.

**Built Heritage and Archaeology:** The built heritage in this section varies from the listed cottages in Kilmuir village, both of which are inhabited and in very good condition, to the ruined building remains on the north shore of Munloch Bay and Craiguch Well, also on the northern shore of Munloch Bay. The archaeology of the foreshore dominates the total number of sites recorded, possibly as a result of the variety of geology and erosion classes. The archaeology includes the remains of jetties, walkways, and the extensive reclamation embankment system at the head of Munloch Bay. The possible shell midden at the mouth of Munloch Bay, on top of a low raised sea beach may be linked to the nearby cave system at Cragiehowe. On the northern shore of Munloch Bay the remains of a hulk have been used torevet a narrow channel cut in order that the Bay quarry may be accessed. This small inlet is currently used for recreational purposes.

## Map 7: Hinterland Geology and Coastal Geomorphology

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1. North of ST MARYS CHURCH to  
CRAIGHOWE  
NH 685515

2 km

Mainly rock platform

Low edge (<10m)

*Boulder clay and marine deposits*

Boulder clay mantles raised beach deposits which rest above Old Red Sandstone. The coastal edge is irregular overlooking rocky platform which has been eroded into a series of gullies.

2. CRAIGIEHOWE to east of BAYFIELD

Irregular spur formed consisting of marine sand and gravel. Boulder clay mantles breccia deposits and marine terraces in parts. The foreshore is variable with shingle, mud and sand. Exposed rocky platforms are present at entrance to Munloch Bay.

3. East of BAYFIELD to BAYHEAD

NH 670 525

2.3km

Mainly mud and sand

Low edge (<10m)

*marine sand and gravel*

Middle section of the south shore of Munloch Bay. Foreshore of mud and sand colonised at HWM by saltmarsh. Hinterland defended by flood banks with marine deposits below 10m OD. Saltmarsh extends eastwards towards the head of the bay.

4. BAYHEAD to west of ORD HILL  
PLANTATION

NH 656 531

2km

Intertidal mud and sand

Low edge (<10m)

*Marine deposits*

Flood banks protect the head of Munloch Bay. The foreshore consists of saltmarsh and tidal flats with mud and sand. The coastal edge is irregular and low-lying. Marine deposits continue into the hinterland.

5. West of ORD HILL PLANTATION to WOOD  
HILL PLANTATION

NH 675 532

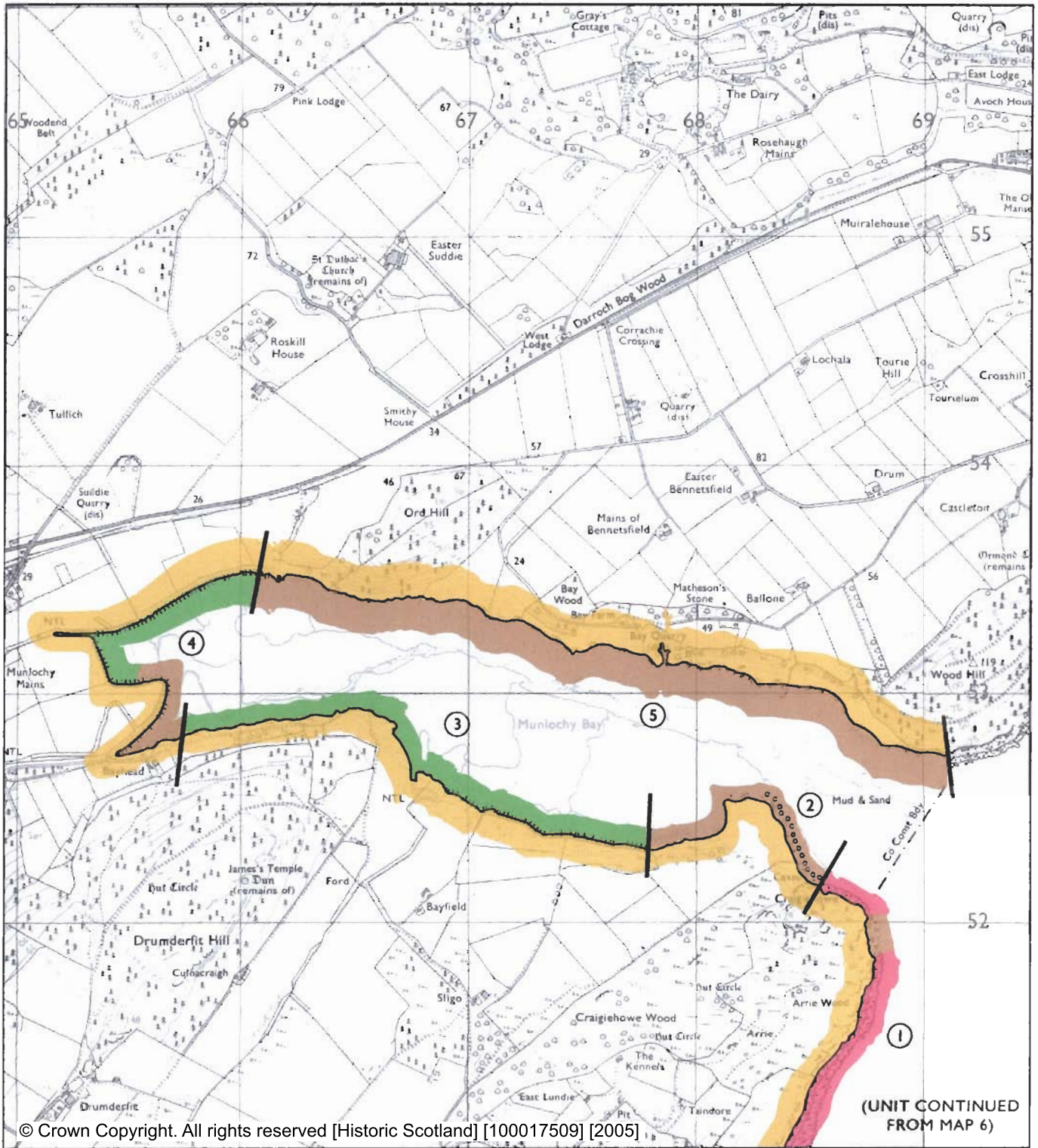
3.2km

Mainly mud and sand

Low edge (<10m)

*Raised beach and marine deposits*

Forming the northern shore of Munloch Bay this section of coast is linear and unbroken with uniformity to the mouth of the bay. The foreshore comprises mainly mud and sand. The hinterland is below 10m OD and consists of marine deposits.



## MAP 7: KILMUIR TO WOOD HILL

MORAY FIRTH SURVEY Grid ref: NH 65-69/51-56

1:25 000

Basemap: O.S. Pathfinder Series Sheet I60

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### HINTERLAND GEOLOGY AND FORESHORE GEOMORPHOLOGY

Assessment date: 10 September 1998

#### Hinterland:

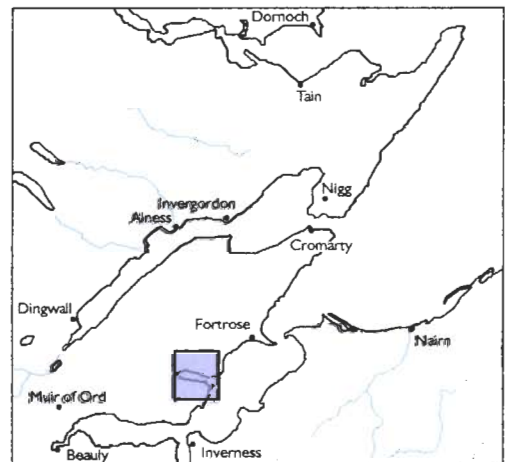
- Drift, boulder clay
- Drift, boulder clay over visible rock
- Raised beach and marine deposits
- Blown sand
- Glacial sand and gravel
- Alluvium

#### 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 7: EROSION

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**1. North east of KILMUIR to CRAIGIEHOWE**

NH 685 510

2.5km

Stable or accreting

This section of coastline appears to be stable owing to the resilient nature of the underlying sandstone geology. Towards the base of the cliffs rock fall is vegetated providing stability to this region.

**2. CRAIGIEHOWE to BAYFIELD**

NH 670 526

3.4km

Definitely Accreting

Southern shore of Munlochy Bay. The bay is very sheltered and this is leading to accretion of mud and shingle on the wide foreshore. At the HWM shingle is banked up and stabilised by vegetation.

**3. BAYHEAD to south of WOOD HILL**

NH 670 533

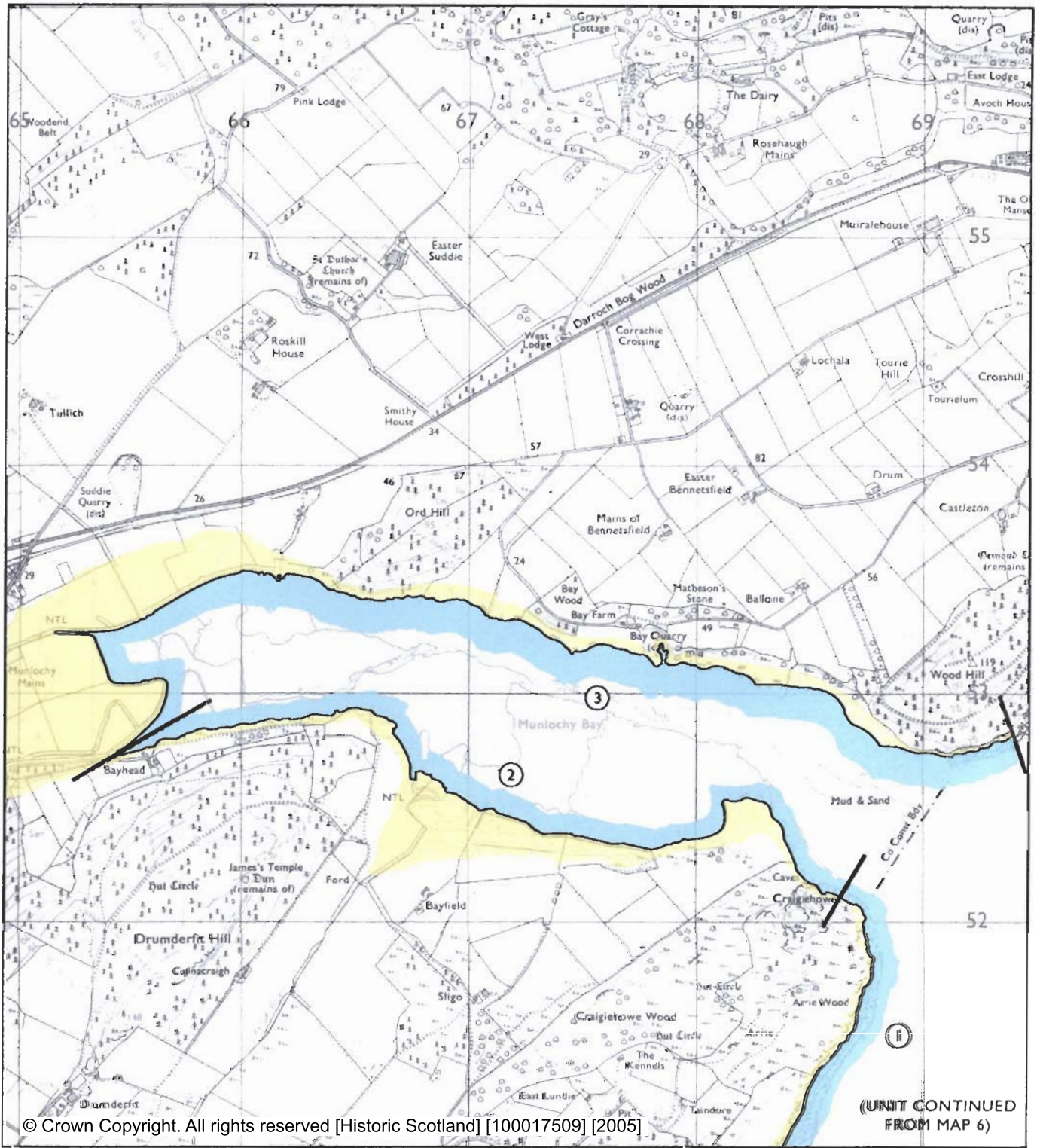
4.2km

Definitely accreting

The north shore of Munlochy Bay is sheltered leading to accretion of the exposed tidal flats caused by sediment entrapment within the bay. Rabbit erosion on a low cliff face is occurring at NH 6853 5292.

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**MAP 7: KILMUIR TO WOOD HILL**

MORAY FIRTH SURVEY Grid ref: NH 65-69/51-56

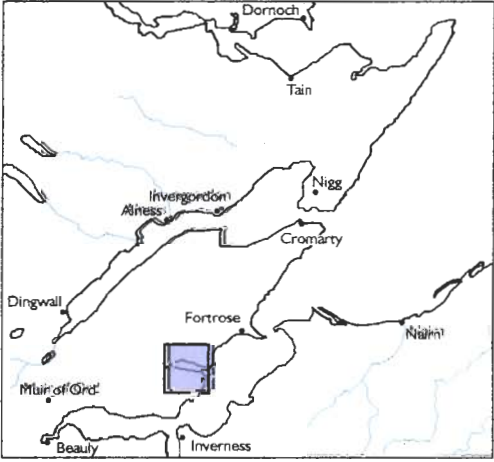
1:25 000

Basemap: O.S. Pathfinder Series Sheet 160  
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**EROSION CLASS**

Assessment date: 10 September 1998

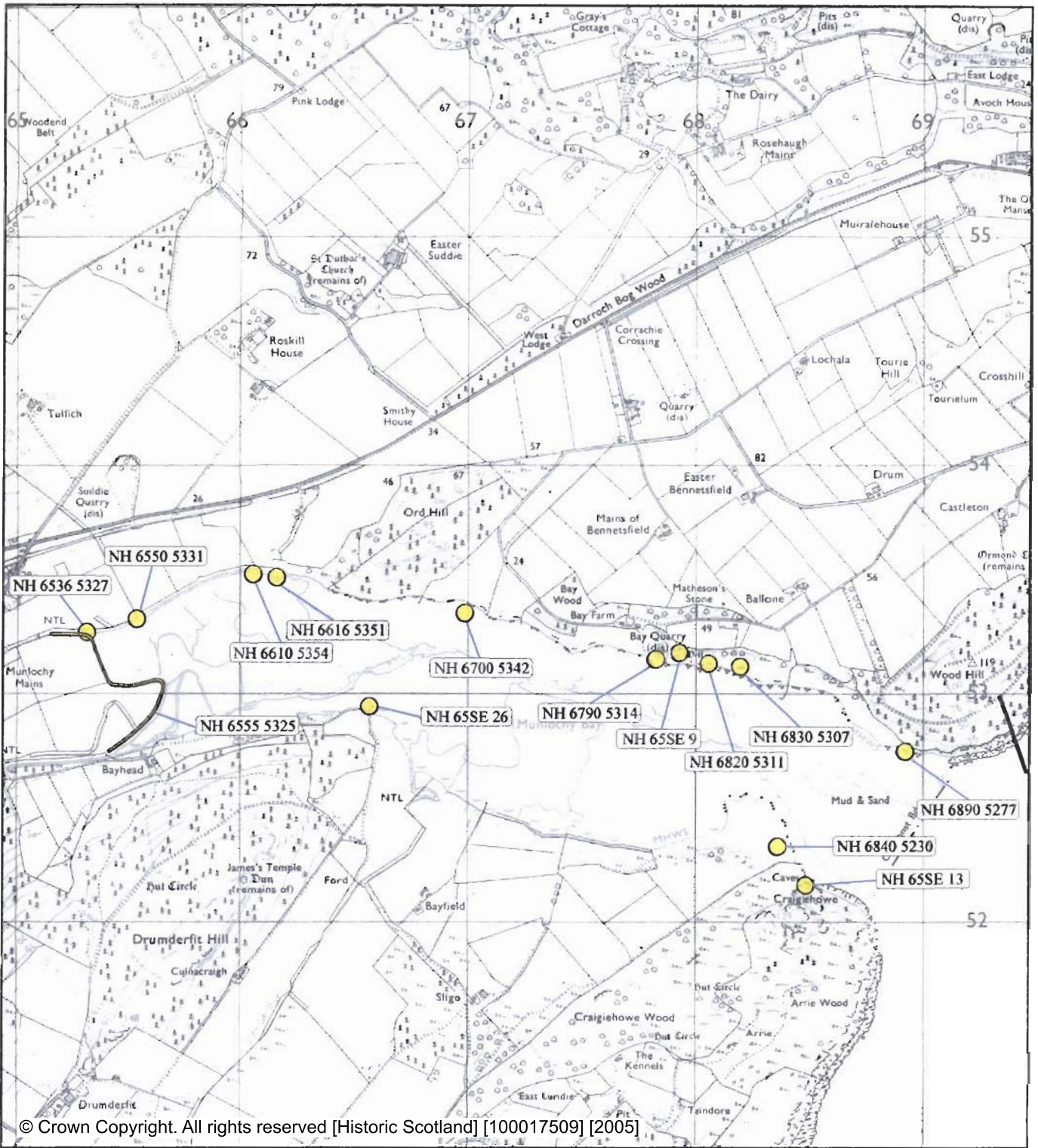
- Key:**
- Definitely accreting
  - Accreting or stable
  - Stable
  - Eroding or stable
  - Definitely eroding
  - Both accreting and eroding
  - No access
  - Land below 10m



## MAP 7: BUILT HERITAGE AND ARCHAEOLOGY

Sites on the Coastal Edge & Foreshore	Sites on the Coastal Edge & Foreshore	Sites in the Hinterland
NH65SE 13 NH 6851 5216 CRAIGIEHOWE Cave with Fingalian association Uncertain Good Survey and monitor	NH 6610 5354 ORD HILL Wooden walkway <b>20<sup>th</sup> century AD</b> Poor Nil	NH65SE 9 NH 6793 5318 BAY FARM Craiguch Well; rag well Uncertain Good Nil
NH 6840 5230 CRAIGIEHOWE Possible shell midden Uncertain Poor Survey	NH 6616 5351 ORD HILL Pier and harbour Uncertain Fair Monitor	NH 6820 5311 BAY FARM Remains of building 18 <sup>th</sup> /19 <sup>th</sup> century AD Poor Nil
NH65SE 26 NH 6658 5293 MUNLOCHY BAY Remains of jetty 19 <sup>th</sup> century AD Fair Nil	NH 6700 5342 BAY WOOD Hulk Uncertain Poor	
NH 6555 5325 MUNLOCHY MAINS Embankment 19 <sup>th</sup> century AD Good Nil	NH 6790 5314 BAY QUARRY Harbour wall revetted with hulk remains 19 <sup>th</sup> century AD Fair Nil	
NH 6536 5327 MUNLOCHY MAINS Wooden bridge Uncertain Poor Nil	NH 6830 5307 BAY FARM Boat house 20 <sup>th</sup> century AD Poor Nil	
NH 6550 5331 MUNLOCHY MAINS Wooden walkway 20 <sup>th</sup> century AD Poor Nil	NH 6890 5277 WOOD HILL Mining cart 19 <sup>th</sup> century AD Poor Nil	







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MORAY FIRTH SURVEY Grid ref: NH 65-69/51-56



### BUILT HERITAGE AND ARCHAEOLOGY


Assessment period: September 1998


Key:


 Protected Ancient Monument,  
 or area of designated wreck

 Listed Historic Building

 Monument formally proposed by  
 Historic Scotland for scheduling,  
or wreck for designation

 Other known Ancient Monuments,  
or Undesignated wreck

 Designated Landscape

 Insufficient information;  
more work needed

 Probably archaeologically sterile

1:25 000

Basemap: O.S. Pathfinder Series  
Sheet 160  
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